

Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)
Progress Report: FY 2014 Quarter 4 covering June 1, 2014 – August 31, 2014 (submitted September 12, 2014)

TASK	DELIVERABLE	DUE DATE	DATE SUBMITTED
Contract Executed September 18, 2012			
1.2	Quarterly Progress Report FY13 Q-1 No. 1 Quarterly Progress Report FY13 Q-2 No. 2 Quarterly Progress Report FY13 Q-3 No. 3 Quarterly Progress Report FY13 Q-4 No. 4 Quarterly Progress Report FY14 Q-1 No. 5 Quarterly Progress Report FY14 Q-2 No. 6 Quarterly Progress Report FY14 Q-3 No. 7 Quarterly Progress Report FY14 Q-4 No. 8 Quarterly Progress Report FY15 Q-1 No. 9 Quarterly Progress Report FY15 Q-2 No. 10 Quarterly Progress Report FY15 Q-3 No. 11 Quarterly Progress Report FY15 Q-3 No. 12	Dec. 15, 2012 Mar. 15, 2013 Jun. 15, 2013 Sep. 15, 2013 Dec. 15, 2013 Mar. 15, 2014 Jun. 15, 2014 Sep. 15, 2014 Dec. 15, 2014 Mar. 15, 2015 Jun. 15, 2015 Sep. 15, 2015	December 14, 2012 March 15, 2013 June 14, 2013 Sept. 13, 2013 Dec. 13, 2013 March 18, 2014 June 11, 2014
1.3	Contract Communication Post-Award Meeting Post Award Meeting Minutes Quarterly Communication Minutes	Oct., 18, 2012 Dec. 15, 2012 Quarterly with QPR	Held Sep. 21, 2012 at TCEQ Offices in Austin Conference call with TCEQ Project Manager August 21, 2014 (Minutes provided in Attachment #1)
1.4	Annual Report Article FY13 Annual Report Article FY14 Annual Report Article FY15	Upon Request Upon Request Upon Request	
1.5	Project Coordination Meeting with EPA	Sep 30, 2014	
2.1	QAPP Planning Meeting with City of Killeen	Oct. 18, 2012	Feb. 11, 2013 TIAER met with CoK in Killeen to discuss the QAPP and Monitoring plan drafts.
2.2	Draft QAPP for Monitoring	Nov. 16, 2013	Feb. 22, 2013 - A draft Monitoring QAPP was sent to the TCEQ Project Manager for review. Received comments March 28 and responded with final revision dated April 17, 2013 and QAPP approved May 2, 2013

Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)
Progress Report: FY 2014 Quarter 4 covering June 1, 2014 – August 31, 2014 (submitted September 12, 2014)

TASK	DELIVERABLE	DUE DATE	DATE SUBMITTED
2.3	Draft QAPP for Modeling	Nov. 16, 2013	Feb. 22, 2013 – A draft Modeling QAPP was sent to the TCEQ Project Manager for review. Received comment April 4 and responded with final revision dated May 13, 2013 approved May 16, 2013.
2.4	QAPP Updates FY14 FY15	No less that 60 days prior to end of effective period	FY14 Annual revision to Monitoring QAPP approved March 6, 2014. FY14 Annual certification for Modeling QAPP approved February 12, 2014.
2.5	QAPP Amendments Draft QAPP Amendments Final	As needed As needed	No activity this quarter
2.6	Data Submittals (quarterly data submittals requested by TCEQ PM)	Mar. 15, 2013 Jun. 15, 2013 Sep. 15, 2013 Dec. 15, 2013 Mar. 15, 2014 Jun. 15, 2014 Sep. 15, 2014 Dec. 15, 2014 Mar. 15, 2015 Jun. 15, 2015 Aug. 15, 2015	Data collection started in May 2013 with approval of monitoring QAPP. First data submittal sent Sep. 13, 2013. Second submittal sent Dec. 16, 2013 Third submittal sent Mar. 12, 2014 Forth submittal June 13, 2014
3.1	Draft PPP Final PPP	Dec. 15, 2012 Mar. 15, 2013	Feb. 25, 2013 – Submitted to TCEQ PM Mar. 4, 2013 – PPP approved by TCEQ PM. Mar. 5, 2013 – Distributed final PPP in PDF form to project partners and TCEQ PM
3.2 – 3.5	Stakeholder Group Development, Activities, Meetings and Project Dissemination	Quarterly	Last public stakeholder meeting held January 16, 2014. Next meeting scheduled for September 25, 2014.
3.6	Draft Building Partnerships – Element E, Part A Report Final Building Partner ships – Element E, Part A Report	Mar. 15 & Sep. 15, 2013 & 2014 Aug. 15, 2015	March 4, 2013 – TCEQ PM gave final approval of PPP and approved document was sent in PDF form to project partners.
4.1-4.2	Inventory of existing data and GIS representation for watershed in shapefile or ArcGIS grid format	Nov. 15, 2013 Revised due date Dec. 5, 2014	Delayed but in progress. New deliverable date requested

Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)
Progress Report: FY 2014 Quarter 4 covering June 1, 2014 – August 31, 2014 (submitted September 12, 2014)

TASK	DELIVERABLE	DUE DATE	DATE SUBMITTED
4.3	Draft Watershed Characterization Report Final Watershed Characterization Report	Dec. 15, 2013 Revised due date Dec. 5, 32014 March 15, 2014 Revised due date Feb. 20, 2015	Delayed but in progress. TCEQ PM notified of via email dated 23Aug2014 of requested extension of due date.
5.2	Draft Water Quality Monitoring Plan Final Water Quality Monitoring Plan	Nov. 16, 2012 Dec. 15, 2012	Reconnaissance and planning meeting held between TIAER and CoK January 18, 2013 Submitted to TCEQ PM for review February 22, 2013 and approved March 8, 2013.
5.3	Source Survey Technical Report	Dec. 15, 2014	
5.5	Draft Watershed Characterization – Phase 2 Report Final Watershed Characterization – Phase 2 Report	Apr. 15, 2015 Jun. 15, 2015	
6.2	Watershed maps that identify potential cause and sources of water quality problems	Jun. 15, 2015	
6.5	Draft Watershed Characterization Phase 3 Report with Loadings Final Watershed Characterization Phase 3 Report with Loadings	June 15, 2015 Jul. 15, 2015	
7.1	Define Education Goals	Mar. 15, 2013	Strategies for reaching targeted audience outlined in PPP
7.2	Identify Target Audience	Mar. 15, 2013	Target audience identified in PPP
7.3	Design Implementation Measures	Mar. 15, 2013	
7.4	Evaluate Education and Outreach Program FY13 FY14 FY15	Sep. 15, 2013 Sep. 15, 2014 Sep. 15, 2015	Evaluation tool prepared for distribution at September 2014 public meeting.
7.5	Draft Information & Education Plan Report Final Information & Education Plan Report	Jun. 15, 2015 Jul. 15, 2015	
8.1- 8.2	Draft Project Report Final Project Report	Jul. 15, 2015 Aug. 15, 2015	

