

## USGS Monthly Progress Report

Agreement Number 581-14-40098

Data are transmitted from USGS to TCEQ via hourly ftp transmissions. The transmissions are monitored by software and a daily report is generated. Data are delivered using multiple POCs. Any data not delivered via hourly transmissions (POC1) is delivered within 150 days of collection as approved data (POC3) or annually (POC4).

Note: [Each hyperlink below takes you to a USGS data page with the corresponding data. On that page, go to the search line displaying the USGS station number \(e.g. USGS 08420500 Pecos Rv at Pecos, TX\), select the type of data desired, and click GO.](#)

**August 2014 Progress Report: Date of visit:** 08/12/2014 **Time of visit:** 1000  
**Staff:** L. Pena, B. Selman **Sonde out:** 06G2028AB **Sonde in:** 12F100880

### Provisional CV and Fouling Results:

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	-0.02	Average Arithmetic Correction	0.08	Fouling Correction
Specific Conductance	-10.51	Average % Drift	-17.17	% Fouling Correction
pH	-0.07	Average Arithmetic Correction	1.56	Fouling Correction
Dissolved Oxygen	-0.36	% Drift	2584	% Fouling Correction

**Fouling conditions:** Sonde recovered with very heavy silt fouling.

**Environmental conditions:** At the time of visit, flow was estimated to be ~600 cf/s. Weather conditions were hot, dry, partly cloudy and calm.

**Additional comments:** Conductance probe failure. Calibration verification of SC in air = 34 mg/L. Also note instrument drift percentage. New probe installed.

### Cleaning visit.

**Date of visit:** 08/28/2014

**Time of visit:** 1200

**Staff:** S. Marr, L. Pena

**Sonde out:** XXXX

**Sonde in:** 12F100880

### Provisional CV and Fouling Results:

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	n/a	Average Arithmetic Correction	0.23	Fouling Correction
Specific Conductance	n/a	Average % Drift	22.73	% Fouling Correction

pH	n/a	Average Arithmetic Correction	0.98	Fouling Correction
Dissolved Oxygen	n/a	% Drift	9271	% Fouling Correction

**Fouling conditions:** Unknown but assumptions can be made by the data and the inability to remove sonde from the deployment tube. See additional comments.

**Environmental conditions:** At the time of visit, flow was estimated to be 81cf/s. Weather conditions were hot, dry, partly cloudy and breezy.

**Additional comments:** Sonde stuck in tube by sediment. Trash pump was required to remove sonde but trash pump was not working. Flushed tube with bailed water and shoveled out lower end of deployment tube.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08371500 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08371500 &agency_cd=USGS)

**Rio Grande BLW. Rio Conchos (CAMS 758) (USGS 08374200): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 08/12/2014

**Time of visit:** 1545

**Staff:** L. Pena, B. Selman

**Sonde out:**

**Sonde in:** 12M100693 (remains deployed)

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	--	Average Arithmetic Correction	--	Fouling Correction
Specific Conductance	--	Average % Drift	--	% Fouling Correction
pH	--	Average Arithmetic Correction	--	Fouling Correction
Dissolved Oxygen	--	% Drift	--	% Fouling Correction

**Fouling conditions:** Sonde embedded in pea gravel and sediment.

**Environmental conditions:** Estimated discharge ~2,300cf/s. Weather conditions were hot, dry, partly cloudy, and calm.

**Additional comments:** Unable to remove sonde from deployment tube due to the density of the pea gravel and sediment which is similar to concrete. Staff attempted to clear debris from the lower end of the tube but the velocity and depth of water prevented success.

**Cleaning visit.**

**Date of visit:** 08/28/2014

**Time of visit:** 0930

**Staff:** S. Marr, L. Pena

**Sonde out:**

**Sonde in:** 12M100693 (remains deployed)

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	--	Average Arithmetic Correction	--	Fouling Correction
Specific Conductance	--	Average % Drift	--	% Fouling Correction
pH	--	Average Arithmetic Correction	--	Fouling Correction
Dissolved Oxygen	--	% Drift	--	% Fouling Correction

**Fouling conditions:** Sonde embedded in pea gravel and sediment.

**Environmental conditions:** Estimated discharge 194cf/s. Velocity near 5 ft/sec. Weather conditions were hot, dry, partly cloudy, and calm.

**Additional comments:** We were still unable to remove sonde from deployment tube due to the density of the pea gravel and sediment. Staff attempted to clear debris from the lower end of the tube but the velocity of water prevented success. Stage and velocity were still too great. Trash pump was inoperable. Defeated again.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374200 &agency_cd=USGS)

**Rio Grande dws Santa Elena Canyon, BBNP, TX (CAMS 802) (USGS 08374510): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 08/14/2014

**Time of visit:** 1440

**Staff:** L. Pena, B. Selman

**Sonde out:** 12M100698

**Sonde in:** 12H100068

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	-0.01	Average Arithmetic Correction	0.88	Fouling Correction
Specific Conductance	0.14	Average % Drift	-3.60	% Fouling Correction
pH	-0.06	Average Arithmetic Correction	0.61	Fouling Correction
Dissolved Oxygen	0.72	% Drift	804	% Fouling Correction

**Fouling conditions:** Sonde recovered with very heavy fine-silt fouling.

**Environmental conditions:** Weather conditions at the time of the visit were hot, dry, clear and calm.

**Additional comments:** Another Terlingua sediment event.

**Cleaning visit.**

**Date of visit:** 08/27/2014

**Time of visit:** 1515

**Staff:** S. Marr, L. Pena

**Sonde out:**

Sonde in: 12H100068 (remains deployed)

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	n/a	Average Arithmetic Correction	2.56	Fouling Correction
Specific Conductance	n/a	Average % Drift	45.64	% Fouling Correction
pH	n/a	Average Arithmetic Correction	1.47	Fouling Correction
Dissolved Oxygen	n/a	% Drift	10,157	% Fouling Correction

**Fouling conditions:** Sonde recovered impacted in silt and sediment.

**Environmental conditions:** Weather conditions at the time of the visit were hot, dry, clear and calm.

**Additional comments:** Unable to deploy field sonde in secondary deployment tube, full of sediment. Unable to lower sonde into flow from bank or boat launch due to depth of sediment deposition on LEW. Bucket method with ambient water was required. Trash pump was used to clear both deployment tubes and area around the tubes.

**Rio Grande at Castolon (CAMS 720) (USGS 08374550): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 08/14/2014

**Time of visit:** 1300

**Staff:** L. Pena, B. Selman

**Discharge information:** Staff was unable to make a discharge measurement due to elevated stage. (~500 cf/s).

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374550 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374550 &agency_cd=USGS)

**Rio Grande at Rio Grande Village (CAMS 721) (USGS 08375300): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 08/14/2014

**Time of visit:** 0945

**Staff:** L. Pena, B. Selman

**Sonde out:** 12F101031

**Sonde in:** 12M100694

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
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Temperature	0.15	Average Arithmetic Correction	-0.06	Fouling Correction
Specific Conductance	1.47	Average % Drift	9.71	% Fouling Correction
pH	-0.08	Average Arithmetic Correction	0.27	Fouling Correction
Dissolved Oxygen	-1.76	% Drift	2500	% Fouling Correction

**Fouling conditions:** Sonde recovered with heavy silt fouling.

**Environmental conditions:** Weather conditions were warm, dry, clear and calm.

**Discharge information:** Staff was unable to make a discharge measurement due to elevated stage. (~1,300 cf/s)

**Additional comments:** After the field work was completed, staff deployed the sonde at the new deployment location. ODO membrane scratched heavily. Replaced.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08377200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08377200 &agency_cd=USGS)

**Rio Grande abv. Amistad (Fosters Ranch) (CAMS 759) (USGS 08377200) QW Monitor (WT, pH, DO, SC)**

**Scheduled visit. \*\*\*\*STATION OUT-OF-SERVICE\*\*\*\***

**Date of visit:**

**Time of visit:**

**Staff:**

**Sonde out:**

**Sonde in:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature		Average Arithmetic Correction		Fouling Correction
Specific Conductance		Average % Drift		% Fouling Correction
pH		Average Arithmetic Correction		Fouling Correction
Dissolved Oxygen		% Drift		% Fouling Correction

**Fouling conditions:**

**Environmental conditions:**

**Additional comments:**

**Lower Pecos River near Langtry (CAMS 799) (USGS 08447410) QW Monitor (WT, pH, DO, SC).**

**Scheduled visit.**

**Date of visit:** 08/12/2014

**Time of visit:** 1215

**Staff:** L. Pena, B. Selman

**Sonde out:** 11J100001

**Sonde in:** 11J100000

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.04	Average Arithmetic Correction	-0.01	Fouling Correction
Specific Conductance	-0.85	Average % Drift	1.18	% Fouling Correction
pH	-0.13	Average Arithmetic Correction	0.01	Fouling Correction
Dissolved Oxygen	1.08	% Drift	-1.39	% Fouling Correction

**Fouling conditions:** Sonde recovered with no visible fouling.

**Environmental conditions:** Weather conditions were hot, dry, clear and calm.

**Additional comments:** All data from the Pecos River event was recorded to the DCP. All data was downloaded from DCP and uploaded to NWIS.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447410%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447410%20&agency_cd=USGS)

**Pecos River nr. Orla, TX (CAMS 798) (USGS 08412500): SW full range + QW sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 08/19/2014

**Time of visit:** 1630

**Staff:** H. Jacques, L. Pena

**Sonde in:** 11J100002

**Sonde out:** 11J100006

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.08	Average Arithmetic Correction	-	Fouling Correction
Specific Conductance	-0.15	Average % Drift	-	% Fouling Correction
pH	-	Average Arithmetic Correction	-	Fouling Correction
Dissolved Oxygen	-	% Drift	-	% Fouling Correction

**Fouling conditions:** No visible fouling. Routine sonde swap in dry conditions.

**Environmental conditions:** At the time of the visit the weather was hot, partly cloudy, and breezy.

**Discharge information:** Site at no flow for the entire deployment period.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08412500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08412500%20&agency_cd=USGS)

**Pecos River @ Pecos, TX (CAMS 710) (USGS 08420500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 08/19/2014  
**Time of visit:** 1745  
**Staff:** H. Jacques, L. Pena  
**Sonde in:** 10K100289  
**Sonde out:** 10K100287

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	-	Fouling Correction
Specific Conductance	0.67	Average % Drift	-	% Fouling Correction
pH	-	Average Arithmetic Correction	-	Fouling Correction
Dissolved Oxygen	-	% Drift	-	% Fouling Correction

**Fouling conditions:** Routine sonde swap in dry conditions.

**Environmental conditions:** At the time of the visit the weather was hot, partly cloudy, and breezy.

**Discharge information:** Site dry for entire deployment period.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08420500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08420500&agency_cd=USGS)

**Pecos River @ RR1176 nr. Grandfalls, TX (CAMS 709) (USGS 08437710): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 08/20/2014  
**Time of visit:** 1630  
**Staff:** H. Jacques, L. Pena  
**Sonde out:** 10J101916  
**Sonde in:** 10K100290

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.08	Average Arithmetic Correction	--	Fouling Correction
Specific Conductance	0.82	Average % Drift	--	% Fouling Correction
pH	-0.12	Average Arithmetic Correction	--	Fouling Correction
Dissolved Oxygen	-0.71	% Drift	--	% Fouling Correction

**Fouling conditions:** Sonde condition was not recorded.

**Environmental conditions:** At the time of the visit the weather was hot, overcast and calm. Cloud to ground lightning nearby.

**Discharge information:** A discharge measurement was not made on this visit.

**Additional comments:** Due to the cloud to ground lightning and the pending heavy rain which could strand the truck in the clay and sand, the after cleaning values of the deployed sonde did not have enough time to equilibrate before departure. However, the before cleaning value comparisons between the two sondes are relatively good as indicated by a determination of the relative percent difference and is noted in the table below. The period cannot be rated.

Before cleaning values				
	Deployed Sonde	Field Sonde	Difference	rpd
Temperature	35.92	36.00	0.08	0.22
SC	36055	35817	238	0.66
pH	8.06	8.10	0.04	0.50
DO	11.36	10.45	0.91	8.30

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08437710&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08437710&agency_cd=USGS)

**Pecos River nr Girvin, TX (CAMS 785) (USGS 08446500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 08/20/2014

**Time of visit:** 1000

**Staff:** H. Jacques, L. Pena

**Sonde out:**

**Sonde in:** 10K100288

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	--	Average Arithmetic Correction	--	Fouling Correction
Specific Conductance	--	Average % Drift	--	% Fouling Correction
pH	--	Average Arithmetic Correction	--	Fouling Correction
Dissolved Oxygen	--	% Drift	--	% Fouling Correction

**Fouling conditions:**

**Environmental conditions:**

**Discharge information:** A discharge measurement was not made on this visit.

**Additional comments:** The road to the site was impassable due to recent heavy rain. A site visit couldn't be rescheduled until 09/04 due to a necessary trip to the Rio Grande sites the following week. Therefore, this site will have two visits in September.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08446500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08446500%20&agency_cd=USGS)

**Pecos River near Sheffield (CAMS 735) (USGS 08447000): SW Low Flow +QW Sonde (WT, SC, pH,**

DO)

**Scheduled visit.**

**Date of visit:** 08/21/2014

**Time of visit:** 1400

**Staff:** H. Jacques, L. Pena

**Sonde out:** 10J101915

**Sonde in:** 10J101909

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.05	Average Arithmetic Correction	-0.10	Fouling Correction
Specific Conductance	4.03	Average % Drift	5.64	% Fouling Correction
pH	-0.11	Average Arithmetic Correction	0.02	Fouling Correction
Dissolved Oxygen	-2.11	% Drift	-1.78	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling. ("No major fouling/silt found on monitor")

**Environmental conditions:** At the time of the visit the weather was hot, partly cloudy, and breezy.

**Discharge information:** A discharge measurement was not made on the visit.

**Additional comments:** ODO membrane replaced:

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447000&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447000&agency_cd=USGS)

**Caroline Springs at Oasis Ranch (CAMS 764) (USGS 08447018): QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 08/21/2014

**Time of visit:** 1200

**Staff:** H. Jacques, L. Pena

**Sonde out:** 10J101913

**Sonde in:** 10J101917

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	-0.03	Average Arithmetic Correction	0.03	Fouling Correction
Specific Conductance	-0.30	Average % Drift	0.34	% Fouling Correction
pH	-0.10	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	-0.48	% Drift	0.26	% Fouling Correction

**Fouling conditions:** Sonde recovered with no visible silt fouling.

**Environmental conditions:** At the time of the visit the weather was hot, partly cloudy, and breezy.

**Discharge information:** Discharge measurement made at Independence Creek USGS 08447020 at 12.1 cf/s and is rated poor.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447018%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447018%20&agency_cd=USGS)

**Pecos River nr Val-Verde Crockett (Brotherton Ranch) (CAMS 729) (USGS 08447300): SW Low Flow+QW Sonde (WT, SC, pH, DO)**

**Scheduled visit. \*\*\*STATION OUT-OF-SERVICE \*\*\***

**Date of visit:**

**Time of visit:**

**Staff:**

**Sonde out:**

**Sonde in:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	n/a	Average Arithmetic Correction	n/a	Fouling Correction
Specific Conductance	n/a	Average % Drift	n/a	% Fouling Correction
pH	n/a	Average Arithmetic Correction	n/a	Fouling Correction
Dissolved Oxygen	n/a	% Drift	n/a	% Fouling Correction

**Fouling conditions:**

**Environmental conditions:**

**Discharge information:**

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447300 &agency_cd=USGS)

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**July 2014 Progress Report:**

**Rio Grande ABV. Rio Conchos (CAMS 757) (USGS 08371500): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 07/11/2014  
**Time of visit:** 1200  
**Staff:** B. Lopez, S. Marr  
**Sonde out:** 06G2028AB  
**Sonde in:** 12F100880

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.02	Average Arithmetic Correction	-0.21	Fouling Correction
Specific Conductance	-1.08	Average % Drift	-1.13	% Fouling Correction
pH	-0.07	Average Arithmetic Correction	-0.08	Fouling Correction
Dissolved Oxygen	0.00	% Drift	-10.49	% Fouling Correction

**Fouling conditions:** Sonde recovered with very heavy silt, sediment and pea gravel fouling.

**Environmental conditions:** Very low flow. Weather conditions were hot plus hot, dry, partly cloudy and breezy.

**Additional comments:** Near zero flow. Sonde may become isolated soon.

**Scheduled visit.**

**Date of visit:** 07/30/2014  
**Time of visit:** 0915  
**Staff:** L. Pena, T. Dowell  
**Sonde out:** 12F100880  
**Sonde in:** 06G2028AB

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.00	Average Arithmetic Correction	7.72	Fouling Correction
Specific Conductance	-0.80	Average % Drift	140.9	% Fouling Correction
pH	-0.12	Average Arithmetic Correction	1.64	Fouling Correction
Dissolved Oxygen	1.97	% Drift	2361	% Fouling Correction

**Fouling conditions:** Sonde recovered with very heavy silt, sediment and pea gravel fouling.

**Environmental conditions:** Weather conditions were not recorded.

**Additional comments:** The site visit was originally planned to be a cleaning visit. The ODO membrane was found to be >50% scratched. A replacement sonde was deployed. The sonde removed will have the ODO membrane changed prior to the next deployment.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08371500 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08371500 &agency_cd=USGS)

**Rio Grande BLW. Rio Conchos (CAMS 758) (USGS 08374200): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 07/11/2014

**Time of visit:** 1030

**Staff:** B. Lopez, S. Marr

**Sonde out:** 12M100699

**Sonde in:** 12M100693

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.02	Average Arithmetic Correction	-0.25	Fouling Correction
Specific Conductance	-0.05	Average % Drift	20.42	% Fouling Correction
pH	-0.09	Average Arithmetic Correction	0.34	Fouling Correction
Dissolved Oxygen	4.76	% Drift	2256	% Fouling Correction

**Fouling conditions:** Sonde embedded in pea gravel and sediment. Sonde removed from deployment tube AFTER fouling was removed from the bottom of the deployment tube.

**Environmental conditions:** Weather conditions were warm, dry, partly cloudy, and breezy.

**Additional comments:** A new ODO membrane was installed on sonde 12M100699 prior to being deployed in June. However, the new membrane was installed one day prior to being deployed.

Appears the membrane needed a longer 'burn-in' time. Dissolved oxygen was recalibrated in the lab after the calibration verifications and allowed to log internally for 24 hours to check the calibration drift. New ODO membrane functions fine. The percent drift value is considered a pre-calibration technician error.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374200&agency_cd=USGS)

**Rio Grande dws Santa Elena Canyon, BBNP, TX (CAMS 802) (USGS 08374510): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 06/25/2014

**Time of visit:** 1600

**Staff:** B. Lopez, L. Pena

**Sonde out:** 12H100068

**Sonde in:** 12M100698

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.00	Average Arithmetic Correction	4.84	Fouling Correction
Specific Conductance	1.25	Average % Drift	-25.35	% Fouling Correction
pH	-0.11	Average Arithmetic Correction	0.92	Fouling Correction

Dissolved Oxygen	-0.82	% Drift	2408	% Fouling Correction
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**Fouling conditions:** Sonde recovered with very heavy fine-silt fouling. Sonde had to be pulled through a sediment plug in order to be removed.

