

**AMENDMENT # 2 TO THE H-GAC
CLEAN RIVERS PROGRAM FY 2012/2013 QAPP**

**PREPARED BY THE HOUSTON-GALVESTON AREA COUNCIL
IN COOPERATION WITH THE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ)**

QUESTIONS CONCERNING THIS QAPP SHOULD BE DIRECTED TO:

**JEAN WRIGHT, QUALITY ASSURANCE OFFICER
HOUSTON-GALVESTON AREA COUNCIL
P.O. Box 22777
HOUSTON, TEXAS 77227-2777
PH. (713) 499-6660
FAX (713) 993-4503
JEAN.WRIGHT@H-GAC.COM**

EFFECTIVE: IMMEDIATELY UPON APPROVAL BY ALL PARTIES

Justification: The H-GAC FY2012-2013 Regional CRP QAPP is being amended to add some pieces of information such as parameter codes that were not available previously and to update personnel within some of the local partners. Additionally, there are changes in a few monitoring locations and parameters collected, as well as updating site descriptions through the SLOC procedure.

Detail of Changes: List each section in which a change is proposed and provide a description of the change(s) in the table below.

Section/Figure/Table	Page(s)	Change	Justification
Section A4 Project /Task Organization	26	Change the name of The Woodland Division CRP Field QAO from Rick Moore to Max Holt.	Following a re-organization within SJRA-Woodlands, Max Holt, the Field Supervisor, also was assigned the duties of the CRP Field QAO.
Section A4 Project /Task Organization	26	Change the name of EIH's CRP Data Manager & Field QAO from Jenny Wrast to Jenny Oakley.	Jenny got married this past fall and changed her name. While this page was being updated, I thought I would update this item as well.
Project Organization Charts Figures A4.1h	36	Change the CRP Field QAO name in this organization chart from Rick Moore to Max Holt.	Following a re-organization within SJRA-Woodlands, Max Holt, the Field Supervisor, also was assigned the duties of the CRP Field QAO.
Project Organization Charts Figures A4.1h	37	Change the CRP Field QAO and CRP Data Manager name in this organization chart from Jenny Wrast to Jenny Oakley.	Jenny got married this past fall and changed her name. While this page was being updated, I thought I would update this item as well.
Section A6 Project/Task Description	43	Add the word 'enterococci' to the paragraph which describes the Harris County Flood Control District monitoring program.	This word was erroneously left out of the paragraph when the QAPP was first approved. It is already found in other related sections such as the table A7.1h and table B2.1h.
Section A6 Project/Task Description	44	Change one of the 24-hr DO sites from 0902 –Cedar Bayou Above Tidal at Hwy 90 (site 11120) to 0901 –Cedar Bayou Tidal at H-10 (site 11117)	The Cedar Bayou Watershed project is supplementing CRP sampling with additional monthly ambient monitoring, monthly 24-hr DO monitoring, & biological monitoring. Since H-GAC is contracting out the additional monitoring work, it is more

			convenient and efficient to change the 24-hr monitoring to another HG sampling site. There will also be 24-hour DO data being collected from the original site but by a different collecting entity.
Section A8 Special Training/Certification Table A8.1 Designated Trainer for each Local Partner	48	Change trainer's name for SJRA-W from Rick Moore to Max Holt. Change the trainer's name for EIH from Jenny Wrast to Jenny Oakley.	Following a reorganization within SJRA-Woodlands, Max Holt, the Field Supervisor, also was assigned the duties of the CRP Field QAO. Jenny got married this past fall and changed her name. While this page was being updated, I thought I would update this item as well.
Section B9 Non-Direct Measurements	76	Insert a new paragraph about the reservoir stage data being collected.	Required to be inserted to report some of the drought related parameters.
Table A7.1a – Measurement Performance Specifications for H-GAC	Appendix A	Insert new parameter codes for drought related parameters.	Drought condition information is needed to help assess data collected when low flow or severe weather conditions exist. Since an amendment was being submitted, H-GAC elected to add the parameters now.
Table A7.1c – Measurement Performance Specifications for HHS	Appendix A	Insert new parameter codes for drought related parameters.	Drought condition information is needed to help assess data collected when low flow or severe weather conditions exist. Since an amendment was being submitted, H-GAC elected to add the parameters now.
Table A7.1d – Measurement Performance Specifications for WQC	Appendix A	Insert new parameter codes for drought related parameters.	Drought condition information is needed to help assess data collected when low flow or severe weather conditions exist. Since an amendment was being submitted, H-GAC elected to add the parameters now.
Table A7.1e – Measurement Performance Specifications for SJRA-LC	Appendix A	Insert new parameter codes for drought related parameters.	Drought condition information is needed to help assess data collected when low flow or severe weather conditions exist. Since an amendment was being submitted, H-GAC elected to add the parameters now.
Table A7.1f –	Appendix	Insert new parameter	Drought condition information is

Measurement Performance Specifications for SJRA-W	A	codes for drought related parameters.	needed to help assess data collected when low flow or severe weather conditions exist. Since an amendment was being submitted, H-GAC elected to add the parameters now.
Table A7.1g – Measurement Performance Specifications for EIH	Appendix A	<i>Insert</i> new parameter codes for drought related parameters.	Drought condition information is needed to help assess data collected when low flow or severe weather conditions exist. Since an amendment was being submitted, H-GAC elected to add the parameters now.
Table A7.1h – Measurement Performance Specifications for PWE	Appendix A	<i>Insert</i> new parameter codes for drought related parameters.	Drought condition information is needed to help assess data collected when low flow or severe weather conditions exist. Since an amendment was being submitted, H-GAC elected to add the parameters now just in case they might be needed in the future.
CMS FY2012	Appendix B	<i>Change</i> HG's 24-Hour DO monitoring site from 11120 to 11117.	Moving the CRP 24-Hr DO monitoring is more convenient efficient of man-power since additional 24-Hr monitoring will be conducted at the original site plus several other locations.
CMS FY2012	Appendix B	<i>Change</i> HG's monitoring site 16604 to 20461.	Site 20461 has been the location being monitored however H-GAC was using the wrong site id.
CMS FY2012	Appendix B	<i>Add</i> monitoring site 11237 to HG's list as an alternate location if 17431 (upstream) is dry.	Site 17431 was added at the request of the TCEQ Beaumont office. Both sites are in the same AU so if the upstream site is found to be dry, the lower site can be monitored.
CMS FY2012	Appendix B	<i>Add</i> flow monitoring to 5 sites in HW's list of sites. All the sites were identified as having USGS gages at them. Sites affected are: 11235, 11238, 11251, 11313, 11328	It was determined that there were USGS gages located at several HW sites. Either HW or HG will look up the information from the USGS web site.
CMS FY2012	Appendix B	<i>Delete</i> TKN from the list of parameters collected at the HP sites.	TKN was erroneously added to the list of lab parameters

Distribution: QAPP Amendments/Revisions to Appendices will be distributed to all personnel on the distribution list maintained by the Houston-Galveston Area Council.

These changes will be incorporated into the QAPP document and TCEQ, H-GAC, and the local partners will acknowledge and accept these changes by signing this amendment.

HOUSTON-GALVESTON AREA COUNCIL (H-GAC)



5/7/12

Todd Running
H-GAC Project Manager

Date



5/7/12

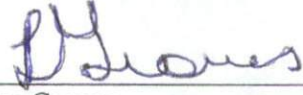
Jean Wright
H-GAC Quality Assurance Officer

Date

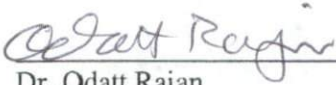
CITY OF HOUSTON, HEALTH AND HUMAN SERVICES (HHS)




Arturo Blanco Date
HHS CRP Project Manager



Lisa Groves Date
HHS Field Quality Assurance Officer



Dr. Odatt Rajan Date
CRP Laboratory Director



Emina Marjanovich Date
HHS Lab Inorganic Chemistry Section Technical Supervisor

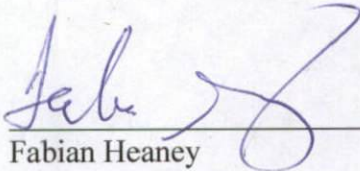


Linda Holman Date
HHS Lab Microbiology Section Technical Supervisor

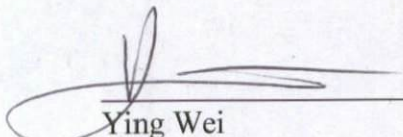


Cyndie Boulé Date
HHS Lab Quality Assurance Officer


CITY OF HOUSTON, DEPARTMENT OF WATER QUALITY CONTROL (WQC)


Fabian Heaney
Laboratory Director

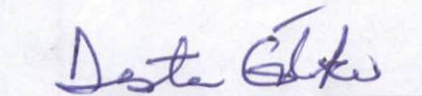
3-28-2012
Date


Ying Wei
Laboratory Manager / CRP Project Manager

3-28-12
Date


Shubha Thakur
Laboratory Quality Assurance Officer

3/28/12
Date



Desta Takie
Field Quality Assurance Officer

3/28/12
Date

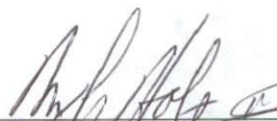
SAN JACINTO RIVER AUTHORITY - LAKE CONROE DIVISION (SJRA-LC)

 4-1-12
Randy Acreman Date
SJRA-L CRP Project Manager & Field Quality Assurance Officer

SAN JACINTO RIVER AUTHORITY - WOODLANDS DIVISION (SJRA-W)

 3/28/12

Zafar Ahmed Date
SJRA-W CRP Project Manager

 3/28/12

Max Holt Date
SJRA-W CRP Field QAO


ENVIRONMENTAL INSTITUTE OF HOUSTON, UNIVERSITY OF HOUSTON CLEAR LAKE (EIH)



Dr. George Guillen
EIH CRP Project Manager

3/29/12

Date



Jenny Oakley
EIH Field Quality Assurance Officer

3/29/12

Date

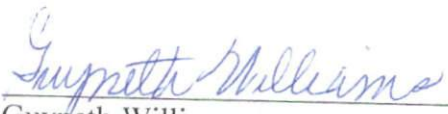
HARRIS COUNTY FLOOD CONTROL DISTRICT (HCFCF)

Jonathan Holley 3/29/2012
Jonathan Holley Date
HCFCF CRP Project Manager, QAO,
& Coordinator of Laboratory Services

Robert Snoza 3/29/2012
Robert Snoza Date
HCFCF Data Manager

CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING (PWE)

 3-28-2012
Dorene Hancock
PWE CRP Project Manager
Date

 3/28/12
Guyneth Williams
PWE Field QAO & Field Supervisor
Date

 3/29/12
Richard Chapin
PWE Data Manager
Date

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Patricia Wise 5/17/12
Patricia Wise, CRP Project Manager Date

Allison Fischer 5/17/2012
Allison Fischer, CRP Project QAS Date

Allison Woodall 5/17/2012
Allison Woodall, CRP Work Leader Date

Daniel R. Burke 5/17/2012
Daniel R. Burke, CRP Lead QAS Date

Gary Foster**The Woodlands Division CRP Data Manager**

Responsible for reviewing and verifying data with field operations and with contract laboratory personnel. Enters laboratory data into an electronic data file and reviews all data for accuracy, reasonableness, completeness, and compliance with the QAPP. Submits the electronic data file and appropriate sections of the Data Review Check-list to the Quality Assurance Officer.

Max Holt**The Woodlands Division CRP Field Supervisor**

Responsible for scheduling and collecting field samples, and ensuring that field data sheets and the appropriate section of the Data Review Check-list are properly completed. Enters field data into an electronic data file and reviews data for accuracy and reasonableness. Provides field data sheets, chain-of-custody forms, the appropriate section of the Data Review Check-list, and electronic data to the Data Manager and/or Quality Assurance Officer, as appropriate. Ensures all monitoring personnel are properly trained.

Max Holt**The Woodlands Division CRP Field QAO**

Trains all field monitoring personnel. Responsible for ensuring that proper methods and protocols are followed during sample collection.

ENVIRONMENTAL INSTITUTE OF HOUSTON (EIH) UNIVERSITY OF HOUSTON CLEAR LAKE**Dr. George Guillen****EIH CRP Project Manager, Field Supervisor & CRP Quality Assurance Officer**

Responsible for meeting the requirements of the contract between H-GAC and the Environmental Institute of Houston (EIH) by implementing CRP requirements, the Regional QAPP, and QAPP amendments and appendices. Ensures project oversight is consistent with QAPP requirements and communicates project status to H-GAC Project Manager. Notifies H-GAC Project Manager and/or the H-GAC QAO of circumstances that may adversely affect quality of data derived from collection and analysis of samples. Helps coordinates basin planning activities and works with basin partners. Responsible for ensuring that proper methods and protocols are followed during sample collection and that field data are properly reviewed, verified and submitted to H-GAC in a timely manner.

Jenny Oakley**CRP Data Manager & Field QAO**

Responsible for entering data in spreadsheets, reviewing and verifying data with field operations and with contract laboratory personnel. Performs required QA/QC checks on data and ensures results are acceptable for submission to H-GAC. Trains all field monitoring personnel and is responsible for ensuring that proper methods and protocols are followed during sample collection.

HARRIS COUNTY FLOOD CONTROL DISTRICT (HCFCD)**Jonathan Holley****CRP Project Manager / Coordinator of Laboratory Services / Project QAO**

Responsible for project oversight, maintaining communication with H-GAC Project manager, and coordinator between field and laboratory personnel. Responsible for ensuring that proper methods,

Figure A4.1g. San Jacinto River Authority, The Woodland Division (SJRA-W) CRP Organizational Chart.