GENERAL COMMENTS

TASK	COMMENTS/ACTIVITIES
1. Project Administration	Project administrative duties occurred as needed including emails, quarterly communication, development of quarterly progress reports and reimbursement requests. Updated PEL provided as Attachment #2. TCEQ PM notified of via email dated 23Aug2014 of requested extension of due date for deliverables under Task 4.
2. Quality Assurance	No activity this quarter. Annual revisions or certification reviews conducted and approved for FY14.
3. Building Partnerships	Stakeholder list updated based on requests. Next stakeholder meeting scheduled for September 25, 2014 to be held at the Killeen Transportation Services Building from 6 to 8 pm.
4. Watershed Characterization – Data Inventory	Work continued throughout the quarter with regard to the data inventory. The CoK is reviewing the data and has made a draft available to TIAER as an overview.
5. Watershed Characterization – Data Collection and Analysis	Routine monitoring was conducted monthly throughout the quarter at all 11 stations and is summarized in Table 1 at the end of the General Comments Section. Storm monitoring was conducted in late March at the four storm sampling stations (see Table 2). Corrective Action Reports and Corrective Action Plans issued for project samples are presented in Table 3 with the Corrective Action Status as Table 4.
6. Identification of Causes and Sources of Pollution and Estimation of Pollutant Loads	SELECT model modified for use in Nolan watershed and needed data are being acquired.
7. Information and Education Component	Evaluation tool prepared for distribution at September 2014 public meeting.
8. Project Report	No activity to report

Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)

Progress Report: FY 2014 Quarter 4 covering June 1, 2014 – August 31, 2014 (submitted September 12, 2014)

Table 1. Routine Monthly Monitoring for June 2014 through August 2014. Number of samples and comments, as applicable.

Collection Date	TCEQ Station ID	Sonde	Nutrients & TSS	<i>E. coli</i>	Flow	Comments
17June2014	11915	1	1	1	1	
17June2014	18828	1	1	1	1	
17June2014	21436	1	1	1	1	
17June2014	18827	1	1	1	1	
17June2014	21437	1	1	1	1	
17June2014	11913	1	1	1	1	
17June2014	11911	1	1	1	1	
17June2014	11910	1	1	1	1	
17June2014	11908	1	1	1	1	
17June2014	11905	1	1	1	1	
17June2014	14237	1	1	1	1	
23July2014	11915	1	1	1	1	
23July2014	18828	1	1	1	1	
23July2014	21436	1	1	1	1	
23July2014	18827	1	1	1	1	
23July2014	21437	1	1	1	1	
23July2014	11913	1	1	1	1	
23July2014	11911	1	1	1	1	
23July2014	11910	1	1	1	1	
23July2014	11908	1	1	1	1	
23July2014	11905	1	1	1	1	
23July2014	14237	1	1	1	1	
13Aug2014	11915	1	1	1	1	
13Aug2014	18828	1	1	1	1	
13Aug2014	21436	1	1	1	1	
13Aug2014	18827	1	1	1	1	
13Aug2014	21437	1	1	1	1	
13Aug2014	11913	1	1	1	1	
13Aug2014	11911	1	1	1	1	
13Aug2014	11910	1	1	1	1	
13Aug2014	11908	1	1	1	1	
13Aug2014	11905	1	1	1	1	
13Aug2014	14237	1	1	1	1	

Sonde data includes dissolved oxygen, specific conductance, pH, and water temperature.

Nutrients include nitrite-nitrogen + nitrate-nitrogen (NO₂-N+NO₃-N, dissolved), total Kjeldahl nitrogen (TKN), orthophosphate-phosphorus (OPO₄-P, dissolved), and total phosphorus (TP).

Table 2. Storm Monitoring for June 2014 through August 2014. Number of samples and comments, as applicable. Nutrient and TSS, unless noted, represent a flow-weighted sample collected with an automated sampler. Samples for *E. coli* are grab samples collected during elevated flow conditions.

Collection Date	TCEQ Station ID	Nutrients & TSS	<i>E. coli</i>	Flow	Comments
16July2014	18828	1	1	1	
16July2014	11913	1	1	1	
16July2014	11910	1	1	1	
16July2014	11905	1	1	1	

Nutrients include nitrite-nitrogen + nitrate-nitrogen (NO₂-N+NO₃-N, dissolved), total Kjeldahl nitrogen (TKN), orthophosphate-phosphorus (OPO₄-P, dissolved), and total phosphorus (TP).

Corrective Action Reports

The below listing includes CARs where data quality was potentially impacted and required notification and review by the TIAER PM. The deficiencies were not such to require immediate reporting to TCEQ, and are, thus, reported with the QPR.