**Environmental conditions:** Weather conditions at the time of the visit were hot, dry, clear and calm.

**Additional comments:**

**Scheduled visit.**

**Date of visit:** 07/29/2014

**Time of visit:** 0915

**Staff:** L. Pena, T. Dowell

**Sonde out:** 12M100698

**Sonde in:** 12H100068

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.02	Average Arithmetic Correction	-0.80	Fouling Correction
Specific Conductance	-0.83	Average % Drift	0.24	% Fouling Correction
pH	-0.08	Average Arithmetic Correction	0.78	Fouling Correction
Dissolved Oxygen	0.21	% Drift	1704	% Fouling Correction

**Fouling conditions:** Sonde recovered with heavy silt fouling.

**Environmental conditions:** Weather conditions at the time of the visit were hot, dry, clear and calm.

**Additional comments:** The site visit was originally planned to be a cleaning visit. The ODO membrane was found to be >50% scratched. A replacement sonde was deployed. The sonde removed will have the ODO membrane changed prior to the next deployment.

**Rio Grande at Castolon (CAMS 720) (USGS 08374550): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 07/10/2014

**Time of visit:** 1400

**Staff:** B. Lopez, S. Marr

**Discharge information:** Discharge was measured at 73.2cf/s and is rated good.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374550 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374550 &agency_cd=USGS)

**Rio Grande at Rio Grande Village (CAMS 721) (USGS 08375300): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 07/10/2014  
**Time of visit:** 0915  
**Staff:** B. Lopez, S. Marr  
**Sonde out:** 12F101031  
**Sonde in:** 12M100694

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	Unavailable	Average Arithmetic Correction	Unavailable	Fouling Correction
Specific Conductance	Unavailable	Average % Drift	Unavailable	% Fouling Correction
pH	Unavailable	Average Arithmetic Correction	Unavailable	Fouling Correction
Dissolved Oxygen	Unavailable	% Drift	Unavailable	% Fouling Correction

**Fouling conditions:** Sonde recovered with very moderate silt fouling.

**Environmental conditions:** Weather conditions were warm, dry, clear and calm.

**Discharge information:** Discharge was measured at 138cf/s and is rated good.

**Additional comments:** After cleaning the deployed sonde it would not "reconnect" to any display unit, alternate cable or to the DCP. Sonde would not connect to Ecowatch after returning from the field. True fouling conditions and calibration drift values are unknown. There is minimal difference between the last recorded deployed sonde value and the first recorded new sonde values. All data for all parameters will be unrated. Sonde 12F101031 is out-of-service.

**Cleaning visit.**

**Date of visit:** 07/10/2014  
**Time of visit:** 0915  
**Staff:** B. Lopez, S. Marr  
**Sonde out:** 12F101031  
**Sonde in:** 12M100694

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	n/a	Average Arithmetic Correction	0.63	Fouling Correction
Specific Conductance	n/a	Average % Drift	1.60	% Fouling Correction
pH	n/a	Average Arithmetic Correction	-0.31	Fouling Correction
Dissolved Oxygen	n/a	% Drift	17.99	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling.

**Environmental conditions:** Weather conditions were hot dry, clear and calm.

**Discharge information:** n/a

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08377200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08377200 &agency_cd=USGS)

**Rio Grande abv. Amistad (Fosters Ranch) (CAMS 759) (USGS 08377200) QW Monitor (WT, pH, DO, SC)**

**Scheduled visit. \*\*\*\*STATION OUT-OF-SERVICE\*\*\*\***

**Date of visit:**  
**Time of visit:**  
**Staff:**  
**Sonde out:**  
**Sonde in:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature		Average Arithmetic Correction		Fouling Correction
Specific Conductance		Average % Drift		% Fouling Correction
pH		Average Arithmetic Correction		Fouling Correction
Dissolved Oxygen		% Drift		% Fouling Correction

**Fouling conditions:**  
**Environmental conditions:**  
**Additional comments:**

**Lower Pecos River near Langtry (CAMS 799) (USGS 08447410) QW Monitor (WT, pH, DO, SC).**

**Scheduled visit.**

**Date of visit:** 07/09/2014  
**Time of visit:** 1200  
**Staff:** B. Lopez, S. Marr  
**Sonde out:** 11J100000  
**Sonde in:** 11J100001

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	0.53	Average % Drift	7.31	% Fouling Correction
pH	-0.04	Average Arithmetic Correction	0.01	Fouling Correction
Dissolved Oxygen	-0.82	% Drift	1.06	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling on sonde body and all probes except conductivity which had moderate fouling inside cavity.

**Environmental conditions:** Recent flood conditions. Weather conditions were hot, dry, partly cloudy and breezy.

**Additional comments:** All data from the Pecos River event was recorded to the DCP despite the loss of the solar panel. All data was downloaded from DCP and uploaded to NWIS.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447410%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447410%20&agency_cd=USGS)

**Pecos River nr. Orla, TX (CAMS 798) (USGS 08412500): SW full range + QW sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** Site was not visited in July

**Time of visit:**

**Staff:**

**Sonde in:** 11J100006

**Sonde out:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature		Average Arithmetic Correction	-	Fouling Correction
Specific Conductance		Average % Drift	-	% Fouling Correction
pH	-	Average Arithmetic Correction	-	Fouling Correction
Dissolved Oxygen	-	% Drift	-	% Fouling Correction

**Fouling conditions:**

**Environmental conditions:**

**Discharge information:**

**Additional comments:.**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08412500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08412500%20&agency_cd=USGS)

**Pecos River @ Pecos, TX (CAMS 710) (USGS 08420500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** Site was not visited in July

**Time of visit:**

**Staff:**

**Sonde in:** 10K100287

**Sonde out:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature		Average Arithmetic Correction	-	Fouling Correction
Specific Conductance		Average % Drift	-	% Fouling Correction
pH	-	Average Arithmetic Correction	-	Fouling Correction
Dissolved Oxygen	-	% Drift	-	% Fouling Correction

**Fouling conditions:**

**Environmental conditions:**

**Discharge information:**

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08420500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08420500&agency_cd=USGS)

**Pecos River @ RR1176 nr. Grandfalls, TX (CAMS 709) (USGS 08437710): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 07/10/2014

**Time of visit:** 0815

**Staff:** L. Pena, C. Carman

**Sonde out:** 10K100290

**Sonde in:** 10J101916

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	-0.08	Average Arithmetic Correction	0.03	Fouling Correction
Specific Conductance	-4.36	Average % Drift	-0.06	% Fouling Correction
pH	-0.12	Average Arithmetic Correction	0.13	Fouling Correction
Dissolved Oxygen	-0.48	% Drift	34.36	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt, biologic and scale fouling.

**Environmental conditions:** At the time of the visit the weather was warm, clear, and gusty.

**Discharge information:** A discharge measurement was not made on this visit.

**Additional comments:** Site is at base flow conditions.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08437710 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08437710 &agency_cd=USGS)

**Pecos River nr Girvin, TX (CAMS 785) (USGS 08446500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 07/09/2014

**Time of visit:** 0815

**Staff:** L. Pena, C. Carman

**Sonde out:** 07H101208

**Sonde in:** 10K100288

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	-0.06	Average Arithmetic Correction	0.13	Fouling Correction
Specific Conductance	0.61	Average % Drift	5.57	% Fouling Correction
pH	-0.07	Average Arithmetic Correction	0.05	Fouling Correction
Dissolved Oxygen	-0.71	% Drift	62.69	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate biological fouling and some silting.

**Environmental conditions:** At the time of the visit the weather was hot, dry, partly cloudy, and breezy.

**Discharge information:** A discharge measurement was made at 2.74cf/s and is rated good.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08446500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08446500%20&agency_cd=USGS)

**Pecos River near Sheffield (CAMS 735) (USGS 08447000): SW Low Flow +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 07/08/2014

**Time of visit:** 1400

**Staff:** L. Pena, C. Carman

**Sonde out:** 10J101909

**Sonde in:** 10J101915

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	-0.04	Average Arithmetic Correction	0.06	Fouling Correction
Specific Conductance	-0.42	Average % Drift	9.01	% Fouling Correction
pH	-0.04	Average Arithmetic Correction	-0.01	Fouling Correction
Dissolved Oxygen	-0.05	% Drift	-1.78	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt and biologic fouling.

**Environmental conditions:** At the time of the visit the weather was hot, dry, partly cloudy, and gusty.

**Discharge information:** A discharge measurement was made at 14.0cf/s and is rated good.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447000&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447000&agency_cd=USGS)

**Caroline Springs at Oasis Ranch (CAMS 764) (USGS 08447018): QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 07/09/2014

**Time of visit:** 1530

**Staff:** L. Pena, C. Carman

**Sonde out:** 10J101917

**Sonde in:** 10J101913

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	-0.03	Average Arithmetic Correction	0.03	Fouling Correction
Specific Conductance	-1.38	Average % Drift	1.04	% Fouling Correction
pH	-0.03	Average Arithmetic Correction	0.01	Fouling Correction
Dissolved Oxygen	-0.25	% Drift	0.26	% Fouling Correction

**Fouling conditions:** Sonde recovered with no visible silt fouling.

**Environmental conditions:** At the time of the visit the weather was hot, dry, partly cloudy, and gusty.

**Discharge information:** Discharge measurement was not made at Independence Creek USGS 08447020.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447018%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447018%20&agency_cd=USGS)

**Pecos River nr Val-Verde Crockett (Brotherton Ranch) (CAMS 729) (USGS 08447300): SW Low Flow+QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.** \*\*\*STATION OUT-OF-SERVICE \*\*\*

**Date of visit:**

**Time of visit:**

**Staff:**

**Sonde out:**

**Sonde in:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	n/a	Average Arithmetic Correction	n/a	Fouling Correction
Specific Conductance	n/a	Average % Drift	n/a	% Fouling Correction
pH	n/a	Average Arithmetic Correction	n/a	Fouling Correction
Dissolved Oxygen	n/a	% Drift	n/a	% Fouling Correction

**Fouling conditions:**

**Environmental conditions:**

**Discharge information:**

**Additional comments:**

**Scheduled visit.**

**Date of visit:** 07/31/2014

**Time of visit:**

**Staff:** L. Pena, T. Dowell

**Discharge information:** A discharge measurement was made at 76.1cf/s, and is rated fair.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447300&agency_cd=USGS)

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**June 2014 Progress Report:**

**Rio Grande ABV. Rio Conchos (CAMS 757) (USGS 08371500): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 06/17/2014  
**Time of visit:** 1345  
**Staff:** B. Lopez, L. Pena  
**Sonde out:** 12F100880  
**Sonde in:** 06G2028AB

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.02	Average Arithmetic Correction	-0.21	Fouling Correction
Specific Conductance	-1.08	Average % Drift	-1.13	% Fouling Correction
pH	-0.07	Average Arithmetic Correction	-0.08	Fouling Correction
Dissolved Oxygen	0.00	% Drift	-10.49	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling.

**Environmental conditions:** Very low flow. Weather conditions were hot, humid, partly cloudy and windy.

**Additional comments:**

**Cleaning visit.**

**Date of visit:** 06/24/2014  
**Time of visit:** 1600  
**Staff:** B. Lopez, L. Pena  
**Sonde out:**  
**Sonde in:** 06G2028AB

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	n/a	Average Arithmetic Correction	0.04	Fouling Correction
Specific Conductance	n/a	Average % Drift	-1.14	% Fouling Correction
pH	n/a	Average Arithmetic Correction	-0.02	Fouling Correction
Dissolved Oxygen	n/a	% Drift	-1.32	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.

**Environmental conditions:** Recent elevated flow 06/19 – 06/24, following period of no flow. Weather conditions were hot, humid, partly cloudy and breezy.

**Additional comments:**

**Rio Grande BLW. Rio Conchos (CAMS 758) (USGS 08374200): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 06/17/2014  
**Time of visit:** 1015  
**Staff:** B. Lopez, L. Pena  
**Sonde out:** 12M100693  
**Sonde in:** 12M100699

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	0.06	Fouling Correction
Specific Conductance	2.02	Average % Drift	411.24	% Fouling Correction
pH	-0.04	Average Arithmetic Correction	0.07	Fouling Correction
Dissolved Oxygen	0.00	% Drift	3798.0	% Fouling Correction

**Fouling conditions:** Sonde recovered with heavy silt and very heavy biological fouling.

**Environmental conditions:** Weather conditions were hot, humid, partly cloudy, and breezy.

**Additional comments:**

**Cleaning visit.**

**Date of visit:** 06/24/2014  
**Time of visit:** 1730  
**Staff:** B. Lopez, L. Pena  
**Sonde out:**  
**Sonde in:** 12M100669

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	n/a	Average Arithmetic Correction	0.22	Fouling Correction
Specific Conductance	n/a	Average % Drift	60.84	% Fouling Correction
pH	n/a	Average Arithmetic Correction	0.67	Fouling Correction
Dissolved Oxygen	n/a	% Drift	12660.0	% Fouling Correction

**Fouling conditions:** Sonde recovered with light biological fouling and small gravel. (Sonde fouling corrections do not match the recovery description. It is very possible the sonde was washed off during the removal from the deployment tube through the water column.)

**Environmental conditions:** Weather conditions were hot, humid, partly cloudy, and breezy.

**Additional comments:** Recent elevated flow 06/19 – 06/25. Small gravel has been moving through the reach for the last few visits. Possibly during discharge from Alamito Creek. An attempt to screen the probe guard to prevent the small gravel from entering the sonde guard was unsuccessful. The cable ties increased the diameter too much, preventing the ability to lower the sonde past the cabling.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374200 &agency_cd=USGS)

**Rio Grande dws Santa Elena Canyon, BBNP, TX (CAMS 802) (USGS 08374510): QW Monitor (WT, pH, DO, SC)**

**Installation visit.**

**Date of visit:** 06/18/2014

**Time of visit:** 0815

**Staff:** C. Carman, B. Lopez, L. Pena, T. Dowell

**Sonde out:**

**Sonde in:** 12H100068

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	n/a	Average Arithmetic Correction	n/a	Fouling Correction
Specific Conductance	n/a	Average % Drift	n/a	% Fouling Correction
pH	n/a	Average Arithmetic Correction	n/a	Fouling Correction
Dissolved Oxygen	n/a	% Drift	n/a	% Fouling Correction

**Fouling conditions:** n/a

**Environmental conditions:** Weather was warm, humid, partly cloudy and windy.

**Additional comments:** The installed DCP was not operational. Sonde was set up to log internally beginning 06/18. Data is pending downloading into USGS database.

**Scheduled visit.**

**Date of visit:** 06/25/2014

**Time of visit:** 1600

**Staff:** B. Lopez, L. Pena

**Sonde out:** 12H100068

**Sonde in:** 12M100698

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.00	Average Arithmetic Correction	n/a	Fouling Correction
Specific Conductance	-1.70	Average % Drift	n/a	% Fouling Correction
pH	-1.39	Average Arithmetic Correction	n/a	Fouling Correction
Dissolved Oxygen	-0.83	% Drift	n/a	% Fouling Correction

**Fouling conditions:** n/a

**Environmental conditions:** Weather conditions were not recorded.

**Additional comments:** A new DCP was installed and is operational. Unable to determine the level of fouling due to the sonde being in internal logging mode. In order to determine live values, it would be necessary to connect a display unit to the sonde. The sonde would have to be pulled up the deployment through the water column in order to connect the sonde to a display unit, thus washing the sonde. The recorded before and after visit data values indicated the difference between the deployed sonde and the newly deployed sonde are minimal. Calibration drift corrections will be applied. All data for the period will be classified as unrated.

**Rio Grande at Castolon (CAMS 720) (USGS 08374550): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Cleaning visit.**

**Date of visit:** 06/04/2014

**Time of visit:** 1830

**Staff:** L. Pena, T. Dowell

**Sonde out:** 05D1750AD

**Sonde in:** 12H100068

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	n/a	Average Arithmetic Correction	-0.07	Fouling Correction
Specific Conductance	n/a	Average % Drift	7.47*	% Fouling Correction
pH	n/a	Average Arithmetic Correction	-0.07	Fouling Correction
Dissolved Oxygen	n/a	% Drift	13.83	% Fouling Correction

**Fouling conditions:** Sonde recovered with very light silt fouling.

**Environmental conditions:** Weather was hot, dry, clear and calm.

**Discharge information:** A discharge measurement was not made.

**Additional comments:** \*Sonde recovered with a crack in the bulkhead at the SC port. Unable to confirm calibration verifications, sonde would not connect to display in laboratory. All data is unrated.