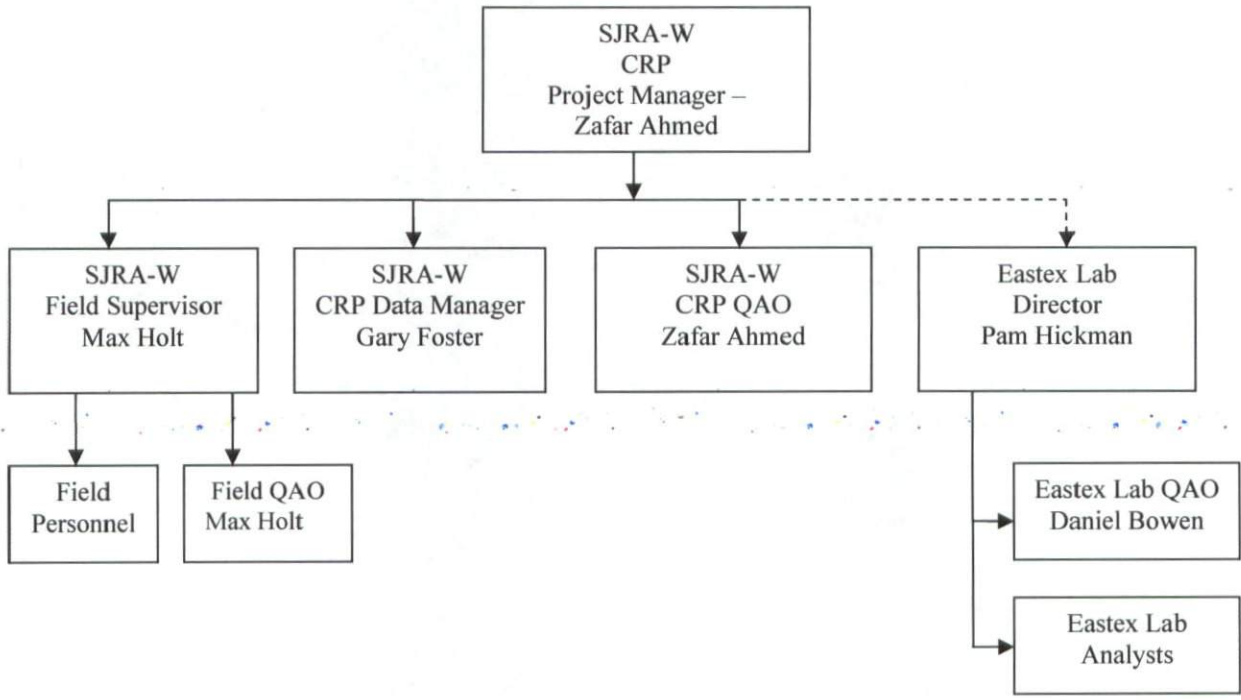
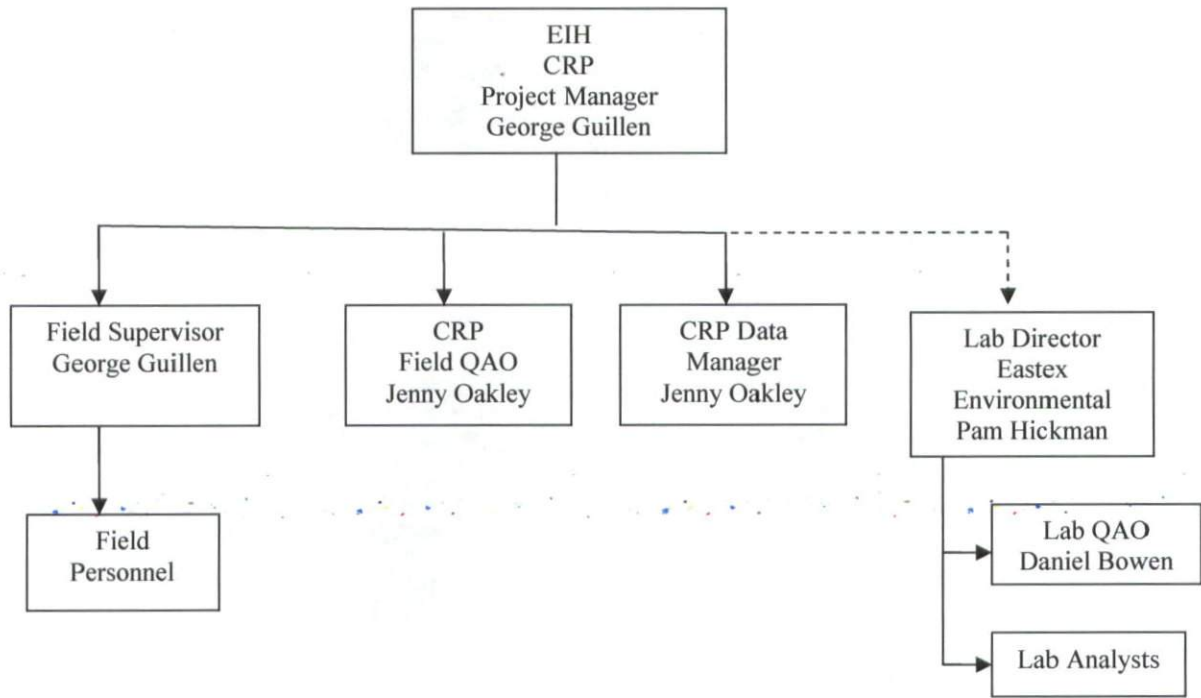


Figure A4.1h. The Environmental Institute of Houston (EIH) at the University of Houston - Clear Lake (UHCL) CRP Organizational Chart.



will eventually be pumped into water production facilities, treated and distributed to the public. Data is collected on a monthly or bi-monthly basis and shared with the Clean Rivers Program. The City of Houston also contracts with SJRA to collect water samples from Lake Conroe which is also a source of public drinking water.

San Jacinto River Authority (Lake Conroe Division) is contracted by the City of Houston to collect routine surface water quality data because Lake Conroe is a secondary source of public drinking water for the City. The monitoring that is conducted by SJRA allows the Department of Water Quality Control to assess the quality of water that will eventually flow downstream into Lake Houston, thence be pumped into water production facilities, treated and distributed to the public. Data is collected on a monthly basis and shared with the Clean Rivers Program. Field parameters are measured and water samples collected, then delivered to the WQC lab for analysis and reporting.

San Jacinto River Authority (The Woodlands Division) collects routine surface water quality data to establish baseline information for Lake Woodlands and Panther Branch – a tributary of Spring Creek. The data is shared with the Clean Rivers Program. Field parameters are monitored monthly while conventional and bacteriological parameters are analyzed quarterly. A few but not all of the TSWQS metals-in-water are collected and analyzed twice a year to look for changes over time.

Environmental Institute of Houston was contracted by H-GAC to monitor surface water quality at more than 50 locations in Galveston and Brazoria Counties. There are no local cities or agencies able to voluntarily monitor the waterways in those areas. Data is collected for the Clean Rivers Program on a quarterly basis for a total of 4 events at each site per year.

Harris County Flood Control District surface water quality monitoring is conducted at 10 selected ambient sites located in Harris County. These sites will be sampled on a monthly basis for field parameters and bacteria. Both enterococci and *E. coli* analyses will be conducted on every sample collected. The sampling activities will be coordinated with another CRP partner's schedule. HCFCD samples will be collected in the mid to late afternoon on the same day when the other CRP partner samples in the morning or early afternoon. The purpose of collecting a second set of samples is to look for daily variations in bacteria concentrations. As data is collected and reviewed, more samples may be added if deemed necessary or beneficial to overall knowledge of bacteria concentrations in area waterways. The **City of Houston, Public Works and Engineering** will conduct the field activities for HCFCD. They will coordinate the collection of field parameters and bacteria samples for each of the ten selected ambient sites. PWE will collect the samples, transport to the lab, receive and process data and forward approved data to HCFCD for eventual submission to H-GAC and TCEQ. Verification, validation, and completeness will be monitored on all levels.

Houston-Galveston Area Council began collecting quarterly surface water quality monitoring samples at 30 locations beginning in September 2007. Today, the number has increased to 33 monitoring sites. There are no local agencies available or willing to collect samples in the areas being targeted so H-GAC established its own monitoring program. Special studies were conducted in the past which indicate the areas are under pressure from urbanization. Routine monitoring in these areas will support future assessments and allow H-GAC or TCEQ to evaluate if or how the streams' water quality changes over time.

Routine monitoring is scheduled at varying frequencies, which are determined by the parameters of concern for individual streams and/or proximity to a monitoring agency's field office and lab. Water bodies are also selected for baseline monitoring if there is a high public interest; if it has a high potential for impairment; or there is a need for continuous up-to-date water quality information. Frequencies vary from quarterly for some partners and parameters to monthly in more highly impacted areas (see coordinated monitoring schedule in Appendix B).

Data collected through routine monitoring is designed to characterize water quality trends and monitor progress in protecting and restoring water quality. This monitoring will provide an overall view of water quality throughout the river and coastal basins. Baseline monitoring will include the collection of basic field parameters at all sites and the collection of bacteria, flow, and conventional chemical parameters at sites where indicated. All monitoring procedures and methods will follow the guidelines prescribed in the H-GAC QAPP and the most current versions of TCEQ's *Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue (RG-415)* and the TCEQ's *Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data (RG-416)*.

24-Hour Dissolved Oxygen monitoring by the Houston-Galveston Area Council.

Numerous sub-segments in the H-GAC region have dissolved oxygen (DO) impairments or concerns about depressed DO. H-GAC identified one segment and four sub-segments which have been listed in the 303(d) List as needing more data. Additional data is needed to determine whether these sub-segments are actually impaired and require a Total Maximum Daily Load (TMDL) or not. H-GAC will conduct six 24-hour DO monitoring events on each of these waterbodies throughout a two year period. There are two sites on the segment and one site on each of the four sub-segments. All data collected and summarized will be submitted to the TCEQ for use in future assessments.

The sites are located on sub-segments:

- 0901 – Cedar Bayou Tidal at I-10 Eastbound bridge south of Mont Belvieu (site 11117)
- 0902 – Cedar Bayou Above Tidal at FM 1960, east of Lake Houston (site 1123)
- 1007H – Pine Gully at Old Galveston Road in Southeast Houston (site 16659)
- 1007I – Plum Creek at Old Galveston Road in Southeast Houston (site 16658)
- 1105E – Brushy Bayou immediately upstream of Brazoria CR 210 east of Angleton (Site 18509)
- 1302B – West Bernard Creek at County Road 225 east of Hungerford (site 20721)

See Appendix B for the project-related work plan tasks and schedule of deliverables for a description of work defined in this QAPP.

See Appendix B for sampling design and monitoring pertaining to this QAPP.

Amendments to the QAPP

Revisions to the QAPP may be necessary to address incorrectly documented information or to reflect changes in project organization, tasks, schedules, objectives, and methods. Requests for amendments will be directed from the H-GAC Project Manager to the CRP Project Manager electronically.

Amendments are effective immediately upon approval by the H-GAC Project Manager, the H-GAC QAO, the CRP Project Manager, the CRP Lead QA Specialist, the CRP Project QA Specialist, and additional parties affected by the amendment. Amendments are not retroactive. They will be incorporated into the QAPP by way of attachment and distributed to personnel on the distribution list

A8 SPECIAL TRAINING/CERTIFICATION

New field personnel receive training in proper sampling and field analysis. Before actual sampling or field analysis occurs, they will demonstrate to the QA Officer (or designee) their ability to properly calibrate field equipment and perform field sampling and analysis procedures. Field personnel training is documented and retained in the personnel file and will be available during a monitoring systems audit.

The requirements for Global Positioning System (GPS) certification are located in Section B10, Data Management.

Contractors and subcontractors must ensure that laboratories analyzing samples under this QAPP meet the requirements contained in section TNI Volume 1 Module 2, Section 4.5.5 (concerning Review of Requests, Tenders and Contracts).

Table A8.1 The Designated Trainer for each Local Partner.

Local Partner Agency	Designated Trainer
Houston-Galveston Area Council	Jean Wright
Harris County Environmental Public Health Division	Tim Duffey
City of Houston – Health & Human Services	Lisa Groves
City of Houston – Water Quality Control	Joey Eickhoff
San Jacinto River Authority-Lake Conroe Division	Randy Acreman
San Jacinto River Authority-The Woodlands Division	Max Holt
Environmental Institute of Houston	Jenny Oakley
City of Houston – Public Works and Engineering	Guyneth Williams

A9 DOCUMENTS AND RECORDS

The documents and records that describe, specify, report, or certify activities are listed. The list below is limited to documents and records that may be requested for review during a monitoring systems audit. Add other types of project documents and records as appropriate.

Table A9.1a – Project Documents and Records: H-GAC

Document/Record	Location	Retention (yrs)	Format
QAPPs, amendments and appendices	H-GAC	7	Paper & electronic
Field SOPs	H-GAC	7	Paper & electronic
Laboratory Quality Manuals	H-GAC / Eastex Lab	7	Paper & electronic
Laboratory SOPs	Eastex Lab	7	Paper & electronic
QAPP distribution documentation	H-GAC / Eastex Lab	7	Paper
Field staff training records	H-GAC	7	Paper
Field equipment calibration/maintenance logs	H-GAC	7	Paper

B7 INSTRUMENT CALIBRATION AND FREQUENCY

Field equipment calibration requirements are contained in the *TCEQ Surface Water Quality Monitoring Procedures*. Post-calibration error limits and the disposition resulting from error are adhered to. Data not meeting post-error limit requirements invalidate associated data collected subsequent to the pre-calibration and are not submitted to the TCEQ.

Detailed laboratory calibrations are contained within the various QMs.

B8 INSPECTION/ACCEPTANCE OF SUPPLIES AND CONSUMABLES

All laboratory-related items will be inspected and accepted for use in this project by the laboratories. Acceptance criteria for such supplies and consumable, in order to satisfy the technical and quality objectives of this project, are documented in the individual laboratories QMs.

B9 NON-DIRECT MEASUREMENTS

The following non-direct measurement source(s) will be used for this project: USGS gage station data will be used throughout this project to aid in determining gage height and flow. Rigorous QA checks are completed on gage data by the USGS and the data is approved by the USGS and permanently stored at the USGS. This data will be submitted to the TCEQ under parameter code 00061 (Flow, Instantaneous) or parameter code 74069 (Flow Estimate) depending on the proximity of the monitoring station to the USGS gage station.

Reservoir stage data are collected every day from the United States Geological Survey (USGS), International Boundary and Water Commission (IBWC), and the United States Army Corps of Engineers (USACE) websites. These data are preliminary and subject to revision. The Texas Water Development Board (TWDB) derives reservoir storage (in acre-feet) from these stage data (elevation in feet above mean sea level), by using the latest rating curve datasets available. These data are published at the TWDB website at <http://wiid.twdb.state.tx.us/ims/resinfo/BushButton/lakeStatus.asp?selcat=3&slbasin=2>. The web application uses real time gaged observations 7 AM reading each day (or closest reading available) from 119 major reservoirs to approximate daily storage for each reservoir, as well as daily total storage for water planning regions, river basins and the state of Texas. These instantaneous data are updated to mean daily data for all previous days. These data will be submitted to the TCEQ under parameter code 00052 Reservoir Stage and parameter code 00053 Reservoir Percent Full.

All data collected directly under this QAPP, plus the non-direct measurements for flow where appropriate, are submitted to the SWQMIS database.

B10 DATA MANAGEMENT

Data Management Process

Data is received by H-GAC from all partners, including H-GAC's own data monitoring program. Each partner has a paragraph below which gives a brief description of their data submission process.

When data is submitted to H-GAC, the data is saved in "Raw Data" folders. When H-GAC begins to process the data, it is saved into a "Working Data" folder. By changing the folder in which the data is saved, H-GAC always has the original data submittal in electronic format. Data is processed by H-GAC's Data Manager (a SAS Operator) and H-GAC's QAO before being submitted to TCEQ in the format specified in the SWQM Data Management Reference Guide, January 2010 or most recent version, for approval to load into SWQMIS. H-GAC's full data procedure is shown in the flow chart in Appendix H – Data Management Procedures.

- H-GAC's field sheets are kept in a three ring binder at the Data Manager's desk. The calibration sheets, field forms, and COCs are reviewed by the QAO before any data entry is made. If there are nonconformances such as failed calibration, the QAO writes instructions in a different colored ink on the related field form regarding data entry. Then the instructions are initialed and dated.