Table 3
Summary of new Corrective Action Reports

TIAER CAR # & CAP#	Sample Collection Date	Report Initiation Date	TIAER Sample Number(s)	Site(s)	Description of Deficiency	Cause(s)	Resulting or Suggested Action	Corrective Action for Specific Incident	Corrective Actions to be Taken	Proposed Completion Date	Date Closed
14-0045 & CAP #7	19Mar2014	12Jun2014	1000093345	11905	RPD for field split greater than 30% for TKN (sample 0.95 mg/L and split 1.43 mg/L)	Unknown, sample may not have been sufficiently shaken, although all other analytes in split passed as well as other batch QC	Continue to monitor	Flag data with "SP" for data submittal	Review data for acceptability for project objectives.	12Jun2014	12Jun2014
14-0046 & CAP #7	09Apr2014	12Jun2014	1000093419	11908	RPD for field split greater than 30% for TKN (sample 1.11 mg/L and split 1.55 mg/L)	Unknown, sample may not have been sufficiently shaken, although all other analytes in split passed as well as other batch QC	Continue to monitor	Flag data with "SP" for data submittal	Review data for acceptability for project objectives.	12Jun2014	12Jun2014
14-0047 & CAP #7	05May2014	12Jun2014	1000093477	11910	RPD for field split greater than 30% for TKN (sample 1.46 mg/L and split 0.98 mg/L)	Unknown, sample may not have been sufficiently shaken, although all other analytes in split passed as well as other batch QC	Continue to monitor	Flag data with "SP" for data submittal	Review data for acceptability for project objectives.	12Jun2014	12Jun2014

Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)

Progress Report: FY 2014 Quarter 4 covering June 1, 2014 – August 31, 2014 (submitted September 12, 2014)

**Table 4
Corrective Action Status Table**

Corrective Action # (CARs)	Date Issued (CAP)	Description of Deficiency	Action Taken	Date Closed
1 (CARs 13-0092 & 13-0105)	06Sep2013	Matrix spike beyond recovery limits (NO ₂ -N+NO ₃ -N & TKN)	Associated sample data to be flagged with “SR” in data submittal. No specific corrective action identified. Lab will continue to monitor for trends.	01Oct2013
2 (CAR 13-0097)	06Sep2013	Quanti-Tray comparator for <i>E. coli</i> analysis was used past expiration	Expired comparator was checked against new comparator. Added comparator expiration date to monthly maintenance check schedule.	10Jan2014
3 (CAR 13-0101)	06Sep2013	Field filtration of NO ₂ -N+NO ₃ -N and PO ₄ -P was unable to occur.	Field crew directed to use alternative parameter codes as outlined in the QAPP. Field personnel reminded to verify that loaded equipment matches the items on the equipment check list, which is located in the Nolan field notebooks.	03Sep2013
4 (CARs 13-0137 & 13-0138)	12Dec2013	Matrix spike beyond recovery limits (NO ₂ -N+NO ₃ -N & PO ₄ -P)	Associated sample data to be flagged with “SR” in data submittal. No specific corrective action identified. Lab will continue to monitor for trends.	13Jan2014
5 (CARs 14-0022, 14-0031 & 14-0038)	05Jun2014	Matrix spike beyond recovery limits (PO ₄ -P, NO ₂ -N+NO ₃ -N & TKN)	Associated sample data to be flagged with “SR” in data submittal. No specific corrective action identified. Lab will continue to monitor for trends.	09Jun2014
6 (CAR 14-0031)	05Jun2014	Sonde incorrectly calibrated for specific conductance	Field personnel instructed to review calibration procedures prior to next monitoring event. Data omission to be noted with data submittal.	27May2014

Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)

Progress Report: FY 2014 Quarter 4 covering June 1, 2014 – August 31, 2014 (submitted September 12, 2014)