**Scheduled visit.**

**Date of visit:** 06/18/2014

**Time of visit:** 1030

**Staff:** B. Lopez, L. Pena

**Sonde out:** 12H100068

**Sonde in:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	n/a	Average Arithmetic Correction	n/a	Fouling Correction
Specific	n/a	Average % Drift	n/a	% Fouling

Conductance				Correction
pH	n/a	Average Arithmetic Correction	n/a	Fouling Correction
Dissolved Oxygen	n/a	% Drift	n/a	% Fouling Correction

**Fouling conditions:** n/a

**Environmental conditions:** Weather was hot, dry, clear and breezy.

**Discharge information:**

**Additional comments:** Site CWQM has been discontinued. Additional CWQM comments for 04/29 – 06/18: Observations and photographs show sonde located in an isolated pool on 04/29 and 06/04. The discharge on these dates and times are 13.4cf/s and 10cf/s, respectively. Without actual visual observations, it is unknown when the sonde was isolated or not for the entire period. Additional interpretation will be required before any retainable record is available.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374550 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374550 &agency_cd=USGS)

**Rio Grande at Rio Grande Village (CAMS 721) (USGS 08375300): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 06/18/2014

**Time of visit:** 1500

**Staff:** B. Lopez, L. Pena

**Sonde out:** 12M100694

**Sonde in:** 12F101031

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.09	Average Arithmetic Correction	0.75	Fouling Correction
Specific Conductance	-1.21	Average % Drift	7.85	% Fouling Correction
pH	-0.08	Average Arithmetic Correction	0.57	Fouling Correction
Dissolved Oxygen	0.00	% Drift	1540	% Fouling Correction

**Fouling conditions:** Sonde recovered with very heavy silt fouling.

**Environmental conditions:** Weather conditions were hot, humid, partly cloudy and breezy.

**Discharge information:** A discharge measurement was not made on this visit.

**Additional comments:**

**Cleaning visit.**

**Date of visit:** 06/20/2014

**Time of visit:** 1000

**Staff:** B. Lopez, L. Pena

**Sonde out:** 12M100694

**Sonde in:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	n/a	Average Arithmetic Correction	-1.48	Fouling Correction
Specific Conductance	n/a	Average % Drift	16.34	% Fouling Correction
pH	n/a	Average Arithmetic Correction	0.41	Fouling Correction
Dissolved Oxygen	n/a	% Drift	5.00	% Fouling Correction

**Fouling conditions:** Sonde recovered with very heavy silt and mud fouling.

**Environmental conditions:** Weather conditions were hot, humid, clear and breezy.

**Discharge information:** A discharge measurement was not made on this visit.

**Additional comments:** Fouling correction values will need further review. A technician error occurred in the field. The field sonde was deployed into the sediment plug in the tube. True environmental values were not obtained.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08377200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08377200 &agency_cd=USGS)

**Rio Grande abv. Amistad (Fosters Ranch) (CAMS 759) (USGS 08377200) QW Monitor (WT, pH, DO, SC)**

**Recovery visit.**

**Date of visit:** 06/06/2014

**Time of visit:** 1220

**Staff:** T. Dowell, L. Pena

**Sonde out:** 12F101030

**Sonde in:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.16	Average Arithmetic Correction	Unavailable	Fouling Correction
Specific Conductance	-1.23	Average % Drift	Unavailable	% Fouling Correction
pH	-0.04	Average Arithmetic Correction	Unavailable	Fouling Correction
Dissolved Oxygen	0.47	% Drift	Unavailable	% Fouling Correction

**Fouling conditions:** No fouling conditions could be determined due to flooding and failure of sonde cable.

**Environmental conditions:** Flood conditions occurred during period.

**Additional comments:** Calibration verification only. All data will is determined to be unrated. There is no sonde currently deployed

**Lower Pecos River near Langtry (CAMS 799) (USGS 08447410) QW Monitor (WT, pH, DO, SC).**

**Scheduled visit.**

**Date of visit:** 06/05/2014

**Time of visit:** 1600

Staff: B. Lopez, R. Kushnereit  
 Sonde out: 11J100000  
 Sonde in: 11J100001

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.07	Average Arithmetic Correction	0.02	Fouling Correction
Specific Conductance	-2.95	Average % Drift	0.16	% Fouling Correction
pH	-0.05	Average Arithmetic Correction	-0.01	Fouling Correction
Dissolved Oxygen	0.28	% Drift	0.00	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling  
**Environmental conditions:** Recent flood conditions. Weather conditions were hot, dry. Clear and breezy.  
**Additional comments:** Conductance probe replaced.

**Scheduled visit.**

**Date of visit:** 06/16/2014  
**Time of visit:** 1400  
**Staff:** B. Lopez, L. Pena  
**Sonde out:** 11J100001  
**Sonde in:** 11J100000

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.05	Average Arithmetic Correction	0.26	Fouling Correction
Specific Conductance	-0.56	Average % Drift	0.98	% Fouling Correction
pH	-0.09	Average Arithmetic Correction	0.01	Fouling Correction
Dissolved Oxygen	0.59	% Drift	1.65	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling  
**Environmental conditions:** Weather conditions were hot, humid, overcast and gusty.  
**Additional comments**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447410%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447410%20&agency_cd=USGS)

**Pecos River nr. Orla, TX (CAMS 798) (USGS 08412500): SW full range + QW sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 06/10/2014  
**Time of visit:** 1200  
**Staff:** L. Pena, B. Lopez  
**Sonde in:** 11J100006  
**Sonde out:** 11J100002

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.01	Average Arithmetic Correction	-	Fouling Correction
Specific Conductance	0.58	Average % Drift	-	% Fouling Correction
pH	-	Average Arithmetic Correction	-	Fouling Correction
Dissolved Oxygen	-	% Drift	-	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt. However site was dry for the entire period.

**Environmental conditions:** At the time of visit the weather was hot, clear, and calm.

**Discharge information:** N/A

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08412500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08412500%20&agency_cd=USGS)

**Pecos River @ Pecos, TX (CAMS 710) (USGS 08420500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 06/10/2014

**Time of visit:** 1500

**Staff:** L. Pena, B. Lopez

**Sonde in:** 10K100287

**Sonde out:** 10K100289

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.00	Average Arithmetic Correction	-	Fouling Correction
Specific Conductance	0.67	Average % Drift	-	% Fouling Correction
pH	-	Average Arithmetic Correction	-	Fouling Correction
Dissolved Oxygen	-	% Drift	-	% Fouling Correction

**Fouling conditions:** None, site was dry.

**Environmental conditions:** At the time of visit the weather was hot, clear, and calm.

**Discharge information:**

**Additional comments.**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08420500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08420500&agency_cd=USGS)

**Pecos River @ RR1176 nr. Grandfalls, TX (CAMS 709) (USGS 08437710): SW full range +QW Sonde**

(WT, SC, pH, DO)

**Scheduled visit.**

**Date of visit:** 06/10/2014

**Time of visit:** 1715

**Staff:** L. Pena, B. Lopez

**Sonde out:** 10J101916

**Sonde in:** 10K100290

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.07	Average Arithmetic Correction	0.06	Fouling Correction
Specific Conductance	-1.21	Average % Drift	2.81	% Fouling Correction
pH	-0.05	Average Arithmetic Correction	0.08	Fouling Correction
Dissolved Oxygen	-0.61	% Drift	-6.71	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.

**Environmental conditions:** At the time of the visit the weather was hot, clear, and calm.

**Discharge information:** Measurement was made discharge was 0.48 cfs and was rated poor.

**Additional comments:** Site is at base flow conditions.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08437710&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08437710&agency_cd=USGS)

**Pecos River nr Girvin, TX (CAMS 785) (USGS 08446500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 06/11/2014

**Time of visit:** 1630

**Staff:** L. Pena, B. Lopez

**Sonde out:** 10K100288

**Sonde in:** 07H101208

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.02	Average Arithmetic Correction	0.04	Fouling Correction
Specific Conductance	-0.29	Average % Drift	1.67	% Fouling Correction
pH	-0.06	Average Arithmetic Correction	0.10	Fouling Correction
Dissolved Oxygen	0.62	% Drift	2.66	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.

**Environmental conditions:** At the time of the visit the weather was hot, partly cloudy, and windy.

**Discharge information:** A discharge measurement was not made.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08446500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08446500%20&agency_cd=USGS)

**Pecos River near Sheffield (CAMS 735) (USGS 08447000): SW Low Flow +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 06/12/2014

**Time of visit:** 1000

**Staff:** L. Pena, B. Lopez

**Sonde out:** 10J101915

**Sonde in:** 10J101909

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.04	Average Arithmetic Correction	-0.05	Fouling Correction
Specific Conductance	-0.95	Average % Drift	2.09	% Fouling Correction
pH	-0.05	Average Arithmetic Correction	-0.04	Fouling Correction
Dissolved Oxygen	-3.66	% Drift	-0.27	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.

**Environmental conditions:** At the time of the visit the weather was warm, dry, clear, and calm.

**Discharge information:** A discharge measurement was not made.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447000&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447000&agency_cd=USGS)

**Caroline Springs at Oasis Ranch (CAMS 764) (USGS 08447018): QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 06/12/2014

**Time of visit:** 1215

**Staff:** L. Pena, B. Lopez

**Sonde out:** 10J101913

**Sonde in:** 10J101917

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.08	Average Arithmetic Correction	0.01	Fouling Correction
Specific Conductance	-0.69	Average % Drift	0.23	% Fouling Correction
pH	-0.10	Average Arithmetic Correction	-0.06	Fouling Correction
Dissolved Oxygen	-0.36	% Drift	1.31	% Fouling Correction

**Fouling conditions:** Sonde recovered with no visible silt fouling on probes.

**Environmental conditions:** At the time of the visit the weather was hot, clear, and calm.

**Discharge information:** Discharge measurement was made at Independence Creek USGS 08447020 of 31.8 cfs and is rated good.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447018%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447018%20&agency_cd=USGS)

**Pecos River nr Val-Verde Crockett (Brotherton Ranch) (CAMS 729) (USGS 08447300): SW Low Flow+QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 06/03/2014

**Time of visit:** 1445

**Staff:** L. Pena, T. Dowell

**Sonde out:** 10J100292 (MIA)

**Sonde in:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	n/a	Average Arithmetic Correction	n/a	Fouling Correction
Specific Conductance	n/a	Average % Drift	n/a	% Fouling Correction
pH	n/a	Average Arithmetic Correction	n/a	Fouling Correction
Dissolved Oxygen	n/a	% Drift	n/a	% Fouling Correction

**Fouling conditions:**

**Environmental conditions:** At the time of the visit the weather was hot, clear and calm.

**Discharge information:**

**Additional comments:** Unable to locate sonde 10J100292. Sonde lost on 05/25 during flooding event:

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447300 &agency_cd=USGS)

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**May 2014 Progress Report:**

**Rio Grande ABV. Rio Conchos (CAMS 757) (USGS 08371500): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 05/28/2014

**Time of visit:** 1600

**Staff:** B. Lopez, L. Pena

**Sonde out:** 06G2028AB

**Sonde in:** 12F100880

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.08	Average Arithmetic Correction	-0.16	Fouling Correction
Specific Conductance	-0.91	Average % Drift	7.04	% Fouling Correction
pH	-0.12	Average Arithmetic Correction	0.18	Fouling Correction
Dissolved Oxygen	0.47	% Drift	-5.92	% Fouling Correction

**Fouling conditions:** Sonde recovered with heavy silt fouling.

**Environmental conditions:** Weather conditions were hot, dry, partly cloudy and gusty winds.

**Additional comment:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08371500 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08371500 &agency_cd=USGS)

**Rio Grande BLW. Rio Conchos (CAMS 758) (USGS 08374200): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 05/28/2014

**Time of visit:** 1815

**Staff:** B. Lopez, L. Pena

**Sonde out:** 12M100699

**Sonde in:** 12M100693

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	-0.03	Fouling Correction
Specific Conductance	-1.72	Average % Drift	1.54	% Fouling Correction
pH	0.05	Average Arithmetic Correction	-0.10	Fouling Correction
Dissolved Oxygen	0.35	% Drift	-6.06	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling and heavy gravel.  
**Environmental conditions:** Weather conditions were hot, dry, partly cloudy, and windy.  
**Additional comments:** ODO membrane scratched > 30%; new membrane installed.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374200 &agency_cd=USGS)

**Rio Grande at Castolon (CAMS 720) (USGS 08374550): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Cleaning visit.**

**Date of visit:** 05/29/14  
**Time of visit:** 1600  
**Staff:** B. Lopez, L. Pena  
**Sonde out:**  
**Sonde in:** 05D1750AD

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature		Average Arithmetic Correction		Fouling Correction
Specific Conductance		Average % Drift		% Fouling Correction
pH		Average Arithmetic Correction		Fouling Correction
Dissolved Oxygen		% Drift		% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling.  
**Environmental conditions:** Weather was hot, dry, clear and with a breeze.  
**Discharge information:** A discharge measurement was made on this visit. Measured 13.4cf/s, and is rated good.  
**Additional comments:** Sonde is in an isolated pool.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374550 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374550 &agency_cd=USGS)

**Rio Grande at Rio Grande Village (CAMS 721) (USGS 08375300): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Date of visit:** 05/29/2014  
**Time of visit:** 1000  
**Staff:** B. Lopez, L. Pena  
**Sonde out:** 12F101031  
**Sonde in:** 12M100694

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.08	Average Arithmetic Correction	0.22	Fouling Correction

Specific Conductance	0.30	Average % Drift	4.18	% Fouling Correction
pH	0.10	Average Arithmetic Correction	0.07	Fouling Correction
Dissolved Oxygen	0.00	% Drift	6.24	% Fouling Correction

**Fouling conditions:** Sonde recovered moderate silt fouling.

**Environmental conditions:** Weather conditions were hot, humid, partly cloudy and breezy.

**Discharge information:** A discharge measurement was not made on this visit.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08375300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08375300 &agency_cd=USGS)

**Rio Grande abv. Amistad (Fosters Ranch) (CAMS 759) (USGS 08377200) QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:**

**Time of visit:**

**Staff:**

**Sonde out:**

**Sonde in:** 12F101030

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature		Average Arithmetic Correction		Fouling Correction
Specific Conductance		Average % Drift		% Fouling Correction
pH		Average Arithmetic Correction		Fouling Correction
Dissolved Oxygen		% Drift		% Fouling Correction

**Fouling conditions:**

**Environmental conditions:** Flood conditions occurred during period.

**Additional comments:** Unable to access site due to recent flood conditions. Sonde failure on 05/24 most likely due to a short in the temporary spliced cable that was severed by IBWC on 02/28.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08377200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08377200 &agency_cd=USGS)

**Lower Pecos River near Langtry (CAMS 799) (USGS 08447410) QW Monitor (WT, pH, DO, SC).**

**Scheduled visit.**

**Date of visit:**

**Time of visit:**

**Staff:**

**Sonde out:**

Sonde in: 11J100001

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature		Average Arithmetic Correction		Fouling Correction
Specific Conductance		Average % Drift		% Fouling Correction
pH		Average Arithmetic Correction		Fouling Correction
Dissolved Oxygen		% Drift		% Fouling Correction

**Fouling conditions:**

**Environmental conditions:** Recent flood conditions.

**Additional comments:** Unable to access site due to high flow and/or mud pit conditions. Site visit scheduled for 06/05.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447410%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447410%20&agency_cd=USGS)

**Pecos River nr. Orla, TX (CAMS 798) (USGS 08412500): SW full range + QW sonde (WT, SC, pH, DO)**

**Scheduled visit. Site not visited in May, Dry**

**Date of visit:**

**Time of visit:**

**Staff:**

**Sonde in:** 11J100002

**Sonde out:** 11J100006

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature		Average Arithmetic Correction	-	Fouling Correction
Specific Conductance		Average % Drift	-	% Fouling Correction
pH	-	Average Arithmetic Correction	-	Fouling Correction
Dissolved Oxygen	-	% Drift	-	% Fouling Correction

**Fouling conditions:**

**Environmental conditions:**

**Discharge information:**

**Additional comments:.**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08412500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08412500%20&agency_cd=USGS)

**Pecos River @ Pecos, TX (CAMS 710) (USGS 08420500): SW full range +QW Sonde (WT, SC, pH,**

DO)

**Scheduled visit. Site not visited in May, Dry**

**Date of visit:**

**Time of visit:**

**Staff:**

**Sonde in:** 10K100287

**Sonde out:** 10K100289

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature		Average Arithmetic Correction	-	Fouling Correction
Specific Conductance		Average % Drift	-	% Fouling Correction
pH	-	Average Arithmetic Correction	-	Fouling Correction
Dissolved Oxygen	-	% Drift	-	% Fouling Correction

**Fouling conditions:**

**Environmental conditions:**

**Discharge information:**

**Additional comments.**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08420500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08420500&agency_cd=USGS)

**Pecos River @ RR1176 nr. Grandfalls, TX (CAMS 709) (USGS 08437710): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 05/13/2014

**Time of visit:** 1445

**Staff:** B. Lopez, S. Marr, L. Pena

**Sonde out:** 10K100290

**Sonde in:** 10J101916

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.00	Average Arithmetic Correction	-0.03	Fouling Correction
Specific Conductance	-1.40	Average % Drift	0.60	% Fouling Correction
pH	-0.11	Average Arithmetic Correction	0.08	Fouling Correction
Dissolved Oxygen	0.71	% Drift	4.92	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling.

**Environmental conditions:** At the time of the visit the weather was cool, mostly cloudy, and windy.

**Discharge information:** Discharge was not measured.

**Additional comments:** Site is at base flow conditions.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08437710 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08437710&agency_cd=USGS)

**Pecos River nr Girvin, TX (CAMS 785) (USGS 08446500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 05/13/2014

**Time of visit:** 1215

**Staff:** B. Lopez, S. Marr, L. Pena

**Sonde out:** 07H101208

**Sonde in:** 10K100288

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.04	Average Arithmetic Correction	0.18	Fouling Correction
Specific Conductance	-0.73	Average % Drift	1.04	% Fouling Correction
pH	-0.06	Average Arithmetic Correction	0.09	Fouling Correction
Dissolved Oxygen	0.70	% Drift	5.47	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling.

**Environmental conditions:** Environmental conditions were not recorded

**Discharge information:** A discharge measurement was not made.

**Additional comments.**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08446500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08446500%20&agency_cd=USGS)

**Pecos River near Sheffield (CAMS 735) (USGS 08447000): SW Low Flow +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 05/14/2014

**Time of visit:** 0915

**Staff:** B. Lopez, S. Marr, L. Pena

**Sonde out:** 10J101909

**Sonde in:** 10J101915

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.04	Average Arithmetic Correction	-0.09	Fouling Correction
Specific Conductance	0.06	Average % Drift	1.06	% Fouling Correction
pH	-0.05	Average Arithmetic Correction	-0.04	Fouling Correction
Dissolved Oxygen	0.35	% Drift	1.85	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.

**Environmental conditions:** At the time of the visit the weather was cool, dry, clear, and calm winds.

**Discharge information:** A discharge measurement was not made.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447000&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447000&agency_cd=USGS)

**Caroline Springs at Oasis Ranch (CAMS 764) (USGS 08447018): QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 05/14/2014

**Time of visit:** 1130

**Staff:** B. Lopez, S. Marr, L. Pena

**Sonde out:** 10J101917

**Sonde in:** 10J101913

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.05	Average Arithmetic Correction	0.01	Fouling Correction
Specific Conductance	0.20	Average % Drift	-0.68	% Fouling Correction
pH	-0.10	Average Arithmetic Correction	0.02	Fouling Correction
Dissolved Oxygen	-1.39	% Drift	0.89	% Fouling Correction

**Fouling conditions:** Sonde recovered with no visible silt fouling on probes.

**Environmental conditions:** At the time of the visit the weather was cool, dry, clear, and windy.

**Discharge information:** A discharge measurement was not made at Independence Creek USGS 08447020.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447018%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447018%20&agency_cd=USGS)

**Pecos River nr Val-Verde Crockett (Brotherton Ranch) (CAMS 729) (USGS 08447300): SW Low Flow+QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 05/14/2014

**Time of visit:** 1430

**Staff:** B. Lopez, S. Marr, L. Pena

**Sonde out:** 10K101911

**Sonde in:** 10J100292

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.07	Average Arithmetic Correction	0.02	Fouling Correction
Specific Conductance	-0.13	Average % Drift	10.30	% Fouling Correction
pH	-0.03	Average Arithmetic Correction	0.04	Fouling Correction
Dissolved Oxygen	1.43	% Drift	-2.85	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling.

**Environmental conditions:** At the time of the visit the weather was hot, dry, clear and calm.

**Discharge information:** A discharge measurement was not made at this visit.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447300&agency_cd=USGS)

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**April 2014 Progress Report:**

**Rio Grande ABV. Rio Conchos (CAMS 757) (USGS 08371500): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 04/01/2014  
**Time of visit:** 1400  
**Staff:** B. Lopez, T. Dowell  
**Sonde out:** 06G2028AB  
**Sonde in:** 12F100880

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.07	Average Arithmetic Correction	-0.03	Fouling Correction
Specific Conductance	-0.87	Average % Drift	2.99	% Fouling Correction
pH	-0.12	Average Arithmetic Correction	0.05	Fouling Correction
Dissolved Oxygen	-0.69	% Drift	-0.75	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.