TABLE A7.1a Measurement Performance Specifications for Houston-Galveston Area Council

Field Parameters

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
TEMPERATURE, WATER (DEGREES CENTIGRADE)	DEG C	water	SM 2550 B and TCEQ SOP V1	00010	NA*	NA	NA	NA	NA	Field
FLOW STREAM, INSTANTANEOUS (CUBIC FEET PER SEC)	cfs	water	TCEQ SOP V1	00061	NA*	NA	NA	NA	NA	Field
TRANSPARENCY, SECCHI DISC (METERS)	meters	water	TCEQ SOP V1	00078	NA*	NA	NA	NA	NA	Field
SPECIFIC CONDUCTANCE, FIELD (uS/CM @ 25C)	us/cm	water	EPA 120.1 and TCEQ SOP, V1	00094	NA*	NA	NA	NA	NA	Field
OXYGEN, DISSOLVED (MG/L)	mg/L	water	SM 4500-O G and TCEQ SOP, V1	00300	NA*	NA	NA	NA	NA	Field
PH (STANDARD UNITS)	s.u	water	EPA 150.1 and TCEQ SOP, V1	00400	NA*	NA	NA	NA	NA	Field
SALINITY - PARTS PER THOUSAND	PPT	water	SM 2520 and TCEQ SOP, V1	00480	NA*	NA	NA	NA	NA	Field
FLOW SEVERITY: 1=No Flow, 2=Low, 3=Normal, 4=Flood, 5=High, 6=Dry	NU	water	TCEQ SOP V1	01351	NA*	NA	NA	NA	NA	Field
DAYS SINCE PRECIPITATION EVENT (DAYS)	days	other	TCEQ SOP V1	72053	NA*	NA	NA	NA	NA	Field
STREAM FLOW ESTIMATE (CFS)	cfs	Water	TCEQ SOP, V1	74069	NA*	NA	NA	NA	NA	Field
DEPTH OF BOTTOM OF WATER BODY AT SAMPLE SITE	meters	water	TCEQ SOP V2	82903	NA*	NA	NA	NA	NA	Field
FLOW MTH 1=GAGE 2=ELEC 3=MECH 4=WEIR/FLU 5=DOPPL	NU	other	TCEQ SOP V1	89835	NA*	NA	NA	NA	NA	Field
WIND INTENSITY (1=CALM, 2=SLIGHT, 3=MOD., 4=STRONG)	NU	other	NA	89965	NA	NA	NA	NA	NA	Field
PRESENT WEATHER (1=CLEAR, 2=PTCLDY, 3=CLDY, 4=RAIN, 5=OTHER)	NU	other	NA	89966	NA	NA	NA	NA	NA	Field
WATER SURFACE (1=CALM, 2=RIPPLE, 3=WAVE, 4=WHITECAP)	NU	water	NA	89968	NA	NA	NA	NA	NA	Field
TIDE STAGE 1=LOW, 2=FALLING, 3=SLACK, 4=RISING, 5=HI	NU	water	NA	89972	NA	NA	NA	NA	NA	Field
WATER COLOR (1=BROWNISH, 2=REDDISH, 3=GREENISH, 4=BLACKISH, 5=CLEAR, 6=OTHER)	NU	water	NA	89969	NA	NA	NA	NA	NA	Field
WATER ODOR (1=SEWAGE, 2=OILY/CHEMICAL, 3=ROTTEN EGG, 4=MUSKY, 5=FISHY, 6=NONE, 7=OTHER)	NU	water	NA	89971	NA	NA	NA	NA	NA	Field
WATER CLARITY (1=EXCELLENT, 2=GOOD, 3=FAIR, 4=POOR)	NU	water	NA	20424	NA	NA	NA	NA	NA	Field
TURBIDITY, OBSERVED (1=LOW, 2=MEDIUM, 3=HIGH)	NU	water	NA	88842	NA	NA	NA	NA	NA	Field

* Reporting to be consistent with SWQM guidance and based on measurement capability.

References:

TABLE A7.1a Measurement Performance Specifications for Houston-Galveston Area Council
Field Parameters
United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020; American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)
TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).
TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data, 2007 (RG-416)
TCEQ Interim Routine Surface Water Quality Monitoring Guidance During Drought, October 2011

**TABLE A7.1a Measurement Performance Specifications for Houston-Galveston Area Council
Conventional and Bacteriological Parameters in Water**

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
RESIDUE, TOTAL NONFILTRABLE (MG/L) [TSS]	mg/L	water	SM 2540 D	00530	4	1	NA	NA	NA	Eastex
NITROGEN, AMMONIA, TOTAL (MG/L AS N)	mg/L	water	SM4500NH3-D & G	00610	0.1	0.1	70-130	20	80-120	Eastex
NITROGEN, KJELDAHL, TOTAL (MG/L AS N)	mg/L	water	SM 4500-NH3 C *	00625	0.2	0.2	70-130	20	80-120	Eastex
NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	mg/L	water	SM 4500-NO3 E & F	00630	0.05	0.02	70-130	20	80-120	Eastex
PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)	mg/L	water	SM 4500-P E	00665	0.06	0.02	70-130	20	80-120	Eastex
CHLORIDE (MG/L AS CL)	mg/L	water	SM 4500 Cl-C	00940	5	5	70-130	20	80-120	Eastex
SULFATE (MG/L AS SO4)	mg/L	water	ASTM D516	00945	5	5	70-130	20	80-120	Eastex
E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	MPN/100 mL	water	SM 9223-B***	31699	1	1	NA	0.50**	NA	Eastex
ENTEROCOCCI, ENTEROLERT, IDEXX, (MPN/100 ML) ****	MPN/100 mL	water	ASTM D-6503	31701	1	1	NA	0.50**	NA	Eastex
E.COLI, COLILERT, IDEXX, HOLDING TIME ***	hours	water	NA	31704	NA	NA	NA	NA	NA	Eastex
CHLOROPHYLL-A UG/L SPECTROPHOTOMETRIC ACID. METH	ug/L	water	EPA 446.0	32211	3	3	NA	20	80-120	Eastex
ORTHOPHOSPHATE PHOSPHORUS, DISS, MG/L, FLDFILT <1 5MIN	mg/L	water	SM 4500-P E & F	00671	0.04	0.04	70-130	20	80-120	Eastex
HARDNESS, TOTAL (MG/L AS CaCO3)*	mg/L	water	SM 2340 C	00900	5	5	NA	20	80-120	Eastex
TURBIDITY, LAB NEPHELOMETRIC TURBIDITY UNITS, NTU	NTU	water	SM 2130B	82079	0.5	0.5	NA	NA	NA	Eastex

* Eastex is accredited for SM 4500-NH3 C but TCEQ does not accredit the prep method SM 4500- Norg C which is the digestion step.
 ** This value is not expressed as a relative percent difference. It represents the maximum allowable difference between the logarithm of the result of a sample and the logarithm of the duplicate result. See Section B5.
 *** E.coli samples analyzed by SM 9223-B should always be processed as soon as possible and within 8 hours. When transport conditions necessitate delays in delivery longer than 6 hours, the holding time may be extended and samples must be processed as soon as possible and within 48 hours.
 **** Enterococcus Samples should be diluted 1:10 for all waters.

References:
 United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020
 American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)
 TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TABLE A7.1a Measurement Performance Specifications for Houston-Galveston Area Council										
24 Hour Parameters in Water										
Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD) of	Bias %Rec. of LCS	Lab
TEMPERATURE, WATER (DEGREES CENTGRADE), 24HR AVG	DEG C	Water	TCEQ SOP, V1	00209	NA	NA	NA	NA	NA	field
WATER TEMPERATURE, DEGREES CENTIGRADE, 24HR MAX	DEG C	Water	TCEQ SOP, V1	00210	NA	NA	NA	NA	NA	field
TEMPERATURE, WATER (DEGREES CENTIGRADE) 24HR MIN	DEG C	Water	TCEQ SOP, V1	00211	NA	NA	NA	NA	NA	field
SPECIFIC CONDUCTANCE, uS/CM, FIELD, 24HR AVG	uS/cm	Water	TCEQ SOP, V1	00212	NA	NA	NA	NA	NA	field
SPECIFIC CONDUCTANCE, uS/CM, FIELD, 24HR MAX	uS/cm	Water	TCEQ SOP, V1	00213	NA	NA	NA	NA	NA	field
SPECIFIC CONDUCTANCE, uS/CM, FIELD, 24HR MIN	uS/cm	Water	TCEQ SOP, V1	00214	NA	NA	NA	NA	NA	field
PH, S.U., 24HR MAXIMUM VALUE	std. units	Water	TCEQ SOP, V1	00215	NA	NA	NA	NA	NA	field
PH, S.U., 24HR, MINIMUM VALUE	std. units	Water	TCEQ SOP, V1	00216	NA	NA	NA	NA	NA	field
SALINITY, 24-HR, MAXIMUM, PPT	ppt	Water	TCEQ SOP, V1	00217	NA	NA	NA	NA	NA	field
SALINITY, 24-HR, AVERAGE, PPT	ppt	Water	TCEQ SOP, V1	00218	NA	NA	NA	NA	NA	field
SALINITY, 24-HR, MINIMUM, PPT	ppt	Water	TCEQ SOP, V1	00219	NA	NA	NA	NA	NA	field
SALINITY, # OF MEASUREMENTS IN 24-HRS	NU	Water	TCEQ SOP, V1	00220	NA	NA	NA	NA	NA	field
WATER TEMPERATURE, # OF MEASUREMENTS IN 24-HRS	NU	Water	TCEQ SOP, V1	00221	NA	NA	NA	NA	NA	field
SPECIFIC CONDUCTANCE, # OF MEASUREMENTS IN 24-HR	NU	Water	TCEQ SOP, V1	00222	NA	NA	NA	NA	NA	field
pH, # OF MEASUREMENTS IN 24-HRS	NU	Water	TCEQ SOP, V1	00223	NA	NA	NA	NA	NA	field
DISSOLVED OXYGEN, 24-HOUR MIN. (MG/L) MIN. 4 MEA	mg/l	Water	TCEQ SOP, V1	89855	NA	NA	NA	NA	NA	field
DISSOLVED OXYGEN, 24-HOUR MAX. (MG/L) MIN. 4 MEA	mg/l	Water	TCEQ SOP, V1	89856	NA	NA	NA	NA	NA	field
DISSOLVED OXYGEN, 24-HOUR AVG. (MG/L) MIN. 4 MEA	mg/l	Water	TCEQ SOP, V1	89857	NA	NA	NA	NA	NA	field
DISSOLVED OXYGEN, # OF MEASUREMENTS IN 24-HRS	NU	Water	TCEQ SOP, V1	89858	NA	NA	NA	NA	NA	field
References:										
United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020 American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.) TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).										

TABLE A7.1a Measurement Performance Specification for Houston-Galveston Area Council

Drought Field Parameters

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample % Recovery	Precision (RPD of LCS/LCSD)	Bias % Recovery of LCS	Lab
DAYS SINCE PRECIPITATION EVENT	DAYS	other	TCEQ SOP V1	72053	NA	NA	NA	NA	NA	Field
DEPTH OF BOTTOM OF WATER BODY AT SAMPLE SITE	M	water	TCEQ SOP V2	82903	NA*	NA	NA	NA	NA	Field
MAXIMUM POOL WIDTH AT TIME OF STUDY (METERS)	M	other	TCEQ SOP, V2	89864	NA*	NA	NA	NA	NA	Field
MAXIMUM POOL DEPTH AT TIME OF STUDY (METERS)	M	other	TCEQ SOP, V2	89865	NA*	NA	NA	NA	NA	Field
POOL LENGTH, METERS***	M	other	TCEQ SOP, V2	89869	NA*	NA	NA	NA	NA	Field
% POOL COVERAGE IN 500 METER REACH***	%	other	TCEQ SOP V2	89870	NA*	NA	NA	NA	NA	Field

* Reporting to be consistent with SWQM guidance and based on measurement capability.

** As published by the Texas Water Development Board on their website

http://wtdb.state.tx.us/ims/resinfo/BushButton/lakeStatus.asp?select=3&sbasin=2

*** To be routinely reported when collecting data from perennial pools.

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020;

American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)

TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data, 2007 (RG-416)

TCEQ Interim Routine Surface Water Quality Monitoring Guidance During Drought, October 2011

Reservoir stage data are collected every day from the United States Geological Survey (USGS), International Boundary and Water Commission (IBWC) and the United States Army Corps of Engineers (USACE) websites. These data are preliminary and subject to revision. The Texas Water Development Board (TWDB) derives reservoir storage (in acre-feet) from these stage data (elevation in feet above mean sea level), by using the latest rating curve datasets available. These data are published at the TWDB website at

http://wtdb.state.tx.us/ims/resinfo/BushButton/lakeStatus.asp?select=3&sbasin=2. The web application uses real time gaged observations 7 AM reading each day (or closest reading available) from 119 major reservoirs to approximate daily storage for each reservoir, as well as daily total storage for water planning regions, river basins and the state of Texas. These instantaneous data are updated to mean daily data for all previous days. These data will be submitted to the TCEQ under parameter code 00052 Reservoir Stage and parameter code 00053 Reservoir Percent Full.

TABLE A7.1c - Measurement Performance Specifications for City of Houston, Health & Human Services

Field Parameters

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
TEMPERATURE, WATER (DEGREES CENTIGRADE)	DEG C	water	SM 2550 B and TCEQ SOP V1	00010	NA*	NA	NA	NA	NA	Field
FLOW STREAM, INSTANTANEOUS (CUBIC FEET PER SEC)	cfs	water	TCEQ SOP V1	00061	NA*	NA	NA	NA	NA	Field
TRANSPARENCY, SECCHI DISC (METERS)	meters	water	TCEQ SOP V1	00078	NA*	NA	NA	NA	NA	Field
SPECIFIC CONDUCTANCE, FIELD (uS/CM @ 25C)	us/cm	water	EPA 120.1 and TCEQ SOP, V1	00094	NA*	NA	NA	NA	NA	Field
OXYGEN, DISSOLVED (MG/L)	mg/L	water	SM 4500-O G and TCEQ SOP, V1	00300	NA*	NA	NA	NA	NA	Field
PH (STANDARD UNITS)	s.u	water	EPA 150.1 and TCEQ SOP, V1	00400	NA*	NA	NA	NA	NA	Field
SALINITY - PARTS PER THOUSAND	PPT	water	SM 2520 and TCEQ SOP, V1	00480	NA*	NA	NA	NA	NA	Field
FLOW SEVERITY: 1=No Flow, 2=Low, 3=Normal, 4=Flood, 5=High, 6=Dry	NU	water	TCEQ SOP V1	01351	NA*	NA	NA	NA	NA	Field
DAYS SINCE PRECIPITATION EVENT (DAYS)	days	other	TCEQ SOP V1	72053	NA*	NA	NA	NA	NA	Field
STREAM FLOW ESTIMATE (CFS)	cfs	Water	TCEQ SOP, V1	74069	NA*	NA	NA	NA	NA	Field
DEPTH OF BOTTOM OF WATER BODY AT SAMPLE SITE	meters	water	TCEQ SOP V2	82903	NA*	NA	NA	NA	NA	Field
FLOW MTH 1=GAGE 2=ELEC 3=MECH 4=WEIR/FLU 5=DOPPL	NU	other	TCEQ SOP V1	89835	NA*	NA	NA	NA	NA	Field
WIND INTENSITY (1=CALM, 2=SLIGHT, 3=MOD., 4=STRONG)	NU	other	NA	89965	NA	NA	NA	NA	NA	Field
PRESENT WEATHER (1=CLEAR, 2=PTCLDY, 3=CLDY, 4=RAIN, 5=OTHER)	NU	other	NA	89966	NA	NA	NA	NA	NA	Field
WATER SURFACE(1=CALM, 2=RIPPLE, 3=WAVE, 4=WHITCAP)	NU	water	NA	89968	NA	NA	NA	NA	NA	Field
TIDE STAGE 1=LOW, 2=FALLING, 3=SLACK, 4=RIISING, 5=HI	NU	water	NA	89972	NA	NA	NA	NA	NA	Field
WATER COLOR (1=BROWNISH, 2=REDDISH, 3=GREENISH, 4=BLACKISH, 5=CLEAR, 6=OTHER)	NU	water	NA	89969	NA	NA	NA	NA	NA	Field
WATER ODOR (1=SEWAGE, 2=OILY/CHEMICAL, 3=ROTTEN EGG, 4=MUSKY, 5=FISHY, 6=NONE, 7=OTHER)	NU	water	NA	89971	NA	NA	NA	NA	NA	Field

* Reporting to be consistent with SWQM guidance and based on measurement capability.