Corrective Action # (CARs)	Date Issued (CAP)	Description of Deficiency	Action Taken	Date Closed
7 (CARs 14-0045, 14-0046 & 14-0047)	05Sep2014	RPD for field split greater than 30% for TKN	Associated sample data flagged with “SP” in data submittal. Historical data reviewed in comparison to sample values to determine acceptability for project objectives.	12Jun2014

Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)

Progress Report: FY 2014 Quarter 4 covering June 1, 2014 – August 31, 2014 (submitted September 12, 2014)

Attachment #1
Minutes from Quarterly Project Coordination Meeting

Date: Thursday August 21, 2014

Time: 10-10:30am

Participants: Anne McFarland - TIAER

Leah Taylor - TIAER

Arthur Talley – TCEQ

Minutes Prepared by Leah Taylor

Workplan and scheduled deadlines for deliverables were discussed by task. Specific items discussed were as follows:

Upcoming Stakeholder Meeting – Meeting has been scheduled for September 25, 2014 at the Killeen Transportation Services located at 3201 W.S. Young Drive, Killeen, TX 76542. Arthur indicated that he should be able to review stakeholder letters, agenda, and press release if given about two weeks. Leah and Anne will send Arthur all stakeholder media for final review on Friday August 22, 2014 to allow sufficient time for review prior to the distribution of materials to stakeholders. PowerPoint presentations for the meeting will be made available to Arthur for review two weeks prior to the meeting.

QAPP – The current QAPPs underwent annual review in February 2014 (modeling QAPP) and March 2014 (monitoring QAPP). TIAER will begin the next annual review starting in December 2014.

Draft Watershed Characterization Report – Anne will formally set a new deadline for the draft watershed characterization report via email to Arthur. Anne aims to set the revised deadline for the final report under Task 4.3 for late in the fall of 2014.

Watershed Assessment Evaluation - The assessment evaluation tool was discussed and decided that it will be distributed to stakeholders at the September 25, 2014 meeting. Leah will send it to Arthur for review on Friday, August 22, 2014.

Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)

Progress Report: FY 2014 Quarter 4 covering June 1, 2014 – August 31, 2014 (submitted September 12, 2014)

**Attachment #1
Updated PEL**

PERSONNEL ELIGIBILITY LIST

Provide a list of personnel (employees of the contractor) who will be designated to work on, and are eligible to charge to, the contract. This form can be recreated using your own software, but these fields are required at a minimum. Please add any special notes to ensure PEL information can be reconciled against payroll and personnel records (e.g. salaries estimated based on X, or salaries include projected pay increases). Cost estimates for fringe benefits may be added to this report in separate columns, if desired, and the benefits need to be identified.

The PEL is a contract management tool, which should be updated and submitted annually with the 1st quarter voucher. It is not necessary to resubmit the PEL for each salary change. ALL Employee changes require a new Personnel Eligibility List (PEL) to be submitted with the applicable quarter=s voucher.

Contractor: Texas Institute for Applied Environmental Research Date: 18 September 2012

Updated: 14 April 2014 to add C.M. Grimes as a student intern and U. Pandey and N. Basnet as alternates for field work. Name change for L. Brown to L. Taylor. Removal of C. Clary.

Updated: 30 Aug 2013 to remove J. Tyer, B. Ginn, and C. Goffinet as temporary employees.

Updated: 06 Jun 2013 for Angie Knaupp (new position) and added Kalyn Brymer to assist with Tasks 1, 3 & 7, replacing M. Brown.

Updated: 01 Jun 2013 to add Scotty Pack in assisting T. Adams with Task 6.

Updated: 02 May 2013 for new personnel, Brandon Ginn. Mr. Ginn will be assisting with field work.

Updated: 14 March 2013 for new personnel, Angie Knaupp and Joshua Tyer, and removal of Matt Brown

Updated: 14 November 2012 for new personnel at TIAER who will be assisting with project tasks (Leah Brown, Sarah Robinson, Stephanie Painter and Kimberly Hogan).