**Environmental conditions:** Weather conditions were hot, partly cloudy and breezy.

**Additional comments:**

**Scheduled visit.**

**Date of visit:** 04/30/2014  
**Time of visit:** 0915  
**Staff:** B. Lopez, G. Webb  
**Sonde out:** 12F100880  
**Sonde in:** 06G2028AB

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.08	Average Arithmetic Correction	0.21	Fouling Correction
Specific Conductance	-3.39	Average % Drift	0.80	% Fouling Correction
pH	-0.11	Average Arithmetic Correction	0.08	Fouling Correction
Dissolved Oxygen	-0.34	% Drift	4.06	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.

**Environmental conditions:** Weather conditions were cool, dry, overcast and windy.

**Additional comments:** New conductivity probe installed.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08371500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08371500&agency_cd=USGS)

**Rio Grande BLW. Rio Conchos (CAMS 758) (USGS 08374200): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.****Date of visit:** 04/01/2014**Time of visit:** 1600**Staff:** B. Lopez, T. Dowell**Sonde out:** 12M100699**Sonde in:** 08C100065**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.04	Average Arithmetic Correction	-0.01	Fouling Correction
Specific Conductance	-0.91	Average % Drift	44.9	% Fouling Correction
pH	-0.02	Average Arithmetic Correction	0.17	Fouling Correction
Dissolved Oxygen	0.11	% Drift	0.07	% Fouling Correction

**Fouling conditions:** Sonde recovered with very heavy fouling. SC cavity had heavy silt fouling. pH probe had 'sticky' fouling on bulb.

**Environmental conditions:** Weather conditions were hot, partly cloudy and windy.

**Additional comments:** Bottom section of secondary deployment tube is missing, presumed to be stolen.

**Scheduled visit.****Date of visit:** 04/30/2014**Time of visit:** 1130**Staff:** B. Lopez, G. Webb**Sonde out:** 12M100693**Sonde in:** 12M100699**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.05	Average Arithmetic Correction	0.01	Fouling Correction
Specific Conductance	-0.79	Average % Drift	42.39	% Fouling Correction
pH	-0.03	Average Arithmetic Correction	0.03	Fouling Correction
Dissolved Oxygen	-0.34	% Drift	-1.26	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate fouling.

**Environmental conditions:** Weather conditions were warm, dry, overcast, and gusty.

**Additional comments:** ODO membrane scratched > 30%; new membrane installed.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374200 &agency_cd=USGS)

**Rio Grande at Castolon (CAMS 720) (USGS 08374550):** *SW Full Range + QW Monitor (WT, pH, DO, SC)*

**Scheduled visit.**

**Date of visit:** 04/02/14  
**Time of visit:** 0900  
**Staff:** B. Lopez, T. Dowell  
**Sonde out:** 05D1750AD  
**Sonde in:** 06G1797AA

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.14	Average Arithmetic Correction	-0.03	Fouling Correction
Specific Conductance	-4.97	Average % Drift	12.0	% Fouling Correction
pH	-0.04	Average Arithmetic Correction	0.04	Fouling Correction
Dissolved Oxygen	-1.12	% Drift	-0.67	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.  
**Environmental conditions:** Weather was warm and windy.  
**Discharge information:** A discharge measurement was made at 47.7 and is rated good.  
**Additional comments:** NPS trenched the area on 03/29 & 03/30 in order to get their pump operational. No visible effect to fouling on sonde or in sonde deployment tube. Conductance standards checked twice. Conductance probe replaced.

**Scheduled visit.**

**Date of visit:** 04/29/14  
**Time of visit:** 1545  
**Staff:** B. Lopez, G. Webb  
**Sonde out:** 06G1797AA (retired)  
**Sonde in:** 05D1750AD

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.04	Average Arithmetic Correction	-0.01	Fouling Correction
Specific Conductance	-1.27	Average % Drift	1.37	% Fouling Correction
pH	-0.03	Average Arithmetic Correction	-0.09	Fouling Correction
Dissolved Oxygen	0.91	% Drift	1.21	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling.  
**Environmental conditions:** Weather was hot, dry, clear and with a breeze.  
**Discharge information:** A discharge measurement was not made on this visit.  
**Additional comments:** NPS somewhat isolated the sonde in a pool when trying to route water to their pump. The small cobble barrier that was blocking good flow was removed, allowing better flow past the monitor. Spoke with NPS personnel regarding this manner. Sonde 06G1797AA is retired from service. Sonde 12H100068 will be placed in service and will begin its journey at the *new* Castolon site. Wish it well.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374550 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374550 &agency_cd=USGS)

**Rio Grande at Rio Grande Village (CAMS 721) (USGS 08375300): SW Full Range + QW Monitor (WT, pH, DO, SC)**

Date of visit: 04/02/2014  
Time of visit: 1245  
Staff: B. Lopez, T. Dowell  
Sonde out: 12F101031  
Sonde in: 12M100694

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.06	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	-0.10	Average % Drift	5.69	% Fouling Correction
pH	0.04	Average Arithmetic Correction	0.03	Fouling Correction
Dissolved Oxygen	-0.46	% Drift	2.26	% Fouling Correction

**Fouling conditions:** Sonde recovered light silt fouling.

**Environmental conditions:** Weather conditions were warm, partly cloudy, and windy.

**Discharge information:** Discharge was measured at 68.1cf/s and is rated good.

**Additional comments:**

Date of visit: 04/29/2014  
Time of visit: 1030  
Staff: B. Lopez, T. Dowell  
Sonde out: 12M100694  
Sonde in: 12F101031

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.12	Average Arithmetic Correction	0.10	Fouling Correction
Specific Conductance	-1.26	Average % Drift	-6.02	% Fouling Correction
pH	-0.05	Average Arithmetic Correction	0.10	Fouling Correction
Dissolved Oxygen	-0.11	% Drift	9.93	% Fouling Correction

**Fouling conditions:** Sonde recovered heavy silt fouling.

**Environmental conditions:** Weather conditions were hot, dry, clear and breezy.

**Discharge information:** Discharge was measured at 68.1cf/s and is rated good.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08375300&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08375300&agency_cd=USGS)

**Rio Grande abv. Amistad (Fosters Ranch) (CAMS 759) (USGS 08377200) QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.****Date of visit:** 04/03/2014**Time of visit:** 1115**Staff:** B. Lopez, T. Dowell**Sonde out:** 12F101030**Sonde in:** 12H100069**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.12	Average Arithmetic Correction	0.11	Fouling Correction
Specific Conductance	-0.98	Average % Drift	0.33	% Fouling Correction
pH	-0.02	Average Arithmetic Correction	0.01	Fouling Correction
Dissolved Oxygen	0.34	% Drift	1.40	% Fouling Correction

**Fouling conditions:** Sonde recovered with no visible fouling.**Environmental conditions:** Weather conditions were hot, humid, clear and breezy.**Additional comments:****Scheduled visit.****Date of visit:** 04/28/2014**Time of visit:** 1600**Staff:** B. Lopez, G. Webb**Sonde out:** 12H100069**Sonde in:** 12F101030**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.11	Average Arithmetic Correction	0.07	Fouling Correction
Specific Conductance	-0.98	Average % Drift	2.74	% Fouling Correction
pH	-0.16	Average Arithmetic Correction	-0.05	Fouling Correction
Dissolved Oxygen	0.00	% Drift	0.62	% Fouling Correction

**Fouling conditions:** Sonde recovered with very light silt fouling.**Environmental conditions:** Weather conditions were hot, dry, clear and gusty.**Additional comments:** A new pH probe was installed.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08377200&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08377200&agency_cd=USGS)

**Lower Pecos River near Langtry (CAMS 799) (USGS 08447410) QW Monitor (WT, pH, DO, SC).****Scheduled visit.****Date of visit:** 04/03/2014

**Time of visit:** 1330  
**Staff:** B. Lopez, T. Dowell  
**Sonde out:** 11J100001  
**Sonde in:** 11J100000

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.07	Average Arithmetic Correction	0.01	Fouling Correction
Specific Conductance	-2.51	Average % Drift	-0.21	% Fouling Correction
pH	0.01	Average Arithmetic Correction	0.02	Fouling Correction
Dissolved Oxygen	-0.68	% Drift	-0.35	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.  
**Environmental conditions:** Weather conditions were hot, humid, clear and breezy.  
**Additional comments:** pH 7 millivolts near 45mV; pH probe replaced.

**Scheduled visit.**

**Date of visit:** 04/28/2014  
**Time of visit:** 1330  
**Staff:** B. Lopez, G. Webb  
**Sonde out:** 11J100000  
**Sonde in:** 11J100001

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.04	Average Arithmetic Correction	-0.01	Fouling Correction
Specific Conductance	-1.02	Average % Drift	1.21	% Fouling Correction
pH	-0.03	Average Arithmetic Correction	0.04	Fouling Correction
Dissolved Oxygen	2.70	% Drift	-2.88	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.  
**Environmental conditions:** Weather conditions were hot, humid, clear and breezy.  
**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447410%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447410%20&agency_cd=USGS)

**Pecos River nr. Orla, TX (CAMS 798) (USGS 08412500): SW full range + QW sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 04/15/2014  
**Time of visit:** 1215  
**Staff:** B. Lopez, T. Dowell  
**Sonde in:** 11J100002  
**Sonde out:** 11J100006

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.07	Average Arithmetic Correction	-	Fouling Correction
Specific Conductance	-0.05	Average % Drift	-	% Fouling Correction
pH	-	Average Arithmetic Correction	-	Fouling Correction
Dissolved Oxygen	-	% Drift	-	% Fouling Correction

**Fouling conditions:** n/a**Environmental conditions:** At the time of the visit the weather was cool, clear and windy.**Discharge information:** Site is at no flow.**Additional comments:** 2-parameter sonde replaced.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08412500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08412500%20&agency_cd=USGS)

**Pecos River @ Pecos, TX (CAMS 710) (USGS 08420500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.****Date of visit:** 04/15/2014**Time of visit:** 1645**Staff:** B. Lopez, T. Dowell**Sonde in:** 10K100287**Sonde out:** 10K100289**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.04	Average Arithmetic Correction	-	Fouling Correction
Specific Conductance	-0.22	Average % Drift	-	% Fouling Correction
pH	-	Average Arithmetic Correction	-	Fouling Correction
Dissolved Oxygen	-	% Drift	-	% Fouling Correction

**Fouling conditions:** n/a**Environmental conditions:** At the time of the visit the weather was warm, clear and windy.**Discharge information:** Site is at no flow.**Additional comments:** 2-parameter sonde replaced.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08420500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08420500&agency_cd=USGS)

**Pecos River @ RR1176 nr. Grandfalls, TX (CAMS 709) (USGS 08437710): SW full range +QW Sonde**

(WT, SC, pH, DO)

**Scheduled visit.**

**Date of visit:** 04/16/2014

**Time of visit:** 1200

**Staff:** B. Lopez, T. Dowell

**Sonde out:** 10J101916

**Sonde in:** 10K100290

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.06	Average Arithmetic Correction	0.31	Fouling Correction
Specific Conductance	-0.52	Average % Drift	-0.02	% Fouling Correction
pH	-0.1	Average Arithmetic Correction	0.04	Fouling Correction
Dissolved Oxygen	1.46	% Drift	-0.75	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.

**Environmental conditions:** At the time of the visit the weather was warm, partly cloudy, and windy.

**Discharge information:** Discharge was measured at 0.92 cfs, and is rated poor.

**Additional comments:** Site is at base flow conditions.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08437710 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08437710 &agency_cd=USGS)

**Pecos River nr Girvin, TX (CAMS 785) (USGS 08446500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 04/16/2014

**Time of visit:** 0915

**Staff:** B. Lopez, T. Dowell

**Sonde out:** 10K100288

**Sonde in:** 07H101200

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	0.95	Fouling Correction
Specific Conductance	-0.44	Average % Drift	4.69	% Fouling Correction
pH	-0.02	Average Arithmetic Correction	0.17	Fouling Correction
Dissolved Oxygen	0.00	% Drift	10.09	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.

**Environmental conditions:** At the time of the visit the weather was cold, clear, and windy with gusts.

**Discharge information:** A discharge measurement was made at 7.75 cfs, and is rated good.

**Additional comments:** Conductance probe near 3.0% drift. Probe replaced.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08446500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08446500%20&agency_cd=USGS)

**Pecos River near Sheffield (CAMS 735) (USGS 08447000): SW Low Flow +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 04/17/2014

**Time of visit:** 1300

**Staff:** B. Lopez, T. Dowell

**Sonde out:** 10J101915

**Sonde in:** 10J101909

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.06	Average Arithmetic Correction	-0.07	Fouling Correction
Specific Conductance	0.11	Average % Drift	8.00	% Fouling Correction
pH	-0.09	Average Arithmetic Correction	0.04	Fouling Correction
Dissolved Oxygen	-1.77	% Drift	1.15	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling.

**Environmental conditions:** At the time of the visit the weather was warm, partly cloudy and breezy.

**Discharge information:** A discharge measurement was made at 14.0 cfs, and is rated poor.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447000&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447000&agency_cd=USGS)

**Caroline Springs at Oasis Ranch (CAMS 764) (USGS 08447018): QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 04/17/2014

**Time of visit:** 1130

**Staff:** B. Lopez, T. Dowell

**Sonde out:** 10J101913

**Sonde in:** 10J101917

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.08	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	-0.69	Average % Drift	0.23	% Fouling Correction
pH	-0.06	Average Arithmetic Correction	0.01	Fouling Correction
Dissolved Oxygen	-0.80	% Drift	-0.26	% Fouling Correction

**Fouling conditions:** Sonde recovered with no visible silt fouling on probes fouling.

**Environmental conditions:** At the time of the visit the weather was warm, partly cloudy and breezy.

**Discharge information:** A discharge measurement was made at Independence Creek USGS 08447020 at 17.9 cfs, and is rated good.

**Additional comments:** A fast response pH probe was installed.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447018%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447018%20&agency_cd=USGS)

**Pecos River nr Val-Verde Crockett (Brotherton Ranch) (CAMS 729) (USGS 08447300): SW Low Flow+QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 04/17/2014

**Time of visit:** 1000

**Staff:** B. Lopez, T. Dowell

**Sonde out:** 10J100292

**Sonde in:** 10K101911

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	0.47	Average % Drift	10.26	% Fouling Correction
pH	-0.02	Average Arithmetic Correction	-0.02	Fouling Correction
Dissolved Oxygen	-0.24	% Drift	0.95	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling.

**Environmental conditions:** At the time of the visit the weather was cold, humid, cloudy, and breezy.

**Discharge information:** A discharge measurement was not made at this visit.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447300 &agency_cd=USGS)

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**March 2014 Progress Report:**

**Rio Grande ABV. Rio Conchos (CAMS 757) (USGS 08371500): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 03/06/2014  
**Time of visit:** 1045  
**Staff:** J. Rosendale, T. Dowell  
**Sonde out:** 12F100880  
**Sonde in:** 06G2028AB

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.05	Average Arithmetic Correction	0.04	Fouling Correction
Specific Conductance	0.51	Average % Drift	4.01	% Fouling Correction
pH	-0.10	Average Arithmetic Correction	-0.06	Fouling Correction
Dissolved Oxygen	-0.59	% Drift	-1.10	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.

**Environmental conditions:** Weather conditions were cool, dry, partly cloudy and breezy.

**Additional comments:** Low flow conditions.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08371500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08371500&agency_cd=USGS)

**Rio Grande BLW. Rio Conchos (CAMS 758) (USGS 08374200): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 03/06/2014  
**Time of visit:** 0900  
**Staff:** J. Rosendale, T. Dowell  
**Sonde out:** 08C100065  
**Sonde in:** 12M100699

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.05	Average Arithmetic Correction	0.05	Fouling Correction
Specific Conductance	-1.50	Average % Drift	12.28	% Fouling Correction
pH	-0.10	Average Arithmetic Correction	0.05	Fouling Correction
Dissolved Oxygen	-2.67	% Drift	0.00	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate algae and biological fouling.

**Environmental conditions:** Weather conditions were cool, dry, clear and breezy.

**Additional comments:** Base flow conditions.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374200&agency_cd=USGS)

**Rio Grande at Castolon (CAMS 720) (USGS 08374550): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 03/05/14  
**Time of visit:** 1345  
**Staff:** J. Rosendale, T. Dowell  
**Sonde out:** 06G1797AA  
**Sonde in:** 05D1750AD

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	0.01	Fouling Correction
Specific Conductance	0.75	Average % Drift	0.48	% Fouling Correction
pH	-0.09	Average Arithmetic Correction	-0.09	Fouling Correction
Dissolved Oxygen	-0.47	% Drift	-0.14	% Fouling Correction

**Fouling conditions:** Sonde recovered with very light silt fouling.  
**Environmental conditions:** Weather was hot, dry, cloudy and breezy.  
**Discharge information:** Discharge was measured at 54.6 cf/s and is rated good.  
**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374550 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374550&agency_cd=USGS)

**Rio Grande at Rio Grande Village (CAMS 721) (USGS 08375300): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Date of visit:** 03/05/2014  
**Time of visit:** 1030  
**Staff:** J. Rosendale, T. Dowell  
**Sonde out:** 08E100529 (retired from service)  
**Sonde in:** 12F101031

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.10	Average Arithmetic Correction	-0.05	Fouling Correction
Specific Conductance	1.17	Average % Drift	1.30	% Fouling Correction
pH	-0.11	Average Arithmetic Correction	0.04	Fouling Correction
Dissolved Oxygen	0.60	% Drift	3.36	% Fouling

				Correction
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**Fouling conditions:** Sonde recovered very light silt fouling.