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020; American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)

TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data, 2007 (RG-416)

TCEQ Interim Routine Surface Water Quality Monitoring Guidance During Drought, October 2011

**TABLE A7.1c - Measurement Performance Specifications for City of Houston, Health & Human Services
Conventional and Bacteriological Parameters in Water**

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
RESIDUE, TOTAL NONFILTRABLE (MG/L) [TSS]	mg/L	water	SM 2540 D	00530	4	4	NA	NA	NA	Braeswood
NITROGEN, AMMONIA, TOTAL (MG/L AS N)	mg/L	water	EPA 350.1 Rev. 2.0 (1993)	00610	0.1	0.1	70-130	20	80-120	Braeswood
NITRATE NITROGEN, TOTAL (MG/L AS N)	mg/L	water	EPA 300.0 Rev. 2.1 (1993)	00620	0.05	0.02	70-130	20	80-120	Braeswood
NITROGEN, KJELDAHL, TOTAL (MG/L AS N)	mg/L	water	SM 4500-NH ₃ C *	00625	0.2	0.2	70-130	20	80-120	Eastex
PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)	mg/L	water	EPA 365.1	00665	0.06	0.02	70-130	20	80-120	Braeswood
CHLORIDE (MG/L AS CL)	mg/L	water	EPA 300.0 Rev. 2.1 (1993)	00940	5	5	70-130	20	80-120	Braeswood
SULFATE (MG/L AS SO ₄)	mg/L	water	EPA 300.0, Rev. 2.1 (1993)	00945	5	5	70-130	20	80-120	Braeswood
E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	MPN/100 mL	water	Colilert - 18	31699	1	1	NA	0.50**	NA	Braeswood
ENTEROCOCCI, ENTEROLERT, IDEXX, (MPN/100 ML) ****	MPN/100 mL	water	Enterolert	31701	1	1	NA	0.50**	NA	Braeswood
E. COLI, COLILERT, IDEXX, HOLDING TIME ***	hours	water	NA	31704	NA	NA	NA	NA	NA	Braeswood

* Eastex is accredited for SM 4500-NH₃ C but TCEQ does not accredit the prep method SM 4500- Norg C which is the digestion step.

** This value is not expressed as a relative percent difference. It represents the maximum allowable difference between the logarithm of the result of a sample and the logarithm of the duplicate result. See Section B5.

*** *E.coli* samples analyzed by SM 9223-B should always be processed as soon as possible and within 8 hours. When transport conditions necessitate delays in delivery longer than 6 hours, the holding time may be extended and samples must be processed as soon as possible and within 48 hours.

**** Enterococcus Samples should be diluted 1:10 for all waters.

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020
 American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)
 TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TABLE A7.1c Measurement Performance Specification for City of Houston, Health & Human Services

Drought Field Parameters

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample % Recovery	Precision (RPD of LCS/LCSD)	Bias % Recovery of LCS	Lab
DAYS SINCE PRECIPITATION EVENT	DAYS	other	TCEQ SOP V1	72053	NA	NA	NA	NA	NA	Field
DEPTH OF BOTTOM OF WATER BODY AT SAMPLE SITE	M	water	TCEQ SOP V2	82903	NA*	NA	NA	NA	NA	Field
MAXIMUM POOL WIDTH AT TIME OF STUDY (METERS)	M	other	TCEQ SOP, V2	89864	NA*	NA	NA	NA	NA	Field
MAXIMUM POOL DEPTH AT TIME OF STUDY (METERS)	M	other	TCEQ SOP, V2	89865	NA*	NA	NA	NA	NA	Field
POOL LENGTH, METERS***	M	other	TCEQ SOP, V2	89866	NA*	NA	NA	NA	NA	Field
% POOL COVERAGE IN 500 METER REACH***	%	other	TCEQ SOP V2	89870	NA*	NA	NA	NA	NA	Field

* Reporting to be consistent with SWQM guidance and based on measurement capability.

** As published by the Texas Water Development Board on their website

<http://wild.twdb.state.tx.us/tms/resinfo/BushButton/lakeStatus.asp?select=3&slbasin=2>

*** To be routinely reported when collecting data from perennial pools.

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020, American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)

TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data, 2007 (RG-416)

TCEQ Internm Routine Surface Water Quality Monitoring Guidance During Drought, October 2011

Reservoir stage data are collected every day from the United States Geological Survey (USGS), International Boundary and Water Commission (IBWC), and the United States Army Corps of Engineers (USACE) websites. These data are preliminary and subject to revision. The Texas Water Development Board (TWDB) derives reservoir storage (in acre-feet) from these stage data (elevation in feet above mean sea level), by using the latest rating curve datasets available. These data are published at the TWDB website at <http://wild.twdb.state.tx.us/tms/resinfo/BushButton/lakeStatus.asp?select=3&slbasin=2>. The web application uses real time gaged observations 7 AM reading each day (or closest reading available) from 119 major reservoirs to approximate daily storage for each reservoir, as well as daily total storage for water planning regions, river basins and the state of Texas. These instantaneous data are updated to mean daily data for all previous days. These data will be submitted to the TCEQ under parameter code 00052 Reservoir Stage and parameter code 00053 Reservoir Percent Full.

TABLE A7.1d - Measurement Performance Specifications for City of Houston - Water Quality Control
Field Parameters

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
TEMPERATURE, WATER (DEGREES CENTIGRADE)	DEG C	water	SM 2550 B and TCEQ SOP V1	00010	NA*	NA	NA	NA	NA	Field
FLOW STREAM, INSTANTANEOUS (CUBIC FEET PER SEC)	cfs	water	TCEQ SOP V1	00061	NA*	NA	NA	NA	NA	Field
TRANSPARENCY, SECCHI DISC (METERS)	meters	water	TCEQ SOP V1	00078	NA*	NA	NA	NA	NA	Field
SPECIFIC CONDUCTANCE, FIELD (uS/CM @ 25C)	us/cm	water	EPA 120.1 and TCEQ SOP, V1	00094	NA*	NA	NA	NA	NA	Field
OXYGEN, DISSOLVED (MG/L)	mg/L	water	SM 4500-O G and TCEQ SOP, V1	00300	NA*	NA	NA	NA	NA	Field
PH (STANDARD UNITS)	s.u	water	EPA 150.1 and TCEQ SOP, V1	00400	NA*	NA	NA	NA	NA	Field
FLOW SEVERITY: 1=No Flow, 2=Low, 3=Normal, 4=Flood, 5=High, 6=Dry	NU	water	TCEQ SOP V1	01351	NA*	NA	NA	NA	NA	Field
DAYS SINCE PRECIPITATION EVENT (DAYS)	days	other	TCEQ SOP V1	72053	NA*	NA	NA	NA	NA	Field
STREAM FLOW ESTIMATE (CFS)	cfs	Water	TCEQ SOP, V1	74069	NA*	NA	NA	NA	NA	Field
DEPTH OF BOTTOM OF WATER BODY AT SAMPLE SITE	meters	water	TCEQ SOP V2	82903	NA*	NA	NA	NA	NA	Field
FLOW MTH 1=GAGE 2=ELEC 3=MECH 4=WEIR/FLU 5=DOPPL	NU	other	TCEQ SOP V1	89835	NA*	NA	NA	NA	NA	Field
WIND INTENSITY (1=CALM, 2=SLIGHT, 3=MOD., 4=STRONG)	NU	other	NA	89965	NA	NA	NA	NA	NA	Field
PRESENT WEATHER (1=CLEAR, 2=PTCLDY, 3=CLDY, 4=RAIN, 5=OTHER)	NU	other	NA	89966	NA	NA	NA	NA	NA	Field
WATER SURFACE (1=CALM, 2=RIPPLE, 3=WAVE, 4=WHITECAP)	NU	water	NA	89968	NA	NA	NA	NA	NA	Field
WATER COLOR (1=BROWNISH, 2=REDDISH, 3=GREENISH, 4=BLACKISH, 5=CLEAR, 6=OTHER)	NU	water	NA	89969	NA	NA	NA	NA	NA	Field
WATER ODOR (1=SEWAGE, 2=OILY/CHEMICAL, 3=ROTTEN EGG, 4=MUSKY, 5=FISHY, 6=NONE, 7=OTHER)	NU	water	NA	89971	NA	NA	NA	NA	NA	Field
TURBIDITY, OBSERVED (1=LOW, 2=MEDIUM, 3=HIGH)	NU	water	NA	88842	NA	NA	NA	NA	NA	Field

* Reporting to be consistent with SWQM guidance and based on measurement capability.

** As published by the Texas Water Development Board on their website <http://wiid.twdb.state.tx.us/ims/resinfo/BushButton/lakeStatus.asp?selcat=3&slbasin=2>

*** To be routinely reported when collecting data from perennial pools.

TABLE A7.1d - Measurement Performance Specifications for City of Houston - Water Quality Control

Field Parameters

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
-----------	-------	--------	--------	----------------	------	-----	-----------------------	-----------------------------	-------------------	-----

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020; American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)

TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data, 2007 (RG-416)

TCEQ Interim Routine Surface Water Quality Monitoring Guidance During Drought, October 2011

**TABLE A7.1d - Measurement Performance Specifications for City of Houston - Water Quality Control
Conventional and Bacteriological Parameters in Water**

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
RESIDUE, TOTAL NONFILTRABLE (MG/L) [TSS]	mg/L	water	SM 2540 D	00530	4	4	NA	NA	NA	WQC
NITROGEN, AMMONIA, TOTAL (MG/L AS N)	mg/L	water	EPA 350.3	00610	0.1	0.1	70-130	20	80-120	WQC
NITROGEN, KJELDAHL, TOTAL (MG/L AS N)	mg/L	water	SM 4500-NH ₃ C *	00625	0.2	0.2	70-130	20	80-120	Eastex
NITRATE NITROGEN, TOTAL (MG/L AS N)	mg/L	water	EPA 300.1 Rev. 2.1 (1993)	00620	0.05	0.04	70-130	20	80-120	WQC
PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)	mg/L	water	EPA 365.3	00665	0.06	0.02	70-130	20	80-120	WQC
CHLORIDE (MG/L AS CL)	mg/L	water	EPA 300.1 Rev. 2.1 (1993)	00940	5	5	70-130	20	80-120	WQC
SULFATE (MG/L AS SO ₄)	mg/L	water	EPA 300.1 Rev. 2.1 (1993)	00945	5	5	70-130	20	80-120	WQC
E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	MPN/100 mL	water	SM 9223-B***	31699	1	1	NA	0.50**	NA	WQC
E.COLI, COLILERT, IDEXX, HOLDING TIME ***	hours	water	NA	31704	NA	NA	NA	NA	NA	WQC
ENTEROCOCCI, ENTEROLERT, IDEXX, (MPN/100 ML) ****	MPN/100 mL	water	Enterolert	31701	1	1	NA	0.50**	NA	WQC
CHLOROPHYLL-A UG/L SPECTROPHOTOMETRIC ACID. METH	ug/L	water	EPA 446.0	32211	3	3	NA	20	80-120	Eastex
ALKALINITY, TOTAL (MG/L AS CaCO ₃)	mg/L	water	SM 2320B	00410	20	20	NA	20	NA	WQC

* Eastex is accredited for SM 4500-NH₃ C but TCEQ does not accredit the prep method SM4500-Norg C which is the digestion step.

** This value is not expressed as a relative percent difference. It represents the maximum allowable difference between the logarithm of the result of a sample and the logarithm of the duplicate result. See Section B5.

*** E.coli samples analyzed by SM 9223-B should always be processed as soon as possible and within 8 hours. When transport conditions necessitate delays in delivery longer than 6 hours, the holding time may be extended and samples must be processed as soon as possible and within 48 hours.

****Hardness is not used for regulatory purposes but is used to assess metals in water at inland sites (estuarine sites do not require hardness analysis).

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual # EPA-600/4-79-020
 American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)
 TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TABLE A7.1d Measurement Performance Specification for City of Houston - Water Quality Control

Drought Field Parameters

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample % Recovery	Precision (RPD of LCS/LCSD)	Bias % Recovery of LCS	Lab
DAYS SINCE PRECIPITATION EVENT	DAYS	other	TCEQ SOP V1	72053	NA	NA	NA	NA	NA	Field
RESERVOIR STAGE (feet above mean sea level)**	FEET ABOVE MSL	water	TWDB	00052	NA	NA	NA	NA	NA	Field
RESERVOIR PERCENT FULL**	% RESERVOIR CAPACITY	water	TWDB	00053	NA*	NA	NA	NA	NA	Field
RESERVOIR ACCESS NOT POSSIBLE, LEVEL TOO LOW, ENTER 1 IF REPORTING	NS	other	TCEQ DROUGHT GUIDANCE	00051	NA*	NA	NA	NA	NA	Field
DEPTH OF BOTTOM OF WATER BODY AT SAMPLE SITE	M	water	TCEQ SOP V2	82903	NA*	NA	NA	NA	NA	Field
MAXIMUM POOL WIDTH AT TIME OF STUDY (METERS)	M	other	TCEQ SOP, V2	89864	NA*	NA	NA	NA	NA	Field
MAXIMUM POOL DEPTH AT TIME OF STUDY (METERS)	M	other	TCEQ SOP, V2	89865	NA*	NA	NA	NA	NA	Field
POOL LENGTH, METERS***	M	other	TCEQ SOP, V2	89869	NA*	NA	NA	NA	NA	Field
% POOL COVERAGE IN 500 METER REACH***	%	other	TCEQ SOP V2	89870	NA*	NA	NA	NA	NA	Field

* Reporting to be consistent with SWQM guidance and based on measurement capability.

** As published by the Texas Water Development Board on their website <http://wiid.twdb.state.tx.us/ims/resinfo/BushButton/lakeStatus.asp?selcat=3&slbasin=2>

*** To be routinely reported when collecting data from perennial pools.

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020; American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)

TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data, 2007 (RG-416)

TCEQ Interim Routine Surface Water Quality Monitoring Guidance During Drought, October 2011

Reservoir stage data are collected every day from the United States Geological Survey (USGS), International Boundary and Water Commission (IBWC), and the United States Army Corps of Engineers (USACE) websites. These data are preliminary and subject to revision. The Texas Water Development Board (TWDB) derives reservoir storage (in acre-feet) from these stage data (elevation in feet above mean sea level), by using the latest rating curve datasets available. These data are published at the TWDB website at <http://wiid.twdb.state.tx.us/ims/resinfo/BushButton/lakeStatus.asp?selcat=3&slbasin=2>. The web application uses real time gaged observations 7 AM reading each day (or closest reading available) from 119 major reservoirs to approximate daily storage for each reservoir, as well as daily total storage for water planning regions, river basins and the state of Texas. These instantaneous data are updated to mean daily data for all previous days. These data will be submitted to the TCEQ under parameter code 00052 Reservoir Stage and parameter code 00053 Reservoir Percent Full.