Staff Name or Vacant	Position or Title	Date Added to PEL	Date Removed from PEL	% Time to Contract	Total Annual Salary ¹	Cost Each Fiscal Year ²
Salaried Employees						
Adams, T.	Research Associate	18Sep2012		11%	\$49,275	\$5,510
Basnet, N.	Senior Research Associate	14Apr2014		Alternate for field work	\$46,862	
Blankenship, D.	Research Assistant	18Sep2012		8%	\$28,933	\$2,306
Brown, L. now Taylor, L.	Research Associate	14Nov2012			\$39,780	
Clary, C.	Research Associate	18Sep2012	01Jan2014	2%	\$40,383	\$857
Hunt, V.	Technician	18Sep2012		<1%	\$27,984	\$281
Hunter, J.	Sr. Research Assistant	18Sep2012		2%	\$43,162	\$916
Jackson, N.	Sr. Project & Policy Dir.	18Sep2012		15%	\$62,296	\$9,123
Martinez, A.	Research Associate	18Sep2012		8%	\$41,288	\$3,256
McFarland, A.	Research Scientist	18Sep2012		10%	\$84,406	\$8,670
Millican, J.	Senior Research Associate	18Sep2012		9%	\$49,400	\$4,392
Murphy, M.	Lab Manager	18Sep2012		<1%	\$78,894	\$175
Pack, S.	Computer Systems Development Technician	01Jun2013			\$43,118	
Painter, S.	Senior Research Associate	14Nov2012			\$45,000	

Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)

Progress Report: FY 2014 Quarter 4 covering June 1, 2014 – August 31, 2014 (submitted September 12, 2014)

Staff Name or Vacant	Position or Title	Date Added to PEL	Date Removed from PEL	% Time to Contract	Total Annual Salary ¹	Cost Each Fiscal Year ²
Pandey, U.	Senior Research Associate	14Apr2014		Alternate for field work	\$42,516	
Pendergrass, D.	Senior Research Associate	18Sep2012		5%	\$48,318	\$2,319
Robinson, S.	Asst. Res. Scientist	14Nov2012			\$51,000	
Rogers, J.	Senior Analyst/Programmer	18Sep2012		4%	\$62,421	\$2,339
Stroebel, J.	Research Associate	18Sep2012		14%	\$56,181	\$7,975
Wages – Hourly Employees						
Brown, Matt	Graduate Assistant	18Sept2012	14Mar2013	6%	\$11.53/hr	\$1,440
Brymer, Kalyn	Graduate Assistant	06June2013		2%	\$11.53/hr	
Grimes, C.M.	Student Intern – Research	14Apr2014			\$9.00/hr	
Knaupp, Angie	Graduate Assistant	06June2013		2%	\$11.53/hr	
Easterling, N.	Research Associate	18Sep2012		2%	\$28.85/hr	\$1,362
Hogan, K.	Student Worker	14Nov2012			\$7.25/hr	
Jones, T	Sr. Research Associate	18Sep2012		1%	\$29.96/hr	\$623
Jackson, J.	Student Worker	18Sep2012		2%	\$10.00/hr	\$416
Goffinet, C.	Student Worker	18Sep2012	30Aug2013	2%	\$10.00/hr	\$416
Knaupp, A.	Student Worker	14Mar2013	06June2013	2%	\$10.00/hr	\$416
Tyer, J.	Res. Assistant	14Mar2013	30Aug2013		\$14.15/hr	
Ginn, B.	Res. Assistant	13May2013	30Aug2013		\$14,15/hr	
Total Annual Cost (Personnel - Salaries)						\$52,792

¹ Annual salary is for fiscal year 2012. A salary increase of 3 % assumed each new fiscal year for the project's duration.

² Average annual personnel cost for project duration. Actual costs will vary by year and task activities conducted.