**Environmental conditions:** Weather conditions were warm, dry, clear, and calm.

**Discharge information:** Discharge was measured at 121.4 and is rated fair.

**Additional comments:** Sonde 08E100529 is retired from service. New sonde for site: 12M100694.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08375300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08375300 &agency_cd=USGS)

**Rio Grande abv. Amistad (Fosters Ranch) (CAMS 759) (USGS 08377200) QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 03/04/2014

**Time of visit:** 1400

**Staff:** J. Rosendale, T. Dowell

**Sonde out:** 12H100069

**Sonde in:** 12F101030

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	-0.01	Fouling Correction
Specific Conductance	4.68	Average % Drift	6.31	% Fouling Correction
pH	-0.09	Average Arithmetic Correction	0.01	Fouling Correction
Dissolved Oxygen	0.00	% Drift	-0.30	% Fouling Correction

**Fouling conditions:** Sonde recovered with heavy silt fouling.

**Environmental conditions:** Weather conditions were warm, dry, clear and breezy.

**Additional comments:** Conductance probe replaced. Missing data prior to visit was due to the YSI cable being severed by IBWC during heavy equipment operations on 02/28.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08377200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08377200 &agency_cd=USGS)

**Lower Pecos River near Langtry (CAMS 799) (USGS 08447410) QW Monitor (WT, pH, DO, SC).**

**Cleaning visit. (Sonde 11J100001 was not replaced, it was redeployed. Instrument drift data from the April visit will be prorated back to 02/06).**

**Date of visit:** 03/04/2014

**Time of visit:** 1130

**Staff:** J. Rosendale, T. Dowell

**Sonde out:** 11J100000

**Sonde in:** 11J100001

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	--	Average Arithmetic Correction	0.01	Fouling Correction
Specific Conductance	--	Average % Drift	0.15	% Fouling Correction
pH	--	Average Arithmetic Correction	-0.03	Fouling Correction
Dissolved Oxygen	--	% Drift	-0.10	% Fouling Correction

**Fouling conditions:** Sonde recovered with no visible signs of fouling.

**Environmental conditions:** Weather conditions were cool, dry, clear and breezy.

**Additional comments:** Base flow conditions.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447410%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447410%20&agency_cd=USGS)

**Pecos River nr. Orla, TX (CAMS 798) (USGS 08412500): SW full range + QW sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** Site was not visited in March

**Time of visit:**

**Staff:**

**Sonde in:** 11J100006

**Sonde out:** 11J100002

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature		Average Arithmetic Correction		Fouling Correction
Specific Conductance		Average % Drift		% Fouling Correction
pH		Average Arithmetic Correction		Fouling Correction
Dissolved Oxygen		% Drift		% Fouling Correction

**Fouling conditions:** n

**Environmental conditions:**

**Discharge information:** Site is at no flow.

**Additional comments.**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08412500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08412500%20&agency_cd=USGS)

**Pecos River @ Pecos, TX (CAMS 710) (USGS 08420500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** Site was not visited in March

**Time of visit:**

**Staff:**

**Sonde in:** 10K100289

**Sonde out:** 10K100287

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature		Average Arithmetic Correction		Fouling Correction
Specific Conductance		Average % Drift		% Fouling Correction
pH		Average Arithmetic Correction		Fouling Correction
Dissolved Oxygen		% Drift		% Fouling Correction

**Fouling conditions:**

**Environmental conditions:**

**Discharge information:** Site is at no flow.

**Additional comments:** Sonde appears to be in good condition. Site is at zero flow.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08420500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08420500&agency_cd=USGS)

**Pecos River @ RR1176 nr. Grandfalls, TX (CAMS 709) (USGS 08437710): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 03/18/2014

**Time of visit:** 1630

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10K100290

**Sonde in:** 10J101916

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.01	Average Arithmetic Correction	0.01	Fouling Correction
Specific Conductance	-0.02	Average % Drift	4.19	% Fouling Correction
pH	-0.12	Average Arithmetic Correction	0.14	Fouling Correction
Dissolved Oxygen	-0.11	% Drift	1.10	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling.

**Environmental conditions:** At the time of the visit the weather was warm, dry, partly cloudy, and windy.

**Discharge information:** Discharge was not measured.

**Additional comments:** Site is at base flow conditions.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08437710 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08437710&agency_cd=USGS)

**Pecos River nr Girvin, TX (CAMS 785) (USGS 08446500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 03/18/2014

**Time of visit:** 1300

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 07H101200

**Sonde in:** 10K100288

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	0.95	Fouling Correction
Specific Conductance	-0.44	Average % Drift	4.69	% Fouling Correction
pH	-0.02	Average Arithmetic Correction	0.17	Fouling Correction
Dissolved Oxygen	0.00	% Drift	10.09	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling. Trash pump was used to clear sediment and silt after completing field data collection; clearing around sonde deployment area and at the control.

**Environmental conditions:** At the time of the visit the weather was warm, dry, partly cloudy, and windy.

**Discharge information:** A discharge measurement was not made.

**Additional comments.**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08446500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08446500%20&agency_cd=USGS)

**Pecos River near Sheffield (CAMS 735) (USGS 08447000): SW Low Flow +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 03/19/2014

**Time of visit:** 0915

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10J101909

**Sonde in:** 10J101915

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.06	Average Arithmetic Correction	-0.04	Fouling Correction
Specific Conductance	-0.26	Average % Drift	1.23	% Fouling Correction
pH	-0.08	Average Arithmetic Correction	-0.01	Fouling Correction
Dissolved Oxygen	0.58	% Drift	-0.23	% Fouling Correction

**Fouling conditions:** Sonde recovered with very light silt fouling.

**Environmental conditions:** At the time of the visit the weather was cold, dry, cloudy and breezy.

**Discharge information:** A discharge measurement was not made.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447000&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447000&agency_cd=USGS)

**Caroline Springs at Oasis Ranch (CAMS 764) (USGS 08447018): QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 03/19/2014

**Time of visit:** 1030

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10J101917

**Sonde in:** 10J101913

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.05	Average Arithmetic Correction	-0.01	Fouling Correction
Specific Conductance	-0.10	Average % Drift	-0.45	% Fouling Correction
pH	-0.10	Average Arithmetic Correction	0.02	Fouling Correction
Dissolved Oxygen	4.09	% Drift	0.09	% Fouling Correction

**Fouling conditions:** Sonde recovered with no visible signs of fouling. Light algae growth on the sonde guard.

**Environmental conditions:** At the time of the visit the weather was cool, dry, partly cloudy and breezy.

**Discharge information:** A discharge measurement was not made at Independence Creek USGS 08447020.

**Additional comments:** ODO membrane was replaced. A fast response pH probe was installed:

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447018%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447018%20&agency_cd=USGS)

**Pecos River nr Val-Verde Crockett (Brotherton Ranch) (CAMS 729) (USGS 08447300): SW Low**  
**Flow+QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 03/19/2014

**Time of visit:** 1245

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10K101911

**Sonde in:** 10J100292

**Provisional CV and Fouling Results:**

<b>Parameter</b>	<b>Instrument Drift</b>	<b>Unit</b>	<b>Fouling Correction</b>	<b>Unit2</b>
Temperature	0.07	Average Arithmetic Correction	0.01	Fouling Correction
Specific Conductance	-0.04	Average % Drift	6.13	% Fouling Correction
pH	-0.05	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	-0.80	% Drift	0.10	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling

**Environmental conditions:** At the time of the visit the weather was cool, dry, partly cloudy, and breezy.

**Discharge information:** A discharge measurement was made at 70.5 and is rated good.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447300 &agency_cd=USGS)

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**February 2014 Progress Report:**

**Rio Grande ABV. Rio Conchos (CAMS 757) (USGS 08371500): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 03/06/2014  
**Time of visit:** 1045  
**Staff:** J. Rosendale, T. Dowell  
**Sonde out:** 12F100880  
**Sonde in:** : 06G2028AB

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.05	Average Arithmetic Correction	0.04	Fouling Correction
Specific Conductance	0.51	Average % Drift	4.01	% Fouling Correction
pH	-0.10	Average Arithmetic Correction	-0.06	Fouling Correction
Dissolved Oxygen	-0.59	% Drift	-1.10	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.

**Environmental conditions:** Weather conditions were cool, dry, partly cloudy and breezy.

**Additional comments:** Low flow conditions.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08371500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08371500&agency_cd=USGS)

**Rio Grande BLW. Rio Conchos (CAMS 758) (USGS 08374200): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 03/06/2014  
**Time of visit:** 0900  
**Staff:** J. Rosendale, T. Dowell  
**Sonde out:** 08C100065  
**Sonde in:** 12M100699

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.05	Average Arithmetic Correction	0.05	Fouling Correction
Specific Conductance	-1.50	Average % Drift	12.28	% Fouling Correction
pH	-0.10	Average Arithmetic Correction	0.05	Fouling Correction
Dissolved Oxygen	-2.67	% Drift	0.00	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate algae and biological fouling.

**Environmental conditions:** Weather conditions were cool, dry, clear and breezy.

**Additional comments:** Base flow conditions.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374200 &agency_cd=USGS)

**Rio Grande at Castolon (CAMS 720) (USGS 08374550): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 02/05/14  
**Time of visit:** 1220  
**Staff:** J. Rosendale, B. Lopez  
**Sonde out:** 05D1750AD  
**Sonde in:** 06G1797AA

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.11	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	2.15	Average % Drift	7.46	% Fouling Correction
pH	-0.03	Average Arithmetic Correction	-0.01	Fouling Correction
Dissolved Oxygen	-0.81	% Drift	-0.19	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling. Erratic SC readings during the end of the deployment period were due to the SC cavity nearly coming out of the water.

**Environmental conditions:** Weather was cool, dry, cloudy and breezy.

**Discharge information:** A discharge measurement was not performed.

**Additional comments:** Declining stage through-out period. Deployment tube was lowered.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374550 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374550 &agency_cd=USGS)

**Rio Grande at Rio Grande Village (CAMS 721) (USGS 08375300): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Date of visit:** 02/05/2014  
**Time of visit:** 0945  
**Staff:** J. Rosendale, B. Lopez  
**Sonde out:** 12F101031  
**Sonde in:** 08E100529

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	-0.03	Fouling Correction
Specific Conductance	-2.06	Average % Drift	0.34	% Fouling Correction
pH	0.00	Average Arithmetic Correction	0.10	Fouling Correction

Dissolved Oxygen	1.63	% Drift	0.33	% Fouling Correction
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**Fouling conditions:** Sonde recovered with very light silt fouling.

**Environmental conditions:** Weather conditions were cold, dry, cloudy, and gusty.

**Discharge information:** A discharge measurement was not performed.

**Additional comments:** Declining stage through-out period.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08375300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08375300 &agency_cd=USGS)

**Rio Grande abv. Amistad (Fosters Ranch) (CAMS 759) (USGS 08377200) QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 02/06/2014

**Time of visit:** 1115

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 12F101030

**Sonde in:** 12H100069

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.10	Average Arithmetic Correction	-0.01	Fouling Correction
Specific Conductance	-1.72	Average % Drift	1.79	% Fouling Correction
pH	0.00	Average Arithmetic Correction	0.07	Fouling Correction
Dissolved Oxygen	-0.35	% Drift	0.27	% Fouling Correction

**Fouling conditions:** Sonde recovered with no visible signs of fouling on probes. Sonde body had very light fouling.

**Environmental conditions:** Weather conditions were cold, dry, cloudy and breezy.

**Additional comments:** Base flow conditions. A slight declining stage during the period of deployment.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08377200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08377200 &agency_cd=USGS)

**Lower Pecos River near Langtry (CAMS 799) (USGS 08447410) QW Monitor (WT, pH, DO, SC).**

**Scheduled visit.**

**Date of visit:** 02/16/2014

**Time of visit:** 1200

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 11J100000

**Sonde in:** 11J100001

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.06	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	-0.49	Average % Drift	0.11	% Fouling Correction
pH	0.02	Average Arithmetic Correction	0.01	Fouling Correction
Dissolved Oxygen	-0.58	% Drift	-0.09	% Fouling Correction

**Fouling conditions:** Sonde recovered with no visible signs of fouling.

**Environmental conditions:** Weather conditions were cold, dry, cloudy and breezy.

**Additional comments:** Base flow conditions. Steady stage during the deployment period.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447410%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447410%20&agency_cd=USGS)

**Pecos River nr. Orla, TX (CAMS 798) (USGS 08412500): SW full range + QW sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 02/19/2014

**Time of visit:** 1130

**Staff:** J. Rosendale, B. Lopez

**Sonde in:** 11J100006

**Sonde out:** 11J100002

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.04	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	-1.36	Average % Drift	0.00	% Fouling Correction
pH	0.00	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	0.00	% Drift	0.00	% Fouling Correction

**Fouling conditions:** n/a

**Environmental conditions:** At the time of the visit the weather was hot, dry, partly cloudy, and breezy.

**Discharge information:** Site is at no flow.

**Additional comments:** Sonde appears to be in good condition. Site is at zero flow.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08412500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08412500%20&agency_cd=USGS)

**Pecos River @ Pecos, TX (CAMS 710) (USGS 08420500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 02/19/2014

**Time of visit:** 1400

**Staff:** J. Rosendale, B. Lopez

**Sonde in:** 10K100289

**Sonde out:** 10K100287

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.02	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	-0.65	Average % Drift	0.00	% Fouling Correction
pH	0.00	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	0.00	% Drift	0.00	% Fouling Correction

**Fouling conditions:** n/a

**Environmental conditions:** At the time of the visit the weather was hot, dry, clear, and gusty.

**Discharge information:** Site is at no flow.

**Additional comments:** Sonde appears to be in good condition. Site is at zero flow.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08420500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08420500&agency_cd=USGS)

**Pecos River @ RR1176 nr. Grandfalls, TX (CAMS 709) (USGS 08437710): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 02/18/2014

**Time of visit:** 1415

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10J101916

**Sonde in:** 10K100290

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.05	Average Arithmetic Correction	0.01	Fouling Correction
Specific Conductance	-2.19	Average % Drift	1.03	% Fouling Correction
pH	-0.06	Average Arithmetic Correction	0.32	Fouling Correction
Dissolved Oxygen	0.00	% Drift	-2.03	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling.

**Environmental conditions:** At the time of the visit the weather was hot, dry, clear, and breezy.

**Discharge information:** Measured discharge was 1.35 cfs.

**Additional comments:** Site is at base flow conditions. No high water marks located. GZF was not measured. Control was not visited.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08437710 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08437710&agency_cd=USGS)

**Pecos River nr Girvin, TX (CAMS 785) (USGS 08446500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 02/18/2014

**Time of visit:** 1100

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10K100288

**Sonde in:** 07H101200

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	0.95	Fouling Correction
Specific Conductance	-0.44	Average % Drift	4.69	% Fouling Correction
pH	-0.02	Average Arithmetic Correction	0.17	Fouling Correction
Dissolved Oxygen	0.00	% Drift	10.09	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling.

**Environmental conditions:** At the time of the visit the weather was hot, dry, partly cloudy, and breezy.

**Discharge information:** Measured discharge was 12.90 cfs.

**Additional comments:** GZF was not obtained, no high water marks observed. Control is starting to accumulate a large amount of sediment build-up.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08446500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08446500%20&agency_cd=USGS)

**Pecos River near Sheffield (CAMS 735) (USGS 08447000): SW Low Flow +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 02/21/2014

**Time of visit:** 0930

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10J101915

Sonde in: 10J101909

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.04	Average Arithmetic Correction	0.02	Fouling Correction
Specific Conductance	-0.70	Average % Drift	2.39	% Fouling Correction
pH	-0.06	Average Arithmetic Correction	0.01	Fouling Correction
Dissolved Oxygen	-0.57	% Drift	-3.08	% Fouling Correction

**Fouling conditions:** Sonde recovered with very light silt fouling.

**Environmental conditions:** At the time of the visit the weather was cold, dry, partly cloudy and breezy.

**Discharge information:** A discharge measurement was not made.

**Additional comments:** GZF was not measured. No high water marks were observed. Control was not visited.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447000&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447000&agency_cd=USGS)

**Caroline Springs at Oasis Ranch (CAMS 764) (USGS 08447018): QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 02/21/2014

**Time of visit:** 1115

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10J101913

**Sonde in:** 10J101917

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.09	Average Arithmetic Correction	0.02	Fouling Correction
Specific Conductance	-0.60	Average % Drift	0.23	% Fouling Correction
pH	-0.06	Average Arithmetic Correction	0.07	Fouling Correction
Dissolved Oxygen	-2.14	% Drift	1.12	% Fouling Correction

**Fouling conditions:** Sonde recovered with no signs of fouling.

**Environmental conditions:** At the time of the visit the weather was cool, dry, partly cloudy and windy.

**Discharge information:** A discharge measurement was not made at Independence Creek USGS 08447020.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447018%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447018%20&agency_cd=USGS)

**Pecos River nr Val-Verde Crockett (Brotherton Ranch) (CAMS 729) (USGS 08447300): SW Low Flow+QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 02/21/2014

**Time of visit:** 1245

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10J100292

**Sonde in:** 10K101911

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.02	Average Arithmetic Correction	-0.02	Fouling Correction
Specific Conductance	0.85	Average % Drift	5.54	% Fouling Correction
pH	-0.08	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	0.58	% Drift	-0.30	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling

**Environmental conditions:** At the time of the visit the weather was cool, dry, partly cloudy, and windy.

**Discharge information:** A discharge measurement was not made during this visit.

**Additional comments:** Control was not visited. GZF was not measured. No high water marks located.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447300 &agency_cd=USGS)

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**January 2014 Progress Report:**

**Rio Grande ABV. Rio Conchos (CAMS 757) (USGS 08371500): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 01/08/2014

**Time of visit:** 1000

**Staff:** J. Rosendale, B. Lopez, S. Kelly

**Sonde out:** 12F100880

**Sonde in:** 06G2028AB

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	0.21	Fouling Correction
Specific Conductance	0.36	Average % Drift	10.0	% Fouling Correction
pH	-0.05	Average Arithmetic Correction	0.10	Fouling Correction
Dissolved Oxygen	-2.48	% Drift	0.36	% Fouling Correction

**Fouling conditions:** Sonde recovered very moderate sediment fouling. SC cavity with greater fouling.

**Environmental conditions:** Weather conditions were cool, dry, partly cloudy and breezy.

**Additional comments:** Secondary tube installed for field sonde deployment.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08371500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08371500&agency_cd=USGS)

**Rio Grande BLW. Rio Conchos (CAMS 758) (USGS 08374200): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 01/08/2014

**Time of visit:** 1230

**Staff:** J. Rosendale, B. Lopez, S. Kelly

**Sonde out:** 08C100065

**Sonde in:** 12M100699 (New sonde in circulation)

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.10	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	1.72	Average % Drift	3.19	% Fouling Correction
pH	0.01	Average Arithmetic Correction	0.06	Fouling Correction
Dissolved Oxygen	-2.82	% Drift	-0.62	% Fouling Correction

**Fouling conditions:** Sonde recovered with light fouling.

**Environmental conditions:** Weather conditions were cool, dry, partly cloudy and breezy.

**Additional comments:** Secondary tube installed for field sonde deployment. New sonde 12M100699 includes copper port plugs and a copper sonde guard. Sonde 08C100065 has been retired from service. New sonde for site to be deployed on next visit will be: 12M100693.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374200 &agency_cd=USGS)

**Rio Grande at Castolon (CAMS 720) (USGS 08374550): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 01/10/14  
**Time of visit:** 0915  
**Staff:** J. Rosendale, B. Lopez, S. Kelly  
**Sonde out:** 06G1797AA  
**Sonde in:** 05D1750AD

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.02	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	-0.65	Average % Drift	1.92	% Fouling Correction
pH	-0.07	Average Arithmetic Correction	-0.02	Fouling Correction
Dissolved Oxygen	-0.46	% Drift	-0.31	% Fouling Correction

**Fouling conditions:** Sonde recovered with very light silt fouling.  
**Environmental conditions:** Weather was cool, dry, cloudy and breezy.  
**Discharge information:** Discharge was measured at 10.9 cf/s, was measured and is rated good.  
**Additional comments:** Secondary tube installed for field sonde deployment.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374550 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374550 &agency_cd=USGS)