TABLE A7.1e - Measurement Performance Specifications for San Jacinto River Authority - Lake Conroe Division

Field Parameters										
Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
TEMPERATURE, WATER (DEGREES CENTIGRADE)	DEG C	water	SM 2550 B and TCEQ SOP V1	00010	NA*	NA	NA	NA	NA	Field
TRANSPARENCY, SECCHI DISC (METERS)	meters	water	TCEQ SOP V1	00078	NA*	NA	NA	NA	NA	Field
SPECIFIC CONDUCTANCE, FIELD (uS/CM @ 25C)	us/cm	water	EPA 120.1 and TCEQ SOP, V1	00094	NA*	NA	NA	NA	NA	Field
OXYGEN, DISSOLVED (MG/L)	mg/L	water	SM 4500-O G and TCEQ SOP, V1	00300	NA*	NA	NA	NA	NA	Field
PH (STANDARD UNITS)	s.u	water	EPA 150.1 and TCEQ SOP, V1	00400	NA*	NA	NA	NA	NA	Field
DAYS SINCE PRECIPITATION EVENT (DAYS)	days	other	TCEQ SOP V1	72053	NA*	NA	NA	NA	NA	Field
DEPTH OF BOTTOM OF WATER BODY AT SAMPLE SITE	meters	water	TCEQ SOP V2	82903	NA*	NA	NA	NA	NA	Field
WIND INTENSITY (1=CALM, 2=SLIGHT, 3=MOD., 4=STRONG)	NU	other	NA	89965	NA	NA	NA	NA	NA	Field
PRESENT WEATHER (1=CLEAR, 2=PTCLDY, 3=CLDY, 4=RAIN, 5=OTHER)	NU	other	NA	89966	NA	NA	NA	NA	NA	Field
WATER SURFACE (1=CALM, 2=RIPPLE, 3=WAVE, 4=WHITECAP)	NU	water	NA	89968	NA	NA	NA	NA	NA	Field
WATER COLOR (1=BROWNISH, 2=REDDISH, 3=GREENISH, 4=BLACKISH, 5=CLEAR, 6=OTHER)	NU	water	NA	89969	NA	NA	NA	NA	NA	Field
WATER ODOR (1=SEWAGE, 2=OILY/CHEMICAL, 3=ROTTEN EGG, 4=MUSKY, 5=FISHY, 6=NONE, 7=OTHER)	NU	water	NA	89971	NA	NA	NA	NA	NA	Field
* Reporting to be consistent with SWQM guidance and based on measurement capability.										
References:										
United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020; American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)										
TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).										
TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data, 2007 (RG-416)										
TCEQ Interim Routine Surface Water Quality Monitoring Guidance During Drought, October 2011										

TABLE A7.1e - Measurement Performance Specifications for San Jacinto River Authority - Lake Conroe Division

Conventional and Bacteriological Parameters in Water										
Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
RESIDUE, TOTAL NONFILTRABLE (MG/L) [TSS]	mg/L	water	SM 2540 D	00530	4	4	NA	NA	NA	WQC
NITROGEN, AMMONIA, TOTAL (MG/L AS N)	mg/L	water	EPA 350.3	00610	0.1	0.1	70-130	20	80-120	WQC
NITROGEN, KJELDAHL, TOTAL (MG/L AS N)	mg/L	water	SM 4500-NH3 C*	00625	0.2	0.2	70-130	20	80-120	Eastex
NITRATE NITROGEN, TOTAL (MG/L AS N)	mg/L	water	EPA 300.1 Rev. 2.1 (1993)	00620	0.05	0.04	70-130	20	80-120	WQC
PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)	mg/L	water	EPA 365.3	00665	0.06	0.02	70-130	20	80-120	WQC
CHLORIDE (MG/L AS CL)	mg/L	water	EPA 300.1 Rev. 2.1 (1993)	00940	5	5	70-130	20	80-120	WQC
SULFATE (MG/L AS SO4)	mg/L	water	EPA 300.1 Rev. 2.1 (1993)	00945	5	5	70-130	20	80-120	WQC
E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	MPN/100 mL	water	SM 9223-B***	31699	1	1	NA	0.50**	NA	WQC
E.COLI, COLILERT, IDEXX, HOLDING TIME ***	hours	water	NA	31704	NA	NA	NA	NA	NA	WQC
CHLOROPHYLL-A UG/L SPECTROPHOTOMETRIC ACID. METH	ug/L	water	EPA 446.0	32211	3	3	NA	20	80-120	Eastex
ALKALINITY, TOTAL (MG/L AS CaCO3)	mg/L	water	SM 2320B	00410	20	20	NA	20	NA	WQC

* Eastex is accredited for SM 4500-NH3 C but TCEQ does not accredit the prep method SM 4500- Norg C which is the digestion step.
 ** This value is not expressed as a relative percent difference. It represents the maximum allowable difference between the logarithm of the result of a sample and the logarithm of the duplicate result. See Section B5.
 *** E.coli samples analyzed by SM 9223-B should always be processed as soon as possible and within 8 hours. When transport conditions necessitate delays in delivery longer than 6 hours, the holding time may be extended and samples must be processed as soon as possible and within 48 hours.
 **** Hardness is not used for regulatory purposes but is used to assess metals in water at inland sites (estuarine sites do not require hardness analysis).

References:
 United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020
 American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)
 TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TABLE A7.1e Measurement Performance Specification for San Jacinto River Authority - Lake Conroe Division

Drought Field Parameters

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample % Recovery	Precision (RPD of LCS/LCSD)	Bias % Recovery of LCS	Lab
DAYS SINCE PRECIPITATION EVENT	DAYS	other	TCEQ SOP V1	72053	NA	NA	NA	NA	NA	Field
RESERVOIR STAGE (feet above mean sea level)**	FEET ABOVE MSL	water	TWDB	00052	NA	NA	NA	NA	NA	Field
RESERVOIR PERCENT FULL**	% RESERVOIR CAPACITY	water	TWDB	00053	NA*	NA	NA	NA	NA	Field
RESERVOIR ACCESS NOT POSSIBLE, LEVEL TOO LOW, ENTER 1 IF REPORTING	NS	other	TCEQ DROUGHT GUIDANCE	00051	NA*	NA	NA	NA	NA	Field
DEPTH OF BOTTOM OF WATER BODY AT SAMPLE SITE	M	water	TCEQ SOP V2	82903	NA*	NA	NA	NA	NA	Field

* Reporting to be consistent with SWQM guidance and based on measurement capability.

** As published by the Texas Water Development Board on their website

<http://wiid.twdb.state.tx.us/ims/resinfo/BushButton/lakeStatus.asp?selcat=3&slbasin=2>

*** To be routinely reported when collecting data from perennial pools.

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020; American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)

TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data, 2007 (RG-416)

TCEQ Interim Routine Surface Water Quality Monitoring Guidance During Drought, October 2011

Reservoir stage data are collected every day from the United States Geological Survey (USGS), International Boundary and Water Commission (IBWC), and the United States Army Corps of Engineers (USACE) websites. These data are preliminary and subject to revision. The Texas Water Development Board (TWDB) derives reservoir storage (in acre-feet) from these stage data (elevation in feet above mean sea level), by using the latest rating curve datasets available. These data are published at the TWDB website at <http://wiid.twdb.state.tx.us/ims/resinfo/BushButton/lakeStatus.asp?selcat=3&slbasin=2>. The web application uses real time gaged observations 7 AM reading each day (or closest reading available) from 119 major reservoirs to approximate daily storage for each reservoir, as well as daily total storage for water planning regions, river basins and the state of Texas. These instantaneous data are updated to mean daily data for all previous days. These data will be submitted to the TCEQ under parameter code 00052 Reservoir Stage and parameter code 00053 Reservoir Percent Full.

TABLE A7.1f - Measurement Performance Specifications for San Jacinto River Authority - Woodlands Division

Field Parameters										
Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
TEMPERATURE, WATER (DEGREES CENTIGRADE)	DEG C	water	SM 2550 B and TCEQ SOP V1	00010	NA*	NA	NA	NA	NA	Field
FLOW STREAM, INSTANTANEOUS (CUBIC FEET PER SEC)	cfs	water	TCEQ SOP V1	00061	NA*	NA	NA	NA	NA	Field
TRANSPARENCY, SECCHI DISC (METERS)	meters	water	TCEQ SOP V1	00078	NA*	NA	NA	NA	NA	Field
SPECIFIC CONDUCTANCE, FIELD (uS/CM @ 25C)	us/cm	water	EPA 120.1 and TCEQ SOP, V1	00094	NA*	NA	NA	NA	NA	Field
OXYGEN, DISSOLVED (MG/L)	mg/L	water	SM 4500-O G and TCEQ SOP, V1	00300	NA*	NA	NA	NA	NA	Field
PH (STANDARD UNITS)	s.u	water	EPA 150.1 and TCEQ SOP, V1	00400	NA*	NA	NA	NA	NA	Field
FLOW SEVERITY:1=No Flow, 2=Low, 3=Normal, 4=Flood, 5=High, 6=Dry	NU	water	TCEQ SOP V1	01351	NA*	NA	NA	NA	NA	Field
DAYS SINCE PRECIPITATION EVENT (DAYS)	days	other	TCEQ SOP V1	72053	NA*	NA	NA	NA	NA	Field
DEPTH OF BOTTOM OF WATER BODY AT SAMPLE SITE	meters	water	TCEQ SOP V2	82903	NA*	NA	NA	NA	NA	Field
FLOW MTH 1=GAGE 2=ELEC 3=MECH 4=WEIR/FLU 5=DOPPL	NU	other	TCEQ SOP V1	89835	NA*	NA	NA	NA	NA	Field
PRESENT WEATHER (1=CLEAR, 2=PTCLDY, 3=CLDY, 4=RAIN, 5=OTHER)	NU	other	NA	89966	NA	NA	NA	NA	NA	Field
WATER COLOR (1=BROWNISH, 2=REDDISH, 3=GREENISH, 4=BLACKISH, 5=CLEAR, 6=OTHER)	NU	water	NA	89969	NA	NA	NA	NA	NA	Field
WATER ODOR (1=SEWAGE, 2=OILY/CHEMICAL, 3=ROTTEN EGG, 4=MUSKY, 5=FISHY, 6=NONE, 7=OTHER)	NU	water	NA	89971	NA	NA	NA	NA	NA	Field
* Reporting to be consistent with SWQM guidance and based on measurement capability.										
References:										
United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020; American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)										
TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).										
TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data, 2007 (RG-416)										
TCEQ Interim Routine Surface Water Quality Monitoring Guidance During Drought, October 2011										

**TABLE A7.1f - Measurement Performance Specifications for San Jacinto River Authority - Woodlands Division
Conventional and Bacteriological Parameters in Water**

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
RESIDUE, TOTAL NONFILTRABLE (MG/L) [TSS]	mg/L	water	SM 2540 D	00530	4	1	NA	NA	NA	Eastex
NITROGEN, AMMONIA, TOTAL (MG/L AS N)	mg/L	water	SM4500 NH ₃ -D & G	00610	0.1	0.1	70-130	20	80-120	Eastex
NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	mg/L	water	SM 4500-NO ₃ E & F	00630	0.05	0.02	70-130	20	80-120	Eastex
NITRATE NITROGEN, TOTAL (MG/L AS N)	mg/L	water	SM 4500-NO ₃ E & F	00620	0.05	0.02	70-130	20	80-120	Eastex
NITROGEN, KJELDAHL, TOTAL (MG/L AS N)	mg/L	water	SM 4500-NH ₃ C *	00625	0.2	0.2	70-130	20	80-120	Eastex
PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)	mg/L	water	SM4500 - PE	00665	0.06	0.02	70-130	20	80-120	Eastex
HARDNESS, TOTAL (MG/L AS CaCO ₃)*****	mg/L	water	SM 2340 C	00900	5	5	70-130	20	80-120	Eastex
CHLORIDE (MG/L AS CL)	mg/L	water	SM 4500- Cl C	00940	5	5	70-130	20	80-120	Eastex
SULFATE (MG/L AS SO ₄)	mg/L	water	ASTM D 516	00945	5	5	70-130	20	80-120	Eastex
E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	MPN/100 mL	water	SM 9223-B***	31699	1	1	NA	0.50**	NA	Eastex
ENTEROCOCCI, ENTEROLERT, IDEXX, (MPN/100 ML) ****	MPN/100 mL	water	ASTM D-6503	31701	1	1	NA	0.50**	NA	Eastex
E.COLI, COLILERT, IDEXX, HOLDING TIME ***	hours	water	NA	31704	NA	NA	NA	NA	NA	Eastex
CHLOROPHYLL-A UG/L SPECTROPHOTOMETRIC ACID. METH	ug/L	water	EPA 446.0	32211	3	3	NA	20	80-120	Eastex

* Eastex is accredited for SM 4500-NH₃ C but TCEQ does not accredit the prep method SM 4500- Norg C which is the digestion step.

** This value is not expressed as a relative percent difference. It represents the maximum allowable difference between the logarithm of the result of a sample and the logarithm of the duplicate result. See Section B5.

*** *E.coli* samples analyzed by SM 9223-B should always be processed as soon as possible and within 8 hours. When transport conditions necessitate delays in delivery longer than 6 hours, the holding time may be extended and samples must be processed as soon as possible and within 48 hours.

**** Enterococcus Samples should be diluted 1:10 for all waters.

***** Hardness is not used for

regulatory purposes but is used to assess metals in water at inland sites (estuarine sites do not require hardness analysis).

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020

American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)

TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TABLE A7.1f - Measurement Performance Specifications for San Jacinto River Authority - Woodlands Division
Metals in Water

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
COPPER, TOTAL (UG/L AS CU)	µg/L	water	EPA 200.7	01042	NA	10	70-130	20	80-120	Eastex
SELENIUM, TOTAL (UG/L AS SE)	µg/L	water	EPA 200.7	01147	2	2	70-130	20	80-120	Eastex
HARDNESS, TOTAL (MG/L AS CaCO3)*	mg/L	water	SM 2340 C	00900	5	5	NA	20	80-120	Eastex

*Hardness is not used for regulatory purposes but is used to assess metals in water at inland sites (estuarine sites do not require hardness analysis).

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020
 American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)
 TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RC-415).

TABLE A7.1f Measurement Performance Specification for San Jacinto River Authority - Woodlands Division

Drought Field Parameters

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample % Recovery	Precision (RPD of LCS/LCSD)	Bias % Recovery of LCS	Lab
DAYS SINCE PRECIPITATION EVENT	DAYS	other	TCEQ SOP V1	72053	NA	NA	NA	NA	NA	Field
RESERVOIR STAGE (feet above mean sea level)**	FEET ABOVE MSL	water	TWDB	00052	NA	NA	NA	NA	NA	Field
RESERVOIR PERCENT FULL**	% RESERVOIR CAPACITY	water	TWDB	00053	NA*	NA	NA	NA	NA	Field
RESERVOIR ACCESS NOT POSSIBLE, LEVEL TOO LOW, ENTER 1 IF REPORTING	NS	other	TCEQ DROUGHT GUIDANCE	00051	NA*	NA	NA	NA	NA	Field
DEPTH OF BOTTOM OF WATER BODY AT SAMPLE SITE	M	water	TCEQ SOP V2	82903	NA*	NA	NA	NA	NA	Field
MAXIMUM POOL WIDTH AT TIME OF STUDY (METERS)	M	other	TCEQ SOP, V2	89864	NA*	NA	NA	NA	NA	Field
MAXIMUM POOL DEPTH AT TIME OF STUDY (METERS)	M	other	TCEQ SOP, V2	89865	NA*	NA	NA	NA	NA	Field
POOL LENGTH, METERS***	M	other	TCEQ SOP, V2	89869	NA*	NA	NA	NA	NA	Field
% POOL COVERAGE IN 500 METER REACH***	%	other	TCEQ SOP V2	89870	NA*	NA	NA	NA	NA	Field

* Reporting to be consistent with SWQM guidance and based on measurement capability.

** As published by the Texas Water Development Board on their website <http://wiid.twdb.state.tx.us/ims/resinfo/BushButton/lakeStatus.asp?selcat=3&slbasin=2>

*** To be routinely reported when collecting data from perennial pools.

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020; American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)

TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data, 2007 (RG-416)

TCEQ Interim Routine Surface Water Quality Monitoring Guidance During Drought, October 2011

Reservoir stage data are collected every day from the United States Geological Survey (USGS), International Boundary and Water Commission (IBWC), and the United States Army Corps of Engineers (USACE) websites. These data are preliminary and subject to revision. The Texas Water Development Board (TWDB) derives reservoir storage (in acre-feet) from these stage data (elevation in feet above mean sea level), by using the latest rating curve datasets available. These data are published at the TWDB website at <http://wiid.twdb.state.tx.us/ims/resinfo/BushButton/lakeStatus.asp?selcat=3&slbasin=2>. The web application uses real time gaged observations 7 AM reading each day (or closest reading available) from 119 major reservoirs to approximate daily storage for each reservoir, as well as daily total storage for water planning regions, river basins and the state of Texas. These instantaneous data are updated to mean daily data for all previous days. These data will be submitted to the TCEQ under parameter code 00052 Reservoir Stage and parameter code 00053 Reservoir Percent Full.

TABLE A7.1g - Measurement Performance Specifications for Environmental Institute of Houston - University of Houston - Clear Lake

Field Parameters										
Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
TEMPERATURE, WATER (DEGREES CENTIGRADE)	DEG C	water	SM 2550 B and TCEQ SOP V1	00010	NA*	NA	NA	NA	NA	Field
FLOW STREAM, INSTANTANEOUS (CUBIC FEET PER SEC)	cfs	water	TCEQ SOP V1	00061	NA*	NA	NA	NA	NA	Field
TRANSPARENCY, SECCHI DISC (METERS)	meters	water	TCEQ SOP V1	00078	NA*	NA	NA	NA	NA	Field
SPECIFIC CONDUCTANCE, FIELD (uS/CM @ 25C)	us/cm	water	EPA 120.1 and TCEQ SOP, V1	00094	NA*	NA	NA	NA	NA	Field
OXYGEN, DISSOLVED (MG/L)	mg/L	water	SM 4500-O G and TCEQ SOP, V1	00300	NA*	NA	NA	NA	NA	Field
PH (STANDARD UNITS)	s.u	water	EPA 150.1 and TCEQ SOP, V1	00400	NA*	NA	NA	NA	NA	Field
SALINITY - PARTS PER THOUSAND	PPT	water	SM 2520 and TCEQ SOP, V1	00480	NA*	NA	NA	NA	NA	Field
FLOW SEVERITY:1=No Flow, 2=Low, 3=Normal, 4=Flood, 5=High, 6=Dry	NU	water	TCEQ SOP V1	01351	NA*	NA	NA	NA	NA	Field
DAYS SINCE PRECIPITATION EVENT (DAYS)	days	other	TCEQ SOP V1	72053	NA*	NA	NA	NA	NA	Field
STREAM FLOW ESTIMATE (CFS)	cfs	Water	TCEQ SOP, V1	74069	NA*	NA	NA	NA	NA	Field
DEPTH OF BOTTOM OF WATER BODY AT SAMPLE SITE	meters	water	TCEQ SOP V2	82903	NA*	NA	NA	NA	NA	Field
FLOW MTH 1=GAGE 2=ELEC 3=MECH 4=WEIR/FLU 5=DOPPL	NU	other	TCEQ SOP V1	89835	NA*	NA	NA	NA	NA	Field
WIND INTENSITY (1=CALM, 2=SLIGHT, 3=MOD., 4=STRONG)	NU	other	NA	89965	NA	NA	NA	NA	NA	Field
PRESENT WEATHER (1=CLEAR, 2=PTCLDY, 3=CLDY, 4=RAIN, 5=OTHER)	NU	other	NA	89966	NA	NA	NA	NA	NA	Field
WATER SURFACE (1=CALM, 2=RIPPLE, 3=WAVE, 4=WHITECAP)	NU	water	NA	89968	NA	NA	NA	NA	NA	Field
WATER COLOR (1=BROWNISH, 2=REDDISH, 3=GREENISH, 4=BLACKISH, 5=CLEAR, 6=OTHER)	NU	water	NA	89969	NA	NA	NA	NA	NA	Field
WATER ODOR (1=SEWAGE, 2=OILY/CHEMICAL, 3=ROTTEN EGG, 4=MUSKY, 5=FISHY, 6=NONE, 7=OTHER)	NU	water	NA	89971	NA	NA	NA	NA	NA	Field
TIDE STAGE 1=LOW, 2=FALLING, 3=SLACK, 4=RISING, 5=HI	NU	water	NA	89972	NA	NA	NA	NA	NA	Field

* Reporting to be consistent with SWQM guidance and based on measurement capability.

TABLE A7.1g - Measurement Performance Specifications for Environmental Institute of Houston - University of Houston - Clear Lake

Field Parameters

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020; American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)

TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data, 2007 (RG-416)

TCEQ Interim Routine Surface Water Quality Monitoring Guidance During Drought, October 2011

TABLE A7.1g - Measurement Performance Specifications for Environmental Institute of Houston - University of Houston - Clear Lake

Conventional and Bacteriological Parameters in Water										
Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
RESIDUE, TOTAL NONFILTRABLE (MG/L) [TSS]	mg/L	water	SM 2540 D	00530	4	1	NA	NA	NA	Eastex
NITROGEN, AMMONIA, TOTAL (MG/L AS N)	mg/L	water	SM 4500 NH ₃ -D & G	00610	0.1	0.1	70-130	20	80-120	Eastex
NITROGEN, KJELDAHL, TOTAL (MG/L AS N)	mg/L	water	SM 4500-NH ₃ C *	00625	0.2	0.2	70-130	20	80-120	Eastex
NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	mg/L	water	SM 4500-NO ₃ E & F	00630	0.05	0.02	70-130	20	80-120	Eastex
PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)	mg/L	water	SM 4500-P E	00665	0.06	0.02	70-130	20	80-120	Eastex
CHLORIDE (MG/L AS CL)	mg/L	water	SM 4500 Cl-C	00940	5	5	70-130	20	80-120	Eastex
SULFATE (MG/L AS SO ₄)	mg/L	water	ASTM D516	00945	5	5	70-130	20	80-120	Eastex
E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	MPN/100 mL	water	SM 9223-B***	31699	1	1	NA	0.50*	NA	Eastex
ENTEROCOCCI, ENTEROLERT, IDEXX, (MPN/100 ML) ****	MPN/100 mL	water	ASTM D-6503	31701	1	1	NA	0.50*	NA	Eastex
E. COLI, COLILERT, IDEXX, HOLDING TIME ***	hours	water	NA	31704	NA	NA	NA	NA	NA	Eastex
CHLOROPHYLL-A UG/L SPECTROPHOTOMETRIC ACID. METH	ug/L	water	EPA 446.0	32211	3	3	NA	20	80-120	Eastex
ORTHOPHOSPHATE PHOSPHORUS, DISS, MG/L, FLDFILT<15MIN	mg/L	water	SM 4500-P E & F	00671	0.04	0.04	70-130	20	80-120	Eastex
HARDNESS, TOTAL (MG/L AS CaCO ₃)*	mg/L	water	SM 2340 C	00900	5	5	NA	20	80-120	Eastex
TURBIDITY, LAB NEPHELOMETRIC TURBIDITY UNITS, NTU	NTU	water	SM 2130B	82079	0.5	0.5	NA	NA	NA	Eastex

* Eastex is accredited for SM 4500-NH₃ C but TCEQ does not accredit the prep method SM 4500- Norg C which is the digestion step.
 ** This value is not expressed as a relative percent difference. It represents the maximum allowable difference between the logarithm of the result of a sample and the logarithm of the duplicate result. See Section B5.
 *** E.coli samples analyzed by SM 9223-B should always be processed as soon as possible and within 8 hours. When transport conditions necessitate delays in delivery longer than 6 hours, the holding time may be extended and samples must be processed as soon as possible and within 48 hours.
 **** Enterococcus Samples should be diluted 1:10 for all waters.

References:
 United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020
 American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)
 TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TABLE A7.1g Measurement Performance Specification for Environmental Institute of Houston - University of Houston - Clear Lake

Drought Field Parameters

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample % Recovery	Precision (RPD of LCS/LCSD)	Bias % Recovery of LCS	Lab
DAYS SINCE PRECIPITATION EVENT	DAYS	other	TCEQ SOP V1	72053	NA	NA	NA	NA	NA	Field
DEPTH OF BOTTOM OF WATER BODY AT SAMPLE SITE	M	water	TCEQ SOP V2	82903	NA*	NA	NA	NA	NA	Field
MAXIMUM POOL WIDTH AT TIME OF STUDY (METERS)	M	other	TCEQ SOP, V2	89864	NA*	NA	NA	NA	NA	Field
MAXIMUM POOL DEPTH AT TIME OF STUDY (METERS)	M	other	TCEQ SOP, V2	89865	NA*	NA	NA	NA	NA	Field
POOL LENGTH, METERS***	M	other	TCEQ SOP, V2	89869	NA*	NA	NA	NA	NA	Field
% POOL COVERAGE IN 500 METER REACH***	%	other	TCEQ SOP V2	89870	NA*	NA	NA	NA	NA	Field

* Reporting to be consistent with SWQM guidance and based on measurement capability.

** As published by the Texas Water Development Board on their website <http://wiid.twdb.state.tx.us/ims/resinfo/BushButton/lakeStatus.asp?selcat=3&slbasin=2>

*** To be routinely reported when collecting data from perennial pools.

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020; American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)

TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data, 2007 (RG-416)

TCEQ Interim Routine Surface Water Quality Monitoring Guidance During Drought, October 2011

Reservoir stage data are collected every day from the United States Geological Survey (USGS), International Boundary and Water Commission (IBWC), and the United States Army Corps of Engineers (USACE) websites. These data are preliminary and subject to revision. The Texas Water Development Board (TWDB) derives reservoir storage (in acre-feet) from these stage data (elevation in feet above mean sea level), by using the latest rating curve datasets available. These data are published at the TWDB website at <http://wiid.twdb.state.tx.us/ims/resinfo/BushButton/lakeStatus.asp?selcat=3&slbasin=2>. The web application uses real time gaged observations 7 AM reading each day (or closest reading available) from 119 major reservoirs to approximate daily storage for each reservoir, as well as daily total storage for water planning regions, river basins and the state of Texas. These instantaneous data are updated to mean daily data for all previous days. These data will be submitted to the TCEQ under parameter code 00052 Reservoir Stage and parameter code 00053 Reservoir Percent Full.

TABLE A7.h Measurement Performance Specifications for Harris County Flood Control District & City of Houston Public Works and Engineering

Field Parameters										
Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
TEMPERATURE, WATER (DEGREES CENTIGRADE)	DEG C	water	SM 2550 B and TCEQ SOP V1	00010	NA*	NA	NA	NA	NA	Field
FLOW STREAM, INSTANTANEOUS (CUBIC FEET PER SEC)	cfs	water	TCEQ SOP V1	00061	NA*	NA	NA	NA	NA	Field
TRANSPARENCY, SECCHI DISC (METERS)	meters	water	TCEQ SOP V1	00078	NA*	NA	NA	NA	NA	Field
SPECIFIC CONDUCTANCE, FIELD (uS/CM @ 25C)	us/cm	water	EPA 120.1 and TCEQ SOP, V1	00094	NA*	NA	NA	NA	NA	Field
OXYGEN, DISSOLVED (MG/L)	mg/L	water	SM 4500-O G and TCEQ SOP, V1	00300	NA*	NA	NA	NA	NA	Field
PH (STANDARD UNITS)	s.u	water	EPA 150.1 and TCEQ SOP, V1	00400	NA*	NA	NA	NA	NA	Field
FLOW SEVERITY:1=No Flow, 2=Low, 3=Normal, 4=Flood, 5=High, 6=Dry	NU	water	TCEQ SOP V1	01351	NA*	NA	NA	NA	NA	Field
DAYS SINCE PRECIPITATION EVENT (DAYS)	days	other	TCEQ SOP V1	72053	NA*	NA	NA	NA	NA	Field
DEPTH OF BOTTOM OF WATER BODY AT SAMPLE SITE	meters	water	TCEQ SOP V2	82903	NA*	NA	NA	NA	NA	Field
FLOW MTH 1=GAGE 2=ELEC 3=MECH 4=WEIR/FLU 5=DOPPL	NU	other	TCEQ SOP V1	89835	NA*	NA	NA	NA	NA	Field
WIND INTENSITY (1=CALM, 2=SLIGHT, 3=MOD., 4=STRONG)	NU	other	NA	89965	NA	NA	NA	NA	NA	Field
PRESENT WEATHER (1=CLEAR, 2=PTCLDY, 3=CLDY, 4=RAIN, 5=OTHER)	NU	other	NA	89966	NA	NA	NA	NA	NA	Field
WATER SURFACE (1=CALM, 2=RIPPLE, 3=WAVE, 4=WHITECAP)	NU	water	NA	89968	NA	NA	NA	NA	NA	Field
WATER ODOR (1=SEWAGE, 2=OILY/CHEMICAL, 3=ROTTEN EGG, 4=MUSKY, 5=FISHY, 6=NONE, 7=OTHER)	NU	water	NA	89971	NA	NA	NA	NA	NA	Field
WATER COLOR (1=BROWNISH, 2=REDDISH, 3=GREENISH, 4=BLACKISH, 5=CLEAR, 6=OTHER)	NU	water	NA	89969	NA	NA	NA	NA	NA	Field

TABLE A7.h Measurement Performance Specifications for Harris County Flood Control District & City of Houston Public Works and Engineering

Field Parameters

* Reporting to be consistent with SWQM guidance and based on measurement capability.

** Chlorine residual to be collected downstream of chlorinated outfalls.

*** To be routinely reported when collecting data from perennial pools.

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020

American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard

Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)

TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data 2007 (RG-416)

TABLE A7.h Measurement Performance Specifications for Harris County Flood Control District & City of Houston Public Works and Engineering

Conventional and Bacteriological Parameters in Water

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD of LCS/LCSD)	Bias %Rec. of LCS	Lab
E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	MPN/100 mL	water	SM 9223-B***	31699	1	1	NA	0.50*	NA	Hygeia *
ENTEROCOCCI, ENTEROLERT, IDEXX, (MPN/100 ML)	MPN/100 mL	water	Enterolert	31701	10****	1	NA	0.50*	NA	Hygeia *
E.COLI, COLILERT, IDEXX, HOLDING TIME	hours	water	NA	31704	NA	NA	NA	NA	NA	Hygeia *

* Hygeia Lab is a sub-contractor of XENCO Lab for bacteria analyses.

** This value is not expressed as a relative percent difference. It represents the maximum allowable difference between the logarithm of the result of a sample and the logarithm of the duplicate result. See Section B5.

*** E.coli samples analyzed by SM 9223-B should always be processed as soon as possible and within 8 hours. When transport conditions necessitate delays in delivery longer than 6 hours, the holding time may be extended and samples must be processed as soon as possible and within 48 hours.

****Enterococcus Samples should be diluted 1:10 for all waters

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020; American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)

TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data, 2007 (RG-416)

TCEQ Interim Routine Surface Water Quality Monitoring Guidance During Drought, October 2011

TABLE A7.1h Measurement Performance Specification for Harris County Flood Control District & City of Houston Public Works and Engineering

Drought Field Parameters

Parameter	Units	Matrix	Method	Parameter Code	AWRL	LOQ	LOQ Check Sample % Recovery	Precision (RPD of LCS/LCSD)	Bias % Recovery of LCS	Lab
DAYS SINCE PRECIPITATION EVENT	DAYS	other	TCEQ SOP V1	72053	NA	NA	NA	NA	NA	Field
RESERVOIR STAGE (feet above mean sea level)**	FEET ABOVE MSL	water	TWDB	00052	NA	NA	NA	NA	NA	Field
RESERVOIR PERCENT FULL**	% RESERVOIR CAPACITY	water	TWDB	00053	NA*	NA	NA	NA	NA	Field
RESERVOIR ACCESS NOT POSSIBLE, LEVEL TOO LOW, ENTER 1 IF REPORTING	NS	other	TCEQ DROUGHT GUIDANCE	00051	NA*	NA	NA	NA	NA	Field
DEPTH OF BOTTOM OF WATER BODY AT SAMPLE SITE	M	water	TCEQ SOP V2	82903	NA*	NA	NA	NA	NA	Field
MAXIMUM POOL WIDTH AT TIME OF STUDY (METERS)	M	other	TCEQ SOP, V2	89864	NA*	NA	NA	NA	NA	Field
MAXIMUM POOL DEPTH AT TIME OF STUDY (METERS)	M	other	TCEQ SOP, V2	89865	NA*	NA	NA	NA	NA	Field
POOL LENGTH, METERS***	M	other	TCEQ SOP, V2	89869	NA*	NA	NA	NA	NA	Field
% POOL COVERAGE IN 500 METER REACH***	%	other	TCEQ SOP V2	89870	NA*	NA	NA	NA	NA	Field

* Reporting to be consistent with SWQM guidance and based on measurement capability.