**Rio Grande at Rio Grande Village (CAMS 721) (USGS 08375300): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Date of visit:** 01/09/2014  
**Time of visit:** 0900  
**Staff:** J. Rosendale, B. Lopez, S. Kelly  
**Sonde out:** 08E100529  
**Sonde in:** 12F101031

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.10	Average Arithmetic Correction	0.00	Fouling Correction
Specific	0.30	Average % Drift	2.78	% Fouling

Conductance				Correction
pH	-0.09	Average Arithmetic Correction	-0.05	Fouling Correction
Dissolved Oxygen	-1.15	% Drift	0.41	% Fouling Correction

**Fouling conditions:** Sonde recovered with very light silt fouling.

**Environmental conditions:** Weather conditions were cool, dry, clear, and breezy.

**Discharge information:** Discharge was measured at 11.4 cf/s, and is rated good.

**Additional comments:** Secondary tube installed for field sonde deployment.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08375300&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08375300&agency_cd=USGS)

**Rio Grande abv. Amistad (Fosters Ranch) (CAMS 759) (USGS 08377200) QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 01/07/2014

**Time of visit:** 1400

**Staff:** J. Rosendale, B. Lopez, S. Kelly

**Sonde out:** 12H100069

**Sonde in:** 12F101030

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.01	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	1.02	Average % Drift	2.67	% Fouling Correction
pH	-0.07	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	-1.04	% Drift	0.27	% Fouling Correction

**Fouling conditions:** Sonde recovered with light sediment fouling.

**Environmental conditions:** Weather conditions were cold.

**Additional comments:** Secondary tube installed for field sonde deployment.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08377200&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08377200&agency_cd=USGS)

**Lower Pecos River near Langtry (CAMS 799) (USGS 08447410) QW Monitor (WT, pH, DO, SC).**

**Scheduled visit.**

**Date of visit:** 01/07/2014

**Time of visit:** 1130

**Staff:** J. Rosendale, B. Lopez, S. Kelly

**Sonde out:** 11J100001

**Sonde in:** 11J100000

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.13	Average Arithmetic Correction	0.04	Fouling Correction
Specific Conductance	2.00	Average % Drift	0.24	% Fouling Correction
pH	-0.04	Average Arithmetic Correction	0.01	Fouling Correction
Dissolved Oxygen	-0.12	% Drift	0.00	% Fouling Correction

**Fouling conditions:** Sonde recovered with no visible signs of fouling.

**Environmental conditions:** Weather conditions were cool, dry, clear and windy.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447410%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447410%20&agency_cd=USGS)

**Pecos River nr. Orla, TX (CAMS 798) (USGS 08412500): SW full range + QW sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 01/23/2014

**Time of visit:** 0925

**Staff:** J. Rosendale, B. Lopez

**Sonde in:** 11J100002

**Sonde out:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.00	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	0.00	Average % Drift	0.00	% Fouling Correction
pH	0.00	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	0.00	% Drift	0.00	% Fouling Correction

**Fouling conditions:**

**Environmental conditions**

**Discharge information**

**Additional comments:** Sonde appears to be in satisfactory condition. Site is at zero flow.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08412500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08412500%20&agency_cd=USGS)

**Pecos River @ Pecos, TX (CAMS 710) (USGS 08420500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 01/23/2014

**Time of visit:** 1045

**Staff:** J. Rosendale, B. Lopez

**Sonde in:** 10K100287

**Sonde out:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.00	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	0.00	Average % Drift	0.00	% Fouling Correction
pH	0.00	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	0.00	% Drift	0.00	% Fouling Correction

**Fouling conditions:**

**Environmental conditions**

**Discharge information:**

**Additional comments:** Sonde appears to be in satisfactory condition. Site is at zero flow.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08420500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08420500&agency_cd=USGS)

**Pecos River @ RR1176 nr. Grandfalls, TX (CAMS 709) (USGS 08437710): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 01/21/2014

**Time of visit:** 1415

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10J101916

**Sonde in:** 10K100290

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.28	Average Arithmetic Correction	-0.01	Fouling Correction
Specific Conductance	-0.24	Average % Drift	-6.07	% Fouling Correction
pH	-0.06	Average Arithmetic Correction	0.16	Fouling Correction
Dissolved Oxygen	1.13	% Drift	-0.96	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling.

**Environmental conditions:** At the time of the visit the weather was warm, dry, clear, and breezy.

**Discharge information:** No discharge measurement was made.

**Additional comments:** Site is flowing at base flow conditions. Visit was for water quality monitor service only. No high water marks located. GZF was not measured. Control was not visited.

**Unscheduled visit.**

**Date of visit:** 01/28/2014

**Time of visit:** 1115

**Staff:** B. Lopez

**Sonde out:** 10K100290

**Sonde in:** 10J101916

Comments: pH was displaying an irregular pattern, but not excessive or erratic. During the cleaning process, the pH bulb was broken. The new technician was unclear of how to proceed and did not perform the after cleaning readings. The data prior to the visit will be retained for the following reasons:

- Only seven days after the previous visit.
- Fouling is minimal when comparing the two sondes before cleaning values.

Zero corrections for fouling and drift will be inserted on 01/28 @1115.

All data for all parameters is unrated from 01/21 @1515 to 01/28 @1115.

Parameter	Instrument Drift	Unit	Fouling difference	Unit2
Temperature	-0.01	Average Arithmetic Correction	0.02	Difference deployed/field sondes.
Specific Conductance	1.63	Average % Drift	1213/4.55	Difference deployed/field sondes/RPD
pH	n/a	Average Arithmetic Correction	0.06	Difference deployed/field sondes.
Dissolved Oxygen	0.24	% Drift	0.15	Difference deployed/field sondes.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08437710 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08437710 &agency_cd=USGS)

**Pecos River nr Girvin, TX (CAMS 785) (USGS 08446500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 01/21/2014

**Time of visit:** 1015

Staff: J. Rosendale, B. Lopez  
 Sonde out: 07H101208  
 Sonde in: 10K100288

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.04	Average Arithmetic Correction	-0.06	Fouling Correction
Specific Conductance	0.06	Average % Drift	3.65	% Fouling Correction
pH	-0.08	Average Arithmetic Correction	-0.04	Fouling Correction
Dissolved Oxygen	-0.78	% Drift	-0.39	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate fouling.

**Environmental conditions:** At the time of the visit the weather was cool, dry, clear, and calm.

**Discharge information:** A discharge measurement was not made.

**Additional comments:** Visit also included replacing bubbler with CO2 & troubleshoot gage. After new orifice line and hoof install yesterday, gage is still spiking. Found power problems. No PZF obtained, no HWMs observed.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08446500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08446500%20&agency_cd=USGS)

**Pecos River near Sheffield (CAMS 735) (USGS 08447000): SW Low Flow +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 01/22/2014

**Time of visit:** 0900

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10J101909

**Sonde in:** 10J101915

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.04	Average Arithmetic Correction	-0.03	Fouling Correction
Specific Conductance	0.68	Average % Drift	0.94	% Fouling Correction
pH	-0.09	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	-0.56	% Drift	-0.31	% Fouling Correction

**Fouling conditions:** Sonde recovered with light sediment fouling.

**Environmental conditions:** At the time of the visit the weather was cold, dry, partly cloudy and calm.

**Discharge information:** A discharge measurement was not made.

**Additional comments:** GZF was not measured. Control was not visited.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447000&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447000&agency_cd=USGS)

**Caroline Springs at Oasis Ranch (CAMS 764) (USGS 08447018): QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 01/22/2014

**Time of visit:** 1100

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10J101917

**Sonde in:** 10J101913

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.04	Average Arithmetic Correction	-0.02	Fouling Correction
Specific Conductance	0.35	Average % Drift	0.11	% Fouling Correction
pH	-0.12	Average Arithmetic Correction	0.05	Fouling Correction
Dissolved Oxygen	0.00	% Drift	1.94	% Fouling Correction

**Fouling conditions:** Sonde recovered with no signs of fouling.

**Environmental conditions:** At the time of the visit the weather was cold, dry, partly cloudy and breezy.

**Discharge information:** A discharge measurement was not made at Independence Creek USGS 08447020.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447018%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447018%20&agency_cd=USGS)

**Pecos River nr Val-Verde Crockett (Brotherton Ranch) (CAMS 729) (USGS 08447300): SW Low Flow+QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 01/22/2014

**Time of visit:** 1245

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10J101911

**Sonde in:** 10K100292

**Provisional CV and Fouling Results:**

<b>Parameter</b>	<b>Instrument Drift</b>	<b>Unit</b>	<b>Fouling Correction</b>	<b>Unit2</b>
Temperature	0.05	Average Arithmetic Correction	-0.02	Fouling Correction
Specific Conductance	1.27	Average % Drift	5.15	% Fouling Correction
pH	-0.11	Average Arithmetic Correction	-0.06	Fouling Correction
Dissolved Oxygen	1.38	% Drift	-3.61	% Fouling Correction

**Fouling conditions:** Sonde recovered with light sediment fouling

**Environmental conditions:** At the time of the visit the weather was warm, dry, clear, and breezy.

**Discharge information:** A discharge measurement was made. Measured flow was 77.8 cf/s, and is rated good.

**Additional comments:** Control was not visited. GZF was not measured. No high water marks located.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447300 &agency_cd=USGS)

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**December 2013 Progress Report:**

**Rio Grande ABV. Rio Conchos (CAMS 757) (USGS 08371500): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 12/17/2013  
**Time of visit:** 1400  
**Staff:** J. Rosendale, T. Dowell  
**Sonde out:** 06G2028AB  
**Sonde in:** 12F100880

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.07	Average Arithmetic Correction	0.04	Fouling Correction
Specific Conductance	0.02	Average % Drift	2.53	% Fouling Correction
pH	-0.29	Average Arithmetic Correction	-0.07	Fouling Correction
Dissolved Oxygen	0.12	% Drift	-1.46	% Fouling Correction

**Fouling conditions:** Sonde recovered very heavy sediment fouling.

**Environmental conditions:** Weather conditions were warm, dry, clear and calm.

**Additional comments:** IBWC gage height data shows couple of periods of draw-down from base flow conditions. Possibly due to levy work and needing water for compaction.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08371500 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08371500 &agency_cd=USGS)

**Rio Grande BLW. Rio Conchos (CAMS 758) (USGS 08374200): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 12/17/2013  
**Time of visit:** 1600  
**Staff:** J. Rosendale, T. Dowell  
**Sonde out:** 08C100066  
**Sonde in:** 08C100065

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.01	Average Arithmetic Correction	0.04	Fouling Correction
Specific Conductance	-1.23	Average % Drift	19.43	% Fouling Correction
pH	-0.29	Average Arithmetic Correction	-1.25	Fouling Correction
Dissolved Oxygen	-0.71	% Drift	-0.09	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt and macro-invertebrate fouling.

**Environmental conditions:** Weather conditions were warm, dry, clear and calm.

**Additional comments:** Sonde showing unusually high drift and fouling for pH. Sonde 08C100066 has been retired from service. New sonde for site: 12M100699

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374200&agency_cd=USGS)

**Rio Grande at Castolon (CAMS 720) (USGS 08374550): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 12/18/2013  
**Time of visit:** 1345  
**Staff:** J. Rosendale, T. Dowell  
**Sonde out:** 05D1750AD  
**Sonde in:** 06G1797AA

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.09	Average Arithmetic Correction	0.01	Fouling Correction
Specific Conductance	3.03	Average % Drift	5.32	% Fouling Correction
pH	-0.11	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	-1.07	% Drift	-0.28	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling.

**Environmental conditions:** Weather was warm, dry, clear and calm.

**Discharge information:** Discharge was measured at 348 cf/s, was measured and is rated good.

**Additional comments:** Orifice had been buried in sediment deposition for some time. Sediment was removed and line was purged several times. SW gage is now operational.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374550 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374550&agency_cd=USGS)

**Rio Grande at Rio Grande Village (CAMS 721) (USGS 08375300): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 12/18/2013  
**Time of visit:** 0900  
**Staff:** J. Rosendale, T. Dowell  
**Sonde out:** 07D101131  
**Sonde in:** 08E100529

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	-0.03	Fouling Correction
Specific	0.22	Average % Drift	12.95	% Fouling

Conductance				Correction
pH	-0.15	Average Arithmetic Correction	0.01	Fouling Correction
Dissolved Oxygen	0.36	% Drift	0.21	% Fouling Correction

**Fouling conditions:** Sonde recovered with heavy silt fouling.

**Environmental conditions:** Weather conditions were cool, dry, clear, and calm.

**Discharge information:** Discharge was measured at 448 cf/s, and is rated good.

**Additional comments:** Sonde returned with a broken port plug in extra port. Sonde 07D101131 has been retired from service. New sonde for site: 12F101031.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08375300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08375300 &agency_cd=USGS)

**Rio Grande abv. Amistad (Fosters Ranch) (CAMS 759) (USGS 08377200) QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 12/19/2013

**Time of visit:** 1100

**Staff:** J. Rosendale, T. Dowell

**Sonde out:** 12F101030

**Sonde in:** 12H100069

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.08	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	-5.46	Average % Drift	4.98	% Fouling Correction
pH	-0.02	Average Arithmetic Correction	0.02	Fouling Correction
Dissolved Oxygen	-0.36	% Drift	1.36	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate sediment fouling.

**Environmental conditions:** Weather conditions were cool, dry, overcast and breezy.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08377200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08377200 &agency_cd=USGS)

**Lower Pecos River near Langtry (CAMS 799) (USGS 08447410) QW Monitor (WT, pH, DO, SC).**

**Scheduled visit.**

**Date of visit:** 12/19/2013

**Time of visit:** 1230

**Staff:** J. Rosendale, T. Dowell

**Sonde out:** 11J100000

**Sonde in:** 11J100001

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.07	Average Arithmetic Correction	0.01	Fouling Correction
Specific Conductance	-1.45	Average % Drift	0.96	% Fouling Correction
pH	-0.02	Average Arithmetic Correction	-0.01	Fouling Correction
Dissolved Oxygen	-0.60	% Drift	-0.19	% Fouling Correction

**Fouling conditions:** Sonde recovered with no visible signs of fouling.

**Environmental conditions:** Weather conditions were cool, dry, overcast and breezy.

**Additional comments.**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447410%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447410%20&agency_cd=USGS)

**Pecos River nr. Orla, TX (CAMS 798) (USGS 08412500): SW full range + QW sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:**

**Time of visit:**

**Staff:**

**Sonde in:** 11J100002

**Sonde out:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.00	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	0.00	Average % Drift	0.00	% Fouling Correction
pH	0.00	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	0.00	% Drift	0.00	% Fouling Correction

**Fouling conditions:**

**Environmental conditions**

**Discharge information**

**Additional comments:** A December visit was not completed, due to the fact the site is at zero flow.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08412500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08412500%20&agency_cd=USGS)

**Pecos River @ Pecos, TX (CAMS 710) (USGS 08420500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:**

**Time of visit:**

**Staff:**

**Sonde in:** 10K100287

**Sonde out:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.00	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	0.00	Average % Drift	0.00	% Fouling Correction
pH	0.00	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	0.00	% Drift	0.00	% Fouling Correction

**Fouling conditions:**

**Environmental conditions**

**Discharge information:**

**Additional comments:** A December visit was not completed, due to the fact the site is at zero flow.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08420500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08420500&agency_cd=USGS)

**Pecos River @ RR1176 nr. Grandfalls, TX (CAMS 709) (USGS 08437710): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 12/13/2013

**Time of visit:** 0830

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10K100290

**Sonde in:** : 10J101916

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.28	Average Arithmetic Correction	-0.05	Fouling Correction
Specific Conductance	-3.15	Average % Drift	-5.73	% Fouling Correction
pH	-0.03	Average Arithmetic Correction	0.01	Fouling Correction
Dissolved Oxygen	-2.76	% Drift	1.62	% Fouling Correction

**Fouling conditions:** Sonde recovered with very heavy silt fouling.

**Environmental conditions:** At the time of the visit the weather was cool, dry, partly cloudy, and calm.  
**Discharge information:** A discharge measurement was made at 0.03 cf/s, and is rated fair.  
**Additional comments.**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08437710 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08437710 &agency_cd=USGS)

**Pecos River nr Girvin, TX (CAMS 785) (USGS 08446500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**  
**Date of visit:** 12/13/2013  
**Time of visit:** 1145  
**Staff:** J. Rosendale, B. Lopez  
**Sonde out:** 10K100288  
**Sonde in:** 07H101208

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.00	Average Arithmetic Correction	0.23	Fouling Correction
Specific Conductance	-1.71	Average % Drift	2.60	% Fouling Correction
pH	-0.07	Average Arithmetic Correction	-0.07	Fouling Correction
Dissolved Oxygen	-0.94	% Drift	-0.12	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt and algae fouling.  
**Environmental conditions:** At the time of the visit the weather was cool, dry, pt. cloudy, and calm.  
**Discharge information:** A discharge measurement was made at 0.36 cf/s, and is rated good.  
**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08446500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08446500%20&agency_cd=USGS)

**Pecos River near Sheffield (CAMS 735) (USGS 08447000): SW Low Flow +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**  
**Date of visit:** 12/12/2013  
**Time of visit:** 1015  
**Staff:** J. Rosendale, B. Lopez  
**Sonde out:** 10J101915  
**Sonde in:** 10J101909

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.05	Average Arithmetic Correction	-0.11	Fouling Correction
Specific Conductance	-0.33	Average % Drift	2.89	% Fouling Correction
pH	-0.04	Average Arithmetic Correction	-0.07	Fouling Correction
Dissolved Oxygen	-1.41	% Drift	-0.42	% Fouling Correction

**Fouling conditions:** Sonde recovered with light sediment fouling.

**Environmental conditions:** At the time of the visit the weather was cold, dry, partly cloudy and calm.

**Discharge information:** A discharge measurement was made at 0.54 cf/s, and is rated fair.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447000&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447000&agency_cd=USGS)

**Caroline Springs at Oasis Ranch (CAMS 764) (USGS 08447018): QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 12/12/2013

**Time of visit:** 1200

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10J101913

**Sonde in:** 10J101917

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.07	Average Arithmetic Correction	0.01	Fouling Correction
Specific Conductance	0.15	Average % Drift	0.34	% Fouling Correction
pH	-0.06	Average Arithmetic Correction	0.07	Fouling Correction
Dissolved Oxygen	-0.71	% Drift	0.00	% Fouling Correction

**Fouling conditions:** Sonde recovered with no signs of fouling.

**Environmental conditions:** At the time of the visit the weather was cold, dry, partly cloudy and breezy.

**Discharge information:** A discharge measurement was made at 0.64 cf/s, and is rated fair. (Independence Creek USGS 08447020).

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447018%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447018%20&agency_cd=USGS)

**Pecos River nr Val-Verde Crockett (Brotherton Ranch) (CAMS 729) (USGS 08447300): SW Low**  
*Flow+QW Sonde (WT, SC, pH, DO)*

**Scheduled visit.**

**Date of visit:** 12/12/2013

**Time of visit:** 1545

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 10K100292

**Sonde in:** 10J101911

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.13	Average Arithmetic Correction	-0.05	Fouling Correction
Specific Conductance	-0.36	Average % Drift	4.77	% Fouling Correction
pH	-0.05	Average Arithmetic Correction	-0.01	Fouling Correction
Dissolved Oxygen	-0.59	% Drift	0.38	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling

**Environmental conditions:** At the time of the visit the weather was cool, dry, partly cloudy, and breezy.

**Discharge information:** A discharge measurement was not made during this visit.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447300 &agency_cd=USGS)

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**November 2013 Progress Report:**

**Rio Grande ABV. Rio Conchos (CAMS 757) (USGS 08371500): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 11/13/2013  
**Time of visit:** 0900  
**Staff:** J. Rosendale, B. Lopez  
**Sonde out:** 12F100880  
**Sonde in:** 06G2028AB

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.01	Average Arithmetic Correction	-0.65	Fouling Correction
Specific Conductance	-1.18	Average % Drift	8.42	% Fouling Correction
pH	-0.09	Average Arithmetic Correction	0.68	Fouling Correction
Dissolved Oxygen	-2.09	% Drift	85,800	% Fouling Correction

**Fouling conditions:** Sonde recovered very light sediment fouling.

**Environmental conditions:** Channel is clear and at base-flow conditions. Weather conditions were cold, dry, cloudy and gusty.

**Additional comments:** Deployment tube had minimal silt buildup around base. Silt was not enough to cause DO probe failure. (Lab notes: Wiper is parking properly. ODO membrane is in good condition. DO drift is -2.09).

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08371500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08371500&agency_cd=USGS)

**Rio Grande BLW. Rio Conchos (CAMS 758) (USGS 08374200): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 11/13/2013  
**Time of visit:** 1145  
**Staff:** J. Rosendale, B. Lopez  
**Sonde out:** 08C100065  
**Sonde in:** 08C100066

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.08	Average Arithmetic Correction	-0.01	Fouling Correction
Specific Conductance	-0.83	Average % Drift	13.10	% Fouling Correction
pH	-0.01	Average Arithmetic Correction	0.12	Fouling Correction
Dissolved Oxygen	-0.12	% Drift	0.00	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt and algae fouling.

**Environmental conditions:** Stream is at base-flow conditions. Weather conditions were cool, dry, cloudy and calm.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374200 &agency_cd=USGS)

**Rio Grande at Castolon (CAMS 720) (USGS 08374550):** *SW Full Range + QW Monitor (WT, pH, DO, SC)*

**Scheduled visit.**

**Date of visit:** 11/13/2013

**Time of visit:** 1615

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 06G1797AA

**Sonde in:** 05D1750AD

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	0.83	Average % Drift	0.12	% Fouling Correction
pH	-0.04	Average Arithmetic Correction	0.05	Fouling Correction
Dissolved Oxygen	-0.83	% Drift	-6.09	% Fouling Correction

**Fouling conditions:** Sonde recovered with very light silt fouling.

**Environmental conditions:** Weather was cool, dry, clear and breezy.

**Discharge information:** A discharge measurement was not made.

**Additional comments:** Deployment tube was lowered. Bottom of tube approximately 2 feet from surface.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374550 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374550 &agency_cd=USGS)

**Rio Grande at Rio Grande Village (CAMS 721) (USGS 08375300):** *SW Full Range + QW Monitor (WT, pH, DO, SC)*

**Cleaning visit.** (see comments)

**Date of visit:** 11/14/2013

**Time of visit:** 0845

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 07D101131 (see comments)

**Sonde in:** 07D101131 (see comments)

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
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Temperature	0.00	Average Arithmetic Correction	-0.18	Fouling Correction
Specific Conductance	0.00	Average % Drift	5.70	% Fouling Correction
pH	0.00	Average Arithmetic Correction	-0.03	Fouling Correction
Dissolved Oxygen	0.00	% Drift	-1.56	% Fouling Correction

**Fouling conditions:** Sonde recovered with heavy silt fouling.

**Environmental conditions:** Weather conditions were cool, dry, clear, and breezy.

**Discharge information:** Discharge was not measured.

**Additional comments:** Originally planned as a scheduled visit. Sonde 07D101131 was accidently redeployed. No instrument drift values.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08375300&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08375300&agency_cd=USGS)

**Rio Grande abv. Amistad (Fosters Ranch) (CAMS 759) (USGS 08377200) QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 11/12/2013

**Time of visit:** 1615

**Staff:** J. Rosendale, B. Lopez

**Sonde out:** 12H100069

**Sonde in:** 12F101030

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.01	Average Arithmetic Correction	-0.02	Fouling Correction
Specific Conductance	0.00	Average % Drift	0.07	% Fouling Correction
pH	-0.03	Average Arithmetic Correction	0.04	Fouling Correction
Dissolved Oxygen	0.00	% Drift	1.36	% Fouling Correction

**Fouling conditions:** Sonde recovered with very heavy sediment fouling.

**Environmental conditions:** Weather conditions were cool, mist, cloudy and breezy.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08377200&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08377200&agency_cd=USGS)

**Lower Pecos River near Langtry (CAMS 799) (USGS 08447410) QW Monitor (WT, pH, DO, SC).**

**Scheduled visit.**

**Date of visit:** 11/12/2013

**Time of visit:** 1400

**Staff:** J. Rosendale, B. Lopez

Sonde out: 11J100001

Sonde in: 11J100000

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.12	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	1.09	Average % Drift	0.84	% Fouling Correction
pH	-0.09	Average Arithmetic Correction	0.06	Fouling Correction
Dissolved Oxygen	-0.12	% Drift	0.00	% Fouling Correction

**Fouling conditions:** Sonde recovered with very light silt fouling.

**Environmental conditions:** Stream at base-flow conditions. Weather conditions were cool, dry, cloudy and breezy.

**Additional comments.**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447410%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447410%20&agency_cd=USGS)

**Pecos River nr. Orla, TX (CAMS 798) (USGS 08412500): SW full range + QW sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:**

**Time of visit:**

**Staff:**

**Sonde in:** 11J100002

**Sonde out:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.00	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	0.00	Average % Drift	0.00	% Fouling Correction
pH	0.00	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	0.00	% Drift	0.00	% Fouling Correction

**Fouling conditions:**

**Environmental conditions**

**Discharge information**

**Additional comments:** A November visit was not completed. The Government shutdown pushed our October trip too late in the month. Due to the fact the site is at zero flow, it was determined that a visit so soon after the previous visit made a November visit unnecessary.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08412500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08412500%20&agency_cd=USGS)

**Pecos River @ Pecos, TX (CAMS 710) (USGS 08420500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:**

**Time of visit:**

**Staff:**

**Sonde in:**

**Sonde out:**

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.00	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	0.00	Average % Drift	0.00	% Fouling Correction
pH	0.00	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	0.00	% Drift	0.00	% Fouling Correction

**Fouling conditions:**

**Environmental conditions**

**Discharge information:**

**Additional comments:** A November visit was not completed. The Government shutdown pushed our October trip too late in the month. Due to the fact the site is at zero flow, it was determined that a visit so soon after the previous visit made a November visit unnecessary.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08420500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08420500&agency_cd=USGS)

**Pecos River @ RR1176 nr. Grandfalls, TX (CAMS 709) (USGS 08437710): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 07 November 2013

**Time of visit:** 1000

**Staff:** J. Rosendale, S. Marr

**Sonde out:** 10J101916

**Sonde in:** 10K100290

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.00	Average Arithmetic Correction	-0.02	Fouling Correction
Specific	-2.28	Average % Drift	1.81	% Fouling

Conductance				Correction
pH	-0.08	Average Arithmetic Correction	-0.04	Fouling Correction
Dissolved Oxygen	-3.74	% Drift	0.34	% Fouling Correction

**Fouling conditions:** Sonde recovered with moderate silt fouling.

**Environmental conditions:** At the time of the visit the weather was Cool, dry, partly cloudy, and breezy

**Discharge information:** A discharge measurement was not made during this visit.

**Additional comments.**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08437710&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08437710&agency_cd=USGS)

**Pecos River nr Girvin, TX (CAMS 785) (USGS 08446500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 07 November 2013

**Time of visit:** 1210

**Staff:** J. Rosendale, S. Marr

**Sonde out:** 07H101208

**Sonde in:** 10K100288

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.03	Average Arithmetic Correction	-0.06	Fouling Correction
Specific Conductance	-0.37	Average % Drift	-3.56	% Fouling Correction
pH	-0.64	Average Arithmetic Correction	-0.11	Fouling Correction
Dissolved Oxygen	-0.35	% Drift	-0.39	% Fouling Correction

**Fouling conditions:** Sonde recovered with light sediment fouling.

**Environmental conditions:** At the time of the visit the weather was warm, dry, pt. cloudy, and breezy.

**Discharge information:** A discharge measurement was not made during this visit.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08446500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08446500%20&agency_cd=USGS)

**Pecos River near Sheffield (CAMS 735) (USGS 08447000): SW Low Flow +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 05 November 2013

**Time of visit:** 1025

**Staff:** J. Rosendale, S. Marr

**Sonde out:** 10J101909

**Sonde in:** 10J101915

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	-0.03	Average Arithmetic Correction	0.10	Fouling Correction
Specific Conductance	-0.11	Average % Drift	1.30	% Fouling Correction
pH	-0.11	Average Arithmetic Correction	-0.11	Fouling Correction
Dissolved Oxygen	0.00	% Drift	-1.66	% Fouling Correction

**Fouling conditions:** Sonde recovered with light sediment fouling.

**Environmental conditions:** At the time of the visit the weather was warm, dry, partly cloudy, and gusty.

**Discharge information:** A discharge measurement was not made during this visit.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447000&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447000&agency_cd=USGS)

**Caroline Springs at Oasis Ranch (CAMS 764) (USGS 08447018): QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 05 November 2013

**Time of visit:** 1150

**Staff:** J. Rosendale, S. Marr

**Sonde out:** 10J101917

**Sonde in:** 10J101913

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.01	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	0.00	Average % Drift	0.11	% Fouling Correction
pH	-0.10	Average Arithmetic Correction	0.00	Fouling Correction
Dissolved Oxygen	-0.70	% Drift	0.52	% Fouling Correction

**Fouling conditions:** Sonde recovered with no signs of environmental fouling.

**Environmental conditions:** At the time of the visit the weather was warm, dry, partly cloudy, and windy.

**Discharge information:** A discharge measurement was not made at Independence Creek (USGS 08447020).

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447018%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447018%20&agency_cd=USGS)

**Pecos River nr Val-Verde Crockett (Brotherton Ranch) (CAMS 729) (USGS 08447300): SW Low Flow+QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 05 November 2013

**Time of visit:** 1330

**Staff:** J. Rosendale, S. Marr

**Sonde out:** 10J101911

**Sonde in:** 10K100292

**Provisional CV and Fouling Results:**

Parameter	Instrument Drift	Unit	Fouling Correction	Unit2
Temperature	0.04	Average Arithmetic Correction	0.00	Fouling Correction
Specific Conductance	-0.61	Average % Drift	6.45	% Fouling Correction
pH	-0.09	Average Arithmetic Correction	-0.01	Fouling Correction
Dissolved Oxygen	0.00	% Drift	0.20	% Fouling Correction

**Fouling conditions:** Sonde recovered with light silt fouling

**Environmental conditions:** At the time of the visit the weather was warm, dry, partly cloudy, and breezy.

**Discharge information:** A discharge measurement was not made during this visit.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447300 &agency_cd=USGS)

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**October 2013 Progress Report:**

**Rio Grande ABV. Rio Conchos (CAMS 757) (USGS 08371500): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 10/18/2013  
**Time of visit:** 1630 LST  
**Staff:** J. Rosendale, T Dowell  
**Sonde out:** 06G2028AB  
**Sonde in:** 12F100880

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered moderate sediment fouling.
- **CV Results:** All post deployment calibration checks are rated excellent.

**Environmental conditions:** Channel is clear and there is low flow at the monitor site. Weather conditions were warm, dry, Pt. cloudy with a breeze.

**Additional comments:** Poor water circulation around deployment tube. There were no periods of missing recorded record.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08371500 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08371500&agency_cd=USGS)

**Rio Grande BLW. Rio Conchos (CAMS 758) (USGS 08374200): QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 10/18/2013  
**Time of visit:** 1630 LST  
**Staff:** J. Rosendale, T Dowell  
**Sonde out:** 08C100066  
**Sonde in:** 08C100065

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered with very light organic debris.
- **CV Results:** All post deployment calibration checks are rated excellent.

**Environmental conditions:** Weather conditions were warm, dry, Pt. cloudy and gusty winds.

**Additional comments:** There were no periods of missing recorded record.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374200&agency_cd=USGS)

**Rio Grande at Castolon (CAMS 720) (USGS 08374550): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 10/19/2013  
**Time of visit:** 1425 LST

**Staff:** J. Rosendale, T. Dowell  
**Sonde out:** 05D1750AD  
**Sonde in:** 06G1797AA

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered in six feet of sediment deposition and three feet from *new* channel. Deployment tube dug out and attached to staff plate and clean/calibrated sonde was deployed.
- **CV Results:** All post deployment calibration checks are rated excellent with the exception of dissolved oxygen which is rated good.

**Environmental conditions:** Historical sediment deposition event. Channel has changed. Stream bed is now sediment, no gravel or gravel bar. Weather was cool, dry, clear and with a breeze.

**Discharge information:** Discharge was measured at 550.8, and is rated good.

**Additional comments:** Previous deployment was on 07/10/2013. On 07/20 a sediment event occurred. Data from 07/10 @1330 to 07/20 @1115 is *provisionally* valid. Data from 07/20 @1130 to 10/19 @1415 is deleted. Sonde was not assessable from 07/20 to current date due to flood conditions.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374550&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374550&agency_cd=USGS)

**Rio Grande at Rio Grande Village (CAMS 721) (USGS 08375300): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 10/19/2013  
**Time of visit:** 0845 LST  
**Staff:** J. Rosendale, T. Dowell  
**Sonde out:** 07D101131  
**Sonde in:** 08E100529

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered with heavy silt fouling.
- **CV Results:** Post deployment calibration checks are rated excellent.

**Environmental conditions:** Weather conditions were cool, dry, clear, and breezy.

**Discharge information:** Discharge was not measured.

**Additional comments:** Station Data Collection Platform (DCP) was not operational. Missing data for all parameters from 09/28 @0745 to 10/19 @1130. DCP was replaced on this date.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08375300&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08375300&agency_cd=USGS)

**Rio Grande abv. Amistad (Fosters Ranch) (CAMS 759) (USGS 08377200) QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 10/20/2013  
**Time of visit:** 1150 LST  
**Staff:** J. Rosendale, T. Dowell  
**Sonde out:** 12F101030  
**Sonde in:** 12H100069

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered with very heavy sediment fouling.
- **CV Results:** Post deployment calibration checks are rated excellent.

**Environmental conditions:** Weather conditions were warm, dry, clear and breezy.

**Additional comments:** There were no periods of missing recorded record.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08377200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08377200&agency_cd=USGS)

**Lower Pecos River near Langtry (CAMS 799) (USGS 08447410) QW Monitor (WT, pH, DO, SC).**

**Scheduled visit.**

**Date of visit:** 10/20/2013

**Time of visit:** 1430 LST

**Staff:** J. Rosendale, T. Dowell

**Sonde out:** 11J100000

**Sonde in:** 11J100001

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered with very light sediment and organic fouling.
- **CV Results:** All post deployment calibration checks are rated excellent.

**Environmental conditions:** Channel is clear and good flow. Weather conditions were warm, dry, clear and breezy.

**Additional comments:** There were no periods of missing recorded record.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447410%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447410%20&agency_cd=USGS)

**Pecos River nr. Orla, TX (CAMS 798) (USGS 08412500): SW full range + QW sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:**

**Time of visit:**

**Staff:**

**Sonde in:** 11J100002

**Sonde out:**

**Condition of sensors:**

- **Fouling conditions:**
- **CV Results:**

**Environmental conditions**

**Discharge information**

**Additional comments:** A November visit was not completed. The Government shutdown pushed our October trip to late in the month. Due to the fact the site is at zero flow, it was determined that a visit so soon after the previous visit made a November visit unnecessary.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08412500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08412500%20&agency_cd=USGS)

**Pecos River @ Pecos, TX (CAMS 710) (USGS 08420500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:**

**Time of visit:**

**Staff:**

**Sonde in:**

**Sonde out:**

**Condition of sensors**

• **Fouling conditions:**

• **CV Results:**

**Environmental conditions**

**Discharge information:**

**Additional comments:** A November visit was not completed. The Government shutdown pushed our October trip to late in the month. Due to the fact the site is at zero flow, it was determined that a visit so soon after the previous visit made a November visit unnecessary.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08420500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08420500&agency_cd=USGS)

**Pecos River @ RR1176 nr. Grandfalls, TX (CAMS 709) (USGS 08437710): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 07 November 2013

**Time of visit:** 1000 LST

**Staff:** J. Rosendale, S. Marr

**Sonde out:** 10J101916

**Sonde in:** 10K100290

**Condition of sensors:**

• **Fouling conditions:** Sonde recovered with moderate silt fouling.

• **CV Results:** All post deployment calibration checks rated excellent except DO which was rated good

**Environmental conditions:** At the time of the visit the weather was Cool, dry, partly cloudy, and breezy

**Discharge information:** A discharge measurement was not made during this visit.

**Additional comments.**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08437710 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08437710 &agency_cd=USGS)

**Pecos River nr Girvin, TX (CAMS 785) (USGS 08446500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 07 November 2013

**Time of visit:** 1210 LST

**Staff:** J. Rosendale, S. Marr

**Sonde out:** 07H101208

**Sonde in:** 10K100288

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered with light sediment fouling.
- **CV Results:** All post deployment calibration checks rated excellent except pH. pH 7 was rated good and pH 10 was rated poor.

**Environmental conditions:** At the time of the visit the weather was warm, dry, pt. cloudy, and breezy.

**Discharge information:** A discharge measurement was not made during this visit.

**Additional comments**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08446500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08446500%20&agency_cd=USGS)

**Pecos River near Sheffield (CAMS 735) (USGS 08447000): SW Low Flow +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 05 November 2013

**Time of visit:** 1025 LST

**Staff:** J. Rosendale, S. Marr

**Sonde out:** 10J101909

**Sonde in:** 10J101915

**Condition of sensors**

- **Fouling conditions:** Sonde recovered with light sediment fouling.
- **CV Results:** All post deployment calibration checks rated excellent.

**Environmental conditions:** At the time of the visit the weather was warm, dry, partly cloudy, and gusty.

**Discharge information:** A discharge measurement was not made during this visit.

**Additional comments**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447000&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447000&agency_cd=USGS)

**Caroline Springs at Oasis Ranch (CAMS 764) (USGS 08447018): QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 05 November 2013

**Time of visit:** 1150 LST

**Staff:** J. Rosendale, S. Marr

**Sonde out:** 10J101917

**Sonde in:** 10J101913

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered with no signs of environmental fouling.
- **CV Results:** All post deployment calibration checks rated excellent.

**Environmental conditions:** At the time of the visit the weather was warm, dry, partly cloudy, and windy.

**Discharge information:** A discharge measurement was not made at Independence Creek (USGS 08447020).

**Additional comments**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447018%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447018%20&agency_cd=USGS)

**Pecos River nr Val-Verde Crockett (Brotherton Ranch) (CAMS 729) (USGS 08447300): SW Low Flow+QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 05 November 2013

**Time of visit:** 1330 LST

**Staff:** J. Rosendale, S. Marr

**Sonde out:** 10J101911

**Sonde in:** 10K100292

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered with light silt fouling
- **CV Results:** All post deployment calibration checks rated excellent.

**Environmental conditions:** At the time of the visit the weather was warm, dry, partly cloudy, and breezy.

**Discharge information:** A discharge measurement was not made during this visit.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447300 &agency_cd=USGS)

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## **September 2013 Progress Report:**

### **Rio Grande ABV. Rio Conchos (CAMS 757) (USGS 08371500): QW Monitor (WT, pH, DO, SC)**

#### **Scheduled visit.**

**Date of visit:** 09/05/2013  
**Time of visit:** 10:00 LST  
**Staff:** A. Falzarano, J. Rosendale  
**Sonde out:** 06G2028AB  
**Sonde in:** 12F100880

#### **Condition of sensors:**

- **Fouling conditions:** Sonde recovered moderate sediment fouling.
- **CV Results:** All post deployment calibration checks rated excellent.

**Environmental conditions:** Channel is clear and there is low flow at the monitor site. Weather conditions were warm, dry, Pt. cloudy, and gusty upstream wind.

**Additional comments:** Poor water circulation around deployment tube. There were no periods of missing recorded record.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08371500 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08371500 &agency_cd=USGS)

#### **Cleaning visit. (Changed monitor)**

**Date of visit:** 09/25/2013  
**Time of visit:** 0915 LST  
**Staff:** A. Falzarano, J. Rosendale  
**Sonde out:** 12F100880  
**Sonde in:** 06G2028AB

#### **Condition of sensors:**

- **Fouling conditions:** Sonde recovered with very heavy sediment fouling.
- **CV Results:** All post deployment calibration checks rated excellent.

**Environmental conditions:** Channel is clear and slightly higher than average flow and velocity. Weather conditions were cool, dry, clear, and an upstream breeze.

**Additional comments:** Poor water circulation around deployment tube. There were no periods of missing recorded record.

### **Rio Grande BLW. Rio Conchos (CAMS 758) (USGS 08374200): QW Monitor (WT, pH, DO, SC)**

#### **Scheduled visit.**

**Date of visit:** 09/05/2013  
**Time of visit:** 12:15 LST  
**Staff:** A. Falzarano, J. Rosendale  
**Sonde out:** 08C100065  
**Sonde in:** 08C100066

#### **Condition of sensors:**

- **Fouling conditions:** Sonde recovered with moderate sediment and organic debris with light biological fouling.
- **CV Results:** All post deployment calibration checks rated excellent.

**Environmental conditions:** Channel is clear with high flow. Weather conditions were warm, dry, Pt. cloudy, and gusty winds.

**Additional comments:** There were no periods of missing recorded record.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374200 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374200&agency_cd=USGS)

**Rio Grande at Castolon (CAMS 720) (USGS 08374550): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Scheduled visit. (Unable to retrieve monitor due to high flow)**

**Date of visit:** 09/06/2013

**Time of visit:** LST

**Staff:** A. Falzarano, J. Rosendale

**Sonde out:** N/A

**Sonde in:** 05D1750AD

**Condition of sensors:**

- **Fouling conditions:** N/A

- **CV Results:** There is no calibration verification associated with this visit.

**Environmental conditions:** N/A

**Discharge information:** Discharge was not measured.

**Additional comments:** There were no periods of missing recorded record.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08374550 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08374550&agency_cd=USGS)

**Rio Grande at Rio Grande Village (CAMS 721) (USGS 08375300): SW Full Range + QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 09/06/2013

**Time of visit:** 08:30 LST

**Staff:** A. Falzarano, J. Rosendale

**Sonde out:** 08E100529

**Sonde in:** 07D101131

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered with moderate sediment fouling.

- **CV Results:** Post deployment calibration checks rated excellent.

**Environmental conditions:** Weather conditions were warm, dry, Pt. cloudy, and calm wind.

**Discharge information:** Discharge was not measured. Channel is clear and there is high flow at monitor site.

**Additional comments:** There were no periods of missing recorded record.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08375300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08375300&agency_cd=USGS)

**Rio Grande abv. Amistad (Fosters Ranch) (CAMS 759) (USGS 08377200) QW Monitor (WT, pH, DO, SC)**

**Scheduled visit.**

**Date of visit:** 09/04/2013

**Time of visit:** 15:00 LST

**Staff:** A. Falzarano, J. Rosendale

**Sonde out:** 12H100069

**Sonde in:** 12F101030

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered with very heavy sediment fouling.

- **CV Results:** Post deployment calibration checks rated excellent.

**Environmental conditions:** Channel is clear and there is high flow at monitor site. Weather conditions were hot, dry, Pt. cloudy, and breezy.

**Additional comments:** There were no periods of missing recorded record.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08377200&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08377200&agency_cd=USGS)

**Lower Pecos River near Langtry (CAMS 799) (USGS 08447410) QW Monitor (WT, pH, DO, SC).**

**Scheduled visit.**

**Date of visit:** 09/04/2013

**Time of visit:** 12:45 LST

**Staff:** A. Falzarano, J. Rosendale

**Sonde out:** 11J100001

**Sonde in:** 11J100000

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered with light sediment fouling.

- **CV Results:** All post deployment calibration checks rated excellent.

**Environmental conditions:** Channel is clear and good flow. Weather conditions were hot, dry, Pt. Cloudy, and breezy.

**Additional comments:** There were no periods of missing recorded record.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447410%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447410%20&agency_cd=USGS)

**Pecos River nr. Orla, TX (CAMS 798) (USGS 08412500): SW full range + QW sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 12 September 2012

**Time of visit:** 0915 LST

**Staff:** J. Rosendale, G Falzarano

**Sonde in:** N/A

**Sonde:** 11J100006

**Condition of sensors:**

- **Fouling conditions:** The sonde is currently out of the water. There were no visible signs of fouling.

- **CV Results:** N/A

**Environmental conditions:** There is water in the channel, but it is a stagnant pool. At the time of the visit the weather was warm, dry, cloudy, and windy.

**Discharge information:** Site is at zero flow.

**Additional comments:** SC/Temp is the only probe currently installed on the sonde. The probes appeared to be in good condition. A four parameter sonde is prepared at the office should the river begin to flow.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08412500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08412500%20&agency_cd=USGS)

**Pecos River @ Pecos, TX (CAMS 710) (USGS 08420500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 12 September 2012

**Time of visit:** 1105 LST

**Staff:** J. Rosendale, G Falzarano

**Sonde in:** N/A

**Sonde:** 10K100289

**Condition of sensors**

- **Fouling conditions:** The sonde is currently out of the water. There were no visible signs of fouling

- **CV Results:** N/A

**Environmental conditions:** There is water in the channel, but it is a stagnant pool. At the time of the visit the weather was warm, dry, pt. cloudy, and windy.

**Discharge information:** Site is at zero flow.

**Additional comments:** SC/Temp is the only probe currently installed on the sonde. The probes appeared to be in good condition. A four parameter sonde is prepared at the office should the river begin to flow.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08420500&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08420500&agency_cd=USGS)

**Pecos River @ RR1176 nr. Grandfalls, TX (CAMS 709) (USGS 08437710): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 10 September 2013

**Time of visit:** 1345 LST

**Staff:** J. Rosendale, G. Falzarano

**Sonde out:** 10J101916

**Sonde in:** 10K100290

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered with moderate silt and algae fouling.

- **CV Results:** All post deployment calibration checks rated excellent.

**Environmental conditions:** At the time of the visit the weather was warm, dry, pt. cloudy, and gusty.

**Discharge information:** A discharge measurement was not made during this visit.

**Additional comments:** Cross-sectional QW measurements were taken.

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08437710 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08437710 &agency_cd=USGS)

**Pecos River nr Girvin, TX (CAMS 785) (USGS 08446500): SW full range +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 10 September 2013

**Time of visit:** 1020 LST

**Staff:** J. Rosendale, G. Falzarano

**Sonde out:** 09H101126

**Sonde in:** 10K100288

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered with moderate silt/sand fouling on probes.
- **CV Results:** All post deployment calibration checks rated excellent.

**Environmental conditions:** At the time of the visit the weather was warm, dry, pt. cloudy, and gusty.

**Discharge information:** A discharge measurement was not made during this visit. Site was at base flow for this time of the year.

**Additional comments:** Cross-sectional QW measurements were taken

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08446500%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08446500%20&agency_cd=USGS)

**Pecos River near Sheffield (CAMS 735) (USGS 08447000): SW Low Flow +QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 11 September 2013

**Time of visit:** 0830 LST

**Staff:** J. Rosendale, G. Falzarano

**Sonde out:** 10J101909

**Sonde in:** 10J101915

**Condition of sensors**

- **Fouling conditions:** Sonde recovered with light silt and algal fouling.
- **CV Results:** All post deployment calibration checks rated excellent, with the exception of specific conductance. 2500  $\mu\text{S}/\text{cm}$  rated poor, 10000  $\mu\text{S}/\text{cm}$  rated good.

**Environmental conditions:** At the time of the visit the weather was warm, dry, pt. cloudy, and gusty.

**Discharge information:** A discharge measurement was not made during this visit. Site was at base flow for this time of the year.

**Additional comments:** Cross-sectional QW measurements were taken

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447000&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447000&agency_cd=USGS)

**Caroline Springs at Oasis Ranch (CAMS 764) (USGS 08447018): QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 11 September 2013

**Time of visit:** 1100 LST

**Staff:** J. Rosendale, G. Falzarano

**Sonde out:** 10J101917

**Sonde in:** 10J101913

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered with no signs of environmental fouling.

- **CV Results:** All post deployment calibration checks rated excellent.

**Environmental conditions:** At the time of the visit the weather was warm, dry, cloudy, and windy.

**Discharge information:** N/A

**Additional comments:** Cross-sectional QW measurements were taken

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447018%20&agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447018%20&agency_cd=USGS)

**Pecos River nr Val-Verde Crockett (Brotherton Ranch) (CAMS 729) (USGS 08447300): SW Low Flow+QW Sonde (WT, SC, pH, DO)**

**Scheduled visit.**

**Date of visit:** 11 September 2013

**Time of visit:** 1310 LST

**Staff:** J. Rosendale, G. Falzarano

**Sonde out:** 10J101911

**Sonde in:** 10K100292

**Condition of sensors:**

- **Fouling conditions:** Sonde recovered with light sediment fouling.

- **CV Results:** All post deployment calibration checks rated excellent.

**Environmental conditions:** At the time of the visit the weather was warm, dry, pt. cloudy, and breezy.

**Discharge information:** A discharge measurement was not made during this visit. Site was at base flow for this time of the year.

**Additional comments:**

[http://waterdata.usgs.gov/tx/nwis/measurements/?site\\_no=08447300 &agency\\_cd=USGS](http://waterdata.usgs.gov/tx/nwis/measurements/?site_no=08447300 &agency_cd=USGS)

Monthly Percent Data Return\* for USGS Operated CWQMN Stations Under 582-14-40098

Site_ID	Station_Name	Parm Code	Parm Name	9/13	10/13	11/12	12/13	1/14	2/14	3/14	4/14	5/14	6/14	7/14	8/14
08371500	Rio Grande abv Rio Conchos nr Presidio, TX	00010	Temperature, water	84	95	58	100	100	100	100	100	100	61	100	99
08371500	Rio Grande abv Rio Conchos nr Presidio, TX	00095	Specific cond at 25C	84	95	58	100	100	99	99	98	98	58	100	99
08371500	Rio Grande abv Rio Conchos nr Presidio, TX	00300	Dissolved oxygen	84	95	58	100	100	100	100	100	100	58	100	97
08371500	Rio Grande abv Rio Conchos nr Presidio, TX	00400	pH	84	95	58	100	100	100	100	100	100	58	100	99
08374200	Rio Grande bl Rio Conchos nr Presidio, TX	00010	Temperature, water	100	100	100	100	100	100	100	100	100	100	100	100
08374200	Rio Grande bl Rio Conchos nr Presidio, TX	00095	Specific cond at 25C	100	75	100	100	100	100	100	100	99	99	100	100
08374200	Rio Grande bl Rio Conchos nr Presidio, TX	00300	Dissolved oxygen	100	100	100	100	100	100	100	100	99	100	100	100
08374200	Rio Grande bl Rio Conchos nr Presidio, TX	00400	pH	100	85	100	46	100	100	100	100	100	100	100	100
08377200	Rio Grande at Foster Rh nr Langtry, TX	00010	Temperature, water	100	100	100	100	100	98	88	100	77	0	0	0
08377200	Rio Grande at Foster Rh nr Langtry, TX	00095	Specific cond at 25C	100	100	100	100	100	98	88	100	76	0	0	0
08377200	Rio Grande at Foster Rh nr Langtry, TX	00300	Dissolved oxygen	100	100	100	100	100	98	88	100	77	0	0	0

08377200	Rio Grande at Foster Rh nr Langtry, TX	00400	pH	100	100	100	100	100	98	88	100	77	0	0	0
08374550	Rio Grande nr Castolon, TX	00010	Temperature, water	100	40	100	100	100	83	100	100	0	42	0	0
08374550	Rio Grande nr Castolon, TX	00095	Specific cond at 25C	8	11	69	100	100	65	100	100	0	38	0	0
08374550	Rio Grande nr Castolon, TX	00300	Dissolved oxygen	100	40	100	100	100	83	100	67	0	42	0	0
08374550	Rio Grande nr Castolon, TX	00400	pH	100	40	100	100	100	83	100	100	0	42	0	0
08374550	Rio Grande nr Castolon, TX	00065	Gage height	100	100	1	42	99	100	92	95	100	100	100	100
08374550	Rio Grande nr Castolon, TX	00060	Discharge	100	98	0	42	99	100	92	95	100	100	100	100
08375300	Rio Grande at Rio Grande Village, Big Bnd NP, TX	00010	Temperature, water	91	40	100	100	100	100	100	100	100	100	100	100
08375300	Rio Grande at Rio Grande Village, Big Bnd NP, TX	00095	Specific cond at 25C	91	40	100	100	99	98	99	99	100	100	100	100
08375300	Rio Grande at Rio Grande Village, Big Bnd NP, TX	00300	Dissolved oxygen	91	40	100	100	100	100	100	99	100	99	100	97
08375300	Rio Grande at Rio Grande Village, Big Bnd NP, TX	00400	pH	91	40	100	100	100	99	100	99	100	100	100	100
08375300	Rio Grande at Rio Grande Village, Big Bnd NP, TX	00065	Gage height	100	42	100	100	100	100	99	100	94	98	100	98

08375300	Rio Grande at Rio Grande Village, Big Bnd NP, TX	00060	Discharge	100	42	100	100	100	100	100	99	100	94	98	100	98
08437710	Pecos Rv at RR 1776 nr Grandfalls, TX	00065	Gage height	100	99	96	91	53	100	100	100	100	100	100	89	89
08437710	Pecos Rv at RR 1776 nr Grandfalls, TX	00060	Discharge	100	99	96	91	53	100	100	100	100	100	100	89	89
08437710	Pecos Rv at RR 1776 nr Grandfalls, TX	00010	Temperature, water	100	97	98	98	100	100	100	100	100	100	100	93	100
08437710	Pecos Rv at RR 1776 nr Grandfalls, TX	00095	Specific cond at 25C	100	98	98	98	100	100	100	100	100	100	100	93	100
08437710	Pecos Rv at RR 1776 nr Grandfalls, TX	00300	Dissolved oxygen	100	99	99	99	100	100	100	100	100	100	100	93	100
08437710	Pecos Rv at RR 1776 nr Grandfalls, TX	00400	pH	100	98	98	98	100	100	100	100	100	100	100	93	100
08420500	Pecos Rv at Pecos, TX	00065	Gage height	100	100	100	100	100	100	100	100	100	100	100	100	100
08420500	Pecos Rv at Pecos, TX	00060	Discharge	100	100	100	100	100	100	100	100	100	100	100	100	100
08420500	Pecos Rv at Pecos, TX	00010	Temperature, water	100	100	100	100	100	100	100	100	99	100	100	100	100
08420500	Pecos Rv at Pecos, TX	00095	Specific cond at 25C	100	100	100	100	100	100	100	100	98	100	100	100	100
08420500	Pecos Rv at Pecos, TX	00300	Dissolved oxygen	100	100	100	100	100	100	100	100	99	100	100	100	100





08446500	Pecos Rv nr Girvin, TX	00060	Discharge	100	100	92	89	83	100	100	100	100	100	100	100
08412500	Pecos Rv nr Orla, TX	00010	Temperature, water	100	100	90	68	68	83	94	99	100	100	100	100
08412500	Pecos Rv nr Orla, TX	00095	Specific cond at 25C	100	100	100	100	100	100	100	100	100	100	100	100
08412500	Pecos Rv nr Orla, TX	00300	Dissolved oxygen	0	0	0	0	0	0	0	0	0	0	0	0
08412500	Pecos Rv nr Orla, TX	00400	pH	0	0	0	0	0	0	0	0	0	0	0	0
08412500	Pecos Rv nr Orla, TX	00065	Gage height	100	100	100	100	100	100	100	100	100	100	100	100
08412500	Pecos Rv nr Orla, TX	00060	Discharge	100	100	100	100	100	100	100	100	100	100	100	100
08447410	Pecos Rv nr Langtry, TX	00010	Temperature, water	100	100	100	100	100	100	100	100	100	65	27	0
08447410	Pecos Rv nr Langtry, TX	00095	Specific cond at 25C	100	100	100	100	100	100	100	100	100	65	27	0
08447410	Pecos Rv nr Langtry, TX	00300	Dissolved oxygen	100	100	100	100	100	100	100	100	100	65	27	0
08447410	Pecos Rv nr Langtry, TX	00400	pH	100	100	100	100	100	100	100	99	100	65	27	0
08374510	Rio Grande dws Santa Elena Canyon, BBNP, TX	00010	Temperature, water										Data begins 6/25	99	100

08374510	Rio Grande dws Santa Elena Canyon, BBNP, TX	00095	Specific cond at 25C											Data begins 6/25	99	99
08374510	Rio Grande dws Santa Elena Canyon, BBNP, TX	00300	Dissolved oxygen											Data begins 6/25	98	99
08374510	Rio Grande dws Santa Elena Canyon, BBNP, TX	00400	pH											Data begins 6/25	99	99