** As published by the Texas Water Development Board on their website <http://wiid.twdb.state.tx.us/ims/resinfo/BushButton/lakeStatus.asp?selcat=3&slbasin=2>

*** To be routinely reported when collecting data from perennial pools.

TABLE A7.1h Measurement Performance Specification for Harris County Flood Control District & City of Houston Public Works and Engineering

Drought Field Parameters

References:

United States Environmental Protection Agency (USEPA) Methods for Chemical Analysis of Water and Wastes, Manual #EPA-600/4-79-020; American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF), Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998. (Note: The 21st edition may be cited if it becomes available.)

TCEQ SOP, V1 - TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue, 2008 (RG-415).

TCEQ SOP, V2 - TCEQ Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data, 2007 (RG-416)

TCEQ Interim Routine Surface Water Quality Monitoring Guidance During Drought, October 2011

Reservoir stage data are collected every day from the United States Geological Survey (USGS), International Boundary and Water Commission (IBWC), and the United States Army Corps of Engineers (USACE) websites. These data are preliminary and subject to revision. The Texas Water Development Board (TWDB) derives reservoir storage (in acre-feet) from these stage data (elevation in feet above mean sea level), by using the latest rating curve datasets available. These data are published at the TWDB website at <http://wiid.twdb.state.tx.us/ims/resinfo/BushButton/lakeStatus.asp?selcat=3&slbasin=2>. The web application uses real time gaged observations 7 AM reading each day (or closest reading available) from 119 major reservoirs to approximate daily storage for each reservoir, as well as daily total storage for water planning regions, river basins and the state of Texas. These instantaneous data are updated to mean daily data for all previous days. These data will be submitted to the TCEQ under parameter code 00052 Reservoir Stage and parameter code 00053 Reservoir Percent Full.

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventionals	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
SAN JACINTO RIVER TIDAL IMMEDIATELY DOWNSTREAM OF IH 10 BRIDGE EAST OF CHANNELVIEW	11193	1001	10	12	HG	HC	RT		12	12		12		4		
SAN JACINTO RIVER TIDAL 23 METERS SOUTH AND 735 METERS EAST OF INTERSECTION OF WALLISVILLE ROAD AND 7TH STREET	11198	1001	10	12	HG	HC	RT		12	12		12		4		
SAN JACINTO RIVER TIDAL IMMEDIATELY DOWNSTREAM OF US 90 BRIDGE EAST OF SHELDON	11200	1001	10	12	HG	HC	RT		12	12		12		4		Gage 8072050
SAN JACINTO RIVER TIDAL AT MAGNOLIA GARDENS 1.78 KM UPSTREAM OF US BUS 90U/ BEAUMONT HIGHWAY IN	11201	1001	10	12	HG	HC	RT		12	12		12		4		
HOUSTON SHIP CHANNEL AT BAYTOWN TUNNEL/CM 103 1.84 KM NORTH AND 1.17 KM EAST OF INTERSECTION OF SH 225 AND SH 146	11254	1005	10	12	HG	HC	RT		12	12		12		4		
HOUSTON SHIP CHANNEL AT SAN JACINTO PK WEST OF THE BATTLESHIP TX 317 M N AND 303 M W OF INTERSECTION OF BATTLEGROUND RD AND MARKER DR	11264	1006	10	12	HG	HC	RT		12	12		12		4		
HOUSTON SHIP CHANNEL AT CONFLUENCE WITH GREENS BAYOU/CM 152	11271	1006	10	12	HG	HC	RT		12	12		12		4		
HOUSTON SHIP CHANNEL/BUFFALO BAYOU HSC AT WASHBURN TUNNEL	11283	1007	10	12	HG	HC	RT		12	12		12		4		
HSC/BUFFALO BAYOU IN TURNING BASIN 2.82 K UPSTREAM OF CONFLUENCE WITH BRAVS BAYOU 433 M S AND 182 M W OF INTERSECT OF SIGNET AND DORSETT	11292	1007	10	12	HG	HC	RT		12	12		12		4		Gage 8074710
CLEAR LAKE AT SH 146 DRAWBRIDGE	13332	2425	24	12	HG	HC	RT		12	12		12		4		Gage 8077637
TABBS BAY MIDWAY BETWEEN GOOSE CREEK AND UPPER HOG ISLAND	13338	2426	24	12	HG	HC	RT		12	12		12		4		This site replaced site 17926
BLACK DUCK BAY AT MID BAY 0.6 KM NE OF SH 146 BRIDGE AND 0.6 KM SE OF END OF OKLAHOMA ST IN BAYTOWN	13340	2428	24	12	HG	HC	RT		12	12		12		4		
BURNETT BAY AT MID BAY 1.3 KM SSW OF CONFLUENCE WITH SPRING GULLY AND 1.6 KM SE OF LYNCHBURG ROAD	13344	2430	24	12	HG	HC	RT		12	12		12		4		This site replaced site 17920
ARMAND BAYOU TIDAL 25 M WEST OF CLEAR LAKE PARK FISHING PIER IN MUD LAKE/PASADENA LAKE IN HARRIS COUNTY	15455	1113	11	12	HG	HC	RT		12	12		12		4		
CLEAR CREEK TIDAL AT THE CONFLUENCE WITH CLEAR LAKE 30 M NORTH AND 266 M WEST OF DAVIS ROAD AT VEGA COURT IN LEAGUE CITY IN HARRIS COUNTY	16573	1101	11	12	HG	HC	RT		12	12		12		4		

FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventional	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
HOUSTON SHIP CHANNEL AT CARGILL TERMINAL NORTH OF TIDAL ROAD	16617	1006	10	12	HG	HC	RT		12	12		12		4		
HOUSTON SHIP CHANNEL W OF EXXON DOCKS AND N OF ALEXANDER ISLAND 316 M S AND 1.55 KM W OF INTERSECTION OF BAYWAY DR AND BAYTOWN AVE	16618	1005	10	12	HG	HC	RT		12	12		12		4		
HOUSTON SHIP CHANNEL AT LYNCHBURG FERRY INN SOUTH OF LYNCHBURG RD 658 M N AND 802 M E OF INTERSECTION OF BATTLEGROUND RD AND TIDAL RD	16619	1005	10	12	HG	HC	RT		12	12		12		4		
HOUSTON SHIP CHANNEL/BUFFALO BAYOU AT MAYO SHELL RD 1.42 KM S AND 41 M W OF INTERSECTION OF MAYO SHELL RD	16620	1007	10	12	HG	HC	RT		12	12		12		4		
SAN JACINTO RIVER TIDAL AT CONFLUENCE WITH HSC 226 M S AND 1.07 KM W OF INTERSECTION OF S LYNCHBURG RD AND POQUENO RD IN HOUSTON	16621	1005	10	12	HG	HC	RT		12	12		12		4		
SAN JACINTO RIVER TIDAL AT BANANA BEND ROAD AT END OF PAVEMENT IN HOUSTON	16622	1001	10	12	HG	HC	RT		12	12		12		4		
SAN JACINTO RIVER TIDAL MID STREAM AT TERMINUS OF SHADY LANE IN CHANNELVIEW 9 M S AND 648 M W OF INTERSECTION OF SHADY LN AND PARK DR	17919	1001	10	12	HG	HC	RT		12	12		12		4		
CRYSTAL BAY IN BAYTOWN 383 METERS WEST AND 137 METERS SOUTH OF THE INTERSECTION OF BAYSHORE DRIVE AND CROW ROAD	17921	2430A	24	12	HG	HC	RT		12	12		12		4	4	Change temporary id to 17921
SCOTT BAY 1.2 KM SW OF INTERSECTION OF BAYWAY DRIVE AND PARK STREET IN BAYTOWN	17922	2429	24	12	HG	HC	RT		12	12		12		4	4	
UPPER SAN JACINTO BAY UNDERNEATH ELECTRICAL TRANSMISSION LINES 2.1 KM E/NE OF INTERSECTION OF MILLER CUTOFF RD AND OLD CLARK RD	17923	2427	24	12	HG	HC	RT		12	12		12		4	4	
LOWER SAN JACINTO BAY MID CHANNEL SOUTH OF SH 146 1 KM NE OF INTERSECTION OF SH 225 AND STRANG ROAD IN LAPORTE	17924	2427	24	12	HG	HC	RT		12	12		12		4	4	
BARBOUR'S CUT NEAR NORTH BANK 0.5 KM NNW OF THE INTERSECTION OF BARBOURS CUT BLVD AND MAPLE ST	17925	2436	24	12	HG	HC	RT		12	12		12		4		
GOOSE CREEK NEAR SH 146 0.4 KM S/SW OF THE INTERSECTION OF SH 146 AND WEST MAIN IN BAYTOWN	17927	2426C	24	12	HG	HC	RT		12	12		12		4		
HARRIS COUNTY FLOOD CONTROL DITCH A TRIBUTARY TO TAYLOR BAYOU 385 M UPSTREAM OF CONFLUENCE WEST OF SH 146 AT PORT ROAD IN HARRIS COUNTY	20012	2425E	24	12	HG	HC	RT		12	12		12		4		

FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventionals	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
TAYLOR BAYOU MILD CHANNEL 400 M DOWNSTREAM OF PORT ROAD BRIDGE IN HARRIS COUNTY	20013	2425D	24	12	HG	HC	RT		12	12		12		4		
CLEAR LAKE UNNAMED INLET 115 M SOUTHWEST OF THE INTERSECTION OF NASA ROAD 1 AND OCEANVIEW DRIVE IN SEABROOK IN HARRIS COUNTY	20014	2425	24	12	HG	HC	RT		12	12		12		4		
TAYLOR LAKE MID LAKE AT BLUE WINDOWS 230 M SOUTH OF LAKEWAY DRIVE AT RAY SHELL COURT/HARBOR COVE CIRCLE IN HARRIS COUNTY	20015	2425A	24	12	HG	HC	RT		12	12		12		4	4	
CARPENTERS BAYOU AT MOUTH OF BARGE CANAL 32 METERS WEST AND 666 METERS SOUTH FROM THE INTERSECTION OF DE ZAVALLA ROAD AND HARDING ROAD/HARDING STREET IN HARRIS COUNTY	20797	1006	10	12	HG	HC	RT		12	12		12		4		
CEDAR BAYOU TIDAL MID CHANNEL 45 M DOWNSTREAM OF SH 146 NORTHEAST OF BAYTOWN	11115	0901	9	12	HG	HG	RT		4	4		4		4	4	Site was added to HG monitoring schedule in FY2012
CEDAR BAYOU TIDAL AT IH 10 EASTBOUND BRIDGE SOUTH OF MONT BELVIEU EAST SIDE OF BAYOU	11117	0901	9	12	HG	HG	BS	3			3					Plan to collect 24-hr DO 3 times in FY12 and 3 times in FY13. Site replaces 11120.
CEDAR BAYOU TIDAL AT IH 10 EASTBOUND BRIDGE SOUTH OF MONT BELVIEU EAST SIDE OF BAYOU	11117	0901	9	12	HG	HG	RT		4	4		4		4	4	
CEDAR BAYOU ABOVE TIDAL 30 M DOWNSTREAM OF FM 1942 AT EAST BANK	11118	0902	9	12	HG	HG	RT		4	4		4		4	4	Site was added to HG monitoring schedule in FY2012
CEDAR BAYOU ABOVE TIDAL 45 M DOWNSTREAM OF FM 1960 NORTHEAST OF HUFFMAN	11123	0902	9	12	HG	HG	BS	3			3					Plan to collect 24-hr DO 3 times in FY12 and 3 times in FY13
CEDAR BAYOU ABOVE TIDAL 45 M DOWNSTREAM OF FM 1960 NORTHEAST OF HUFFMAN	11123	0902	9	12	HG	HG	RT		4	4		4		4	4	Gage 8067500
BUFFALO BAYOU IMMEDIATELY DOWNSTREAM OF GREEN BUSH ROAD 3.1 MILES SOUTHEAST OF KATY	11145	1014B	10	12	HG	HG	RT		4	4		4		4	4	was HG168 Gage 8072300
EAST FORK SAN JACINTO RIVER IMMEDIATELY DOWNSTREAM OF FM 945, 5.6 MILES NORTH OF CLEVELAND	11237	1003	10	10	HG	HG	RT		4	4		4		4	4	NOTE: This is an alternate site. It will only be monitored if upstream site 17431 is dry.
WEST FORK SAN JACINTO RIVER 70 METERS UPSTREAM OF FM 2854 WEST OF CONROE	11250	1004	10	12	HG	HG	RT		4	4		4		4	4	
CANEY CREEK IMMEDIATELY UPSTREAM OF FM 2090 WEST OF SPLENDORA	11335	1010	10	12	HG	HG	RT		4	4		4		4	4	Site added in FY2012
LAKE CREEK AT EGYPT COMMUNITY ROAD 8.3 MILES SOUTHWEST OF CONROE	11367	1015	10	12	HG	HG	RT		4	4		4		4	4	Gage 8067900 ?

FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventional	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
OYSTER CREEK TIDAL AT THAT-WAY DRIVE 0.5 MILES BELOW FM 2004	11486	1109	11	12	HG	HG	RT		4	4		4		4		was HG175
SAN BERNARD RIVER IMMEDIATELY DOWNSTREAM OF FM 3013 ON THE COLORADO-AUSTIN COUNTY LINE APPROXIMATELY 15KM SW OF SEALY	16370	1302	13	12	HG	HG	RT		4	4	4	4	4	4	4	
PLUM CREEK/TRIBUTARY OF SIMS BAYOU AT OLD GALVESTON ROAD IN SOUTHEAST HOUSTON	16658	1007I	10	12	HG	HG	BS	3			3					Plan to collect 24-hr DO 3 times in FY12 and 3 times in FY13
PINE GULLY/TRIBUTARY OF SIMS BAYOU AT OLD GALVESTON ROAD IN SOUTHEAST HOUSTON	16659	1007H	10	12	HG	HG	BS	3			3					Plan to collect 24-hr DO 3 times in FY12 and 3 times in FY13
EAST FORK SAN JACINTO RIVER IMMEDIATELY DOWNSTREAM OF SH 150 WEST OF COLDSRING	17431	1003	10	10	HG	HG	RT		4	4	4	4	4	4		Added site in FY11
MOUND CREEK 167 METERS DOWNSTREAM OF RUN OF THE OAKS 1.35 KM UPSTREAM OF CONFLUENCE WITH LAKE CREEK	17937	1015A	10	12	HG	HG	RT		4	4	4	4	4	4		
LAKE CREEK AT FM 149 APPROX 12.5 KM SOUTH OF MONTGOMERY TEXAS NEAR KAREN TEXAS	18191	1015	10	12	HG	HG	RT		4	4		4	4	4		
BRUSHY BAYOU IMMEDIATELY UPSTREAM OF BRAZORIA CR 210 EAST OF ANGLETON	18509	1105D	11	12	HG	HG	BS	3			3					Plan to collect 24-hr DO 3 times in FY12 and 3 times in FY13
SPRING CREEK AT ROBERTS CEMETERY ROAD WEST-NORTHWEST OF TOMBALL	18868	1008	10	12	HG	HG	RT		4	4	4	4	4	4		
SPRING BRANCH AT SH 242 NORTHWEST TO THE CITY OF WOODBRANCH	20451	1010C	10	12	HG	HG	RT		4	4	4	4	4	4		was HG170
CANEY CREEK AT FIRE TOWER ROAD WEST TO THE CITY OF WOODBRANCH	20452	1010	10	12	HG	HG	RT		4	4		4	4	4		was HG171
CANEY CREEK AT COUNTY LINE ROAD IN MONTGOMERY COUNTY EAST TO THE CITY OF WILLIS	20453	1010	10	12	HG	HG	RT		4	4		4	4	4		was HG172
PEACH CREEK AT COUNTY LINE ROAD-FM 3081 NORTHEAST OF CONROE IN MONTGOMERY COUNTY	20454	1011	10	12	HG	HG	RT		4	4	4	4	4	4		was HG173
HALLS BAYOU 50 METERS EAST TO THE INTERSECTION OF KOWIS STREET AND SHADY LANE 535 METERS DOWNSTREAM OF HOPPER ROAD AND 502 METERS UPSTREAM OF LITTLE YORK ROAD IN HOUSTON	20455	1006D	10	12	HG	HG	RT		4	4		4	4	4		was HG177
LITTLE CYPRESS CREEK AT MUESCHKE ROAD 4.4 KILOMETERS NORTH OF SH 290 NORTHWEST OF CYPRESS	20456	1009E	10	12	HG	HG	RT		4	4	4	4	4	4		was HG166
CYPRESS CREEK AT KATY HOCKLEY ROAD 7 KILOMETERS SOUTH OF SH 290 WEST OF CYPRESS	20457	1009	10	12	HG	HG	RT		4	4	4	4	4	4		was HG167 Gage 8068720

FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventional	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
SAN BERNARD RIVER TIDAL AT SH 35 SOUTHWEST OF WEST COLUMBIA	20460	1301	13	12	HG	HG	RT		4	4		4		4	4	was HG176
MILL CREEK AT HARDIN STORE ROAD NORTH OF TOMBALL	20461	1008A	10	12	HG	HG	RT		4	4	4	4	4	4		Replaces site 16604. We were using the wrong id. Really needed to use 20461
WALNUT CREEK AT DECKER PRAIRIE ROSEHL ROAD NORTHWEST OF TOMBALL	20462	1008I	10	12	HG	HG	RT		4	4		4	4	4		was HG180
BRUSHY CREEK AT GLENMONT ESTATES BOULEVARD 265 METERS NORTH AND 35 METERS WEST TO THE INTERSECTION OF ARNDT LANE AND ANN CIRCLE WEST OF TOMBALL	20463	1008J	10	12	HG	HG	RT		4	4		4	4	4		
HORSEPEN CREEK AT FM 529 1.9 KILOMETERS EAST OF SH 6 NORTHWEST OF HOUSTON	20465	1014C	10	12	HG	HG	RT		4	4	4	4	4	4		was HG165
TARKINGTON BAYOU AT SH 105/SH 321 SOUTHEAST OF CLEVELAND	20466	1002A	10	12	HG	HG	RT		4	4	4	4	4	4		was HG169
HALLS BAYOU AT HOPPER ROAD 46 METERS EAST OF THE INTERSECTION OF HOPPER ROAD AND SHADY LANE IN HARRIS COUNTY	20553	1006D	10	12	HG	HG	RT		4	4	4	4	4	4		
WEST BERNARD CREEK AT WHARTON CR 225 IN EAST OF HUNGERFORD	20721	1302B	13	12	HG	HG	BS	3			3					Plan to collect 24-hr DO 3 times in FY12 and 3 times in FY13
WEST BERNARD CREEK AT WHARTON CR 225 IN EAST OF HUNGERFORD	20721	1302B	13	12	HG	HG	RT		4	4	4	4	4	4	4	replaces temp id HG-185
PEACH CREEK AT WHARTON CR 117/CHUDALLA ROAD/ARCHER ROAD 89 METERS SOUTH OF THE INTERSECTION OF WHARTON CR 117/CHUDALLA ROAD/ARCHER ROAD AND WHARTON CR 121/ WHARTON CR 119/DONALDSON ROAD IN EAST OF WHARTON	20722	1302	13	12	HG	HG	RT		4	4	4	4	4	4	4	replaces temp id HG-186
MOUND CREEK AT BRAZORIA CR 450/JACKSON SETTLEMENT ROAD 1.22 KILOMETERS UPSTREAM OF FM 1301 IN WEST OF WEST COLUMBIA	20723	1302	13	12	HG	HG	RT		4	4	4	4	4	4	4	replaces temp id HG-187
UNNAMED TRIBUTARY OF GREENS BAYOU IMMEDIATELY DOWNSTREAM OF GREENRANCH ROAD 1.02 KM UPSTREAM OF CONFLUENCE WITH GREENS BAYOU	11124	1016C	10	12	HG	HH	RT		9	9		9		4		

FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventional	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
GARNERS BAYOU AT NORTH SAM HOUSTON PARKWAY/SH LOOP 8 NE OF HOUSTON	11125	1016A	10	12	HG	HH	RT		9	9	9	9		4		Gage 8076180
HALLS BAYOU AT JENSEN DRIVE IN HOUSTON	11126	1006D	10	12	HG	HH	RT		9	9	9	9		4		Gage 8076500
HALLS BAYOU 87 METERS UPSTREAM OF TIDWELL ROAD IN SETTEGAST	11127	1006D	10	12	HG	HH	RT		9	9		9		4		
HUNTING BAYOU IMMEDIATELY DOWNSTREAM OF IH 10 EAST OF HOUSTON	11128	1007R	10	12	HG	HH	RT		9	9		9		4		
HUNTING BAYOU AT NORTH LOOP EAST/IH 610 IN HOUSTON	11129	1007R	10	12	HG	HH	RT		9	9	9	9		4		Gage 8075770
SIMS BAYOU AT TELEPHONE ROAD/SH 35 IN HOUSTON	11132	1007D	10	12	HG	HH	RT		9	9	9	9		4		Gage 8075500
SIMS BAYOU AT CULLEN BLVD/FM 865 SOUTH OF HOUSTON	11133	1007D	10	12	HG	HH	RT		9	9		9		4		
SIMS BAYOU AT HIRAM CLARKE RD IN HOUSTON	11135	1007D	10	12	HG	HH	RT		9	9	9	9		4		Gage 8075400
BRAYS BAYOU IMMEDIATELY DOWNSTREAM OF ALMEDA ROAD SOUTHWEST OF HOUSTON	11138	1007B	10	12	HG	HH	RT		9	9		9		4		
BRAYS BAYOU AT SOUTH MAIN ST IN HOUSTON	11139	1007B	10	12	HG	HH	RT		9	9	9	9		4		Gage 8075000
BRAYS BAYOU AT SOUTH GESSNER DRIVE IN HOUSTON	11140	1007B	10	12	HG	HH	RT		9	9	9	9		4		Gage 8074810
LITTLE WHITE OAK BAYOU AT TRIMBLE STREET/NORTH EDGE OF HOLLYWOOD CEMETERY IN HOUSTON	11148	1013A	10	12	HG	HH	RT		9	9	9	9		4		Gage 8074540
VOGEL CREEK IMMEDIATELY DOWNSTREAM OF WEST LITTLE YORK ROAD	11155	1017C	10	12	HG	HH	RT		9	9		9		4		
ROLLING FORK CREEK IMMEDIATELY DOWNSTREAM OF LAKE LANE	11157	1017F	10	12	HG	HH	RT		9	9		9		4		
SOUTH MAYDE CREEK IMMEDIATELY DOWNSTREAM OF MEMORIAL DRIVE	11163	1014H	10	12	HG	HH	RT		9	9		9		4		
BRAYS/KEEGANS BAYOU IMMEDIATELY DOWNSTREAM OF ROARK ROAD NEAR US 59 AT BELTWAY 8 IN SOUTHWEST HOUSTON	11169	1007C	10	12	HG	HH	RT		9	9	9	9		4		Gage 8074800
LITTLE VINCE BAYOU IMMEDIATELY DOWNSTREAM OF NORTH MAIN STREET IN PASADENA TX	11172	1007	10	12	HG	HH	RT		9	9		9		4		
WILLOW CREEK IMMEDIATELY UPSTREAM OF GOSLING ROAD	11185	1008H	10	12	HG	HH	RT		9	9		9		4		
RUMMEL CREEK IMMEDIATELY DOWNSTREAM OF MEMORIAL DRIVE IN WEST HOUSTON	11188	1014N	10	12	HG	HH	RT		9	9		9		4		
GREENS BAYOU IMMEDIATELY DOWNSTREAM OF GREEN RIVER ROAD/LEY ROAD IN HOUSTON	11279	1006	10	12	HG	HH	RT		9	9	9	9		4		Gage 8076700

FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventionals	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
HUNTING BAYOU TIDAL AT FEDERAL ROAD BRIDGE IN HOUSTON	11298	1007	10	12	HG	HH	RT		9	9		9		4		
SIMS BAYOU TIDAL IMMEDIATELY DOWNSTREAM OF LAWDALE AVENUE IN HOUSTON	11302	1007	10	12	HG	HH	RT		9	9		9		4		
SIMS BAYOU TIDAL AT GALVESTON ROAD IN HOUSTON	11304	1007	10	12	HG	HH	RT		9	9		9		4		
BRAYS BAYOU TIDAL AT 75TH STREET IN HOUSTON	11306	1007	10	12	HG	HH	RT		9	9		9		4		
BRAYS BAYOU TIDAL AT SCOTT STREET IN HOUSTON	11309	1007	10	12	HG	HH	RT		9	9		9		4		
SPRING CREEK IMMEDIATELY DOWNSTREAM OF RILEY FUZZEL ROAD	11312	1008	10	12	HG	HH	RT		9	9		9		4		Gage 8068520
SPRING CREEK IMMEDIATELY UPSTREAM OF SH 249	11314	1008	10	12	HG	HH	RT		9	9		9		4		Monitoring Entity changed from HW to HH in FY2010
SPRING CREEK IMMEDIATELY UPSTREAM OF DECKER PRAIRIE	11323	1008	10	12	HG	HH	RT		9	9		9		4		Gage 8068275 Part of UAA
CYPRESS CREEK AT STEUBNER-AIRLINE ROAD IN HOUSTON	11330	1009	10	12	HG	HH	RT		9	9		9		4		Gage 8068900
CYPRESS CREEK IMMEDIATELY DOWNSTREAM OF GRANT ROAD NEAR CYPRESS	11331	1009	10	12	HG	HH	RT		9	9		9		4		Monitoring Entity changed from HW to HH in FY2010
CYPRESS CREEK IMMEDIATELY DOWNSTREAM OF HOUSE HAHN ROAD NEAR CYPRESS	11332	1009	10	12	HG	HH	RT		9	9		9		4		Gage 8068800
BUFALO BAYOU TIDAL AT MCKEE ST IN HOUSTON	11333	1009	10	12	HG	HH	RT		9	9		9		4		Gage 8068740
BUFALO BAYOU TIDAL AT MCKEE ST IN HOUSTON	11345	1013	10	12	HG	HH	RT		9	9		9		4		
BUFALO BAYOU TIDAL IMMEDIATELY DOWNSTREAM OF MAIN	11347	1013	10	12	HG	HH	RT		9	9		9		4		Gage 8074600
BUFALO BAYOU TIDAL AT SHEPHERD DRIVE IN HOUSTON	11351	1013	10	12	HG	HH	RT		9	9		9		4		Gage 8074000
BUFALO BAYOU AT VOSS ROAD	11356	1014	10	12	HG	HH	RT		9	9		9		4		
BUFALO BAYOU IMMEDIATELY DOWNSTREAM OF WEST BELTWAY 8 IN HOUSTON	11360	1014	10	12	HG	HH	RT		9	9		9		4		Gage 8073600
BUFALO BAYOU AT WILCREST DRIVE IN HOUSTON	11361	1014	10	12	HG	HH	RT		9	9		9		4		
BUFALO BAYOU IMMEDIATELY DOWNSTREAM OF DAIRY ASHFORD ROAD WEST OF HOUSTON	11362	1014	10	12	HG	HH	RT		9	9		9		4		Gage 8073500
BUFALO BAYOU AT ELDRIDGE ROAD IN HOUSTON	11363	1014	10	12	HG	HH	RT		9	9		9		4		
BUFALO BAYOU AT SH 6	11364	1014	10	12	HG	HH	RT		9	9		9		4		Gage 8072500
GREENS BAYOU AT TIDWELL ROAD IN HARRIS CO	11369	1016	10	12	HG	HH	RT		9	9		9		4		
GREENS BAYOU IMMEDIATELY DOWNSTREAM OF MT HOUSTON PARKWAY	11370	1016	10	12	HG	HH	RT		9	9		9		4		
GREENS BAYOU AT US 59 NORTH OF HOUSTON	11371	1016	10	12	HG	HH	RT		9	9		9		4		

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventionals	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
GREENS BAYOU AT WEST GREENS PARKWAY	11376	1016	10	12	HG	HH	RT		9	9		9	4	4		
WHITEOAK BAYOU AT NORTH SHEPHERD STREET IN HOUSTON	11389	1017	10	12	HG	HH	RT		9	9		9	4	4		This site replaced site 15827
WHITEOAK BAYOU AT NORTH HOUSTON ROSSLYN ROAD	11394	1017	10	12	HG	HH	RT		9	9		9	4	4		
WHITEOAK BAYOU IMMEDIATELY DOWNSTREAM OF TAHOE DRIVE	11396	1017	10	12	HG	HH	RT		9	9		9	4	4		
ARMAND BAYOU AT GENOA-RED BLUFF RD NE OF ELLINGTON AFB	11404	1113A	11	12	HG	HH	RT		9	9		9	4	4		
ARMAND BAYOU AT FAIRMONT PARKWAY ALONG MEDIAN AT MIDPOINT BETWEEN BRIDGES	11405	1113A	11	12	HG	HH	RT		9	9		9	4	4		Added in FY2011 because dropped site 11409
ARMAND BAYOU TIDAL AT BAY AREA BLVD NORTH OF NASA AT MIDDLE OF MEDIAN BETWEEN 2 BRIDGES EASTERN SHORE	11503	1113	11	12	HG	HH	RT		9	9		9	4	4		
GREENS BAYOU 184 METERS DOWNSTREAM OF KNOBCREST DRIVE	13778	1016	10	12	HG	HH	RT		9	9		9	4	4		Gage 8075900
LITTLE CYPRESS CREEK IMMEDIATELY DOWNSTREAM OF KLUGE ROAD IN HOUSTON	14159	1009E	10	12	HG	HH	RT		9	9		9	4	4		
WHITEOAK BAYOU IMMEDIATELY DOWNSTREAM OF WEST 43RD STREET IN NORTHWEST HOUSTON	15829	1017	10	12	HG	HH	RT		9	9		9	4	4		
WHITEOAK BAYOU AT WEST TIDWELL ROAD IN NORTHWEST HOUSTON	15831	1017	10	12	HG	HH	RT		9	9		9	4	4		
BUFFALO BAYOU TIDAL IMMEDIATELY UPSTREAM OF JENSEN	15841	1007	10	12	HG	HH	RT		9	9		9	4	4		
BUFFALO BAYOU TIDAL AT SABINE STREET NORTH OF ALLEN PARKWAY IN HOUSTON	15843	1013	10	12	HG	HH	RT		9	9		9	4	4		
BUFFALO BAYOU AT CHIMNEY ROCK ROAD IN HOUSTON	15845	1014	10	12	HG	HH	RT		9	9		9	4	4		
BUFFALO BAYOU IMMEDIATELY DOWNSTREAM OF BRIAR FOREST DRIVE IN WEST HOUSTON	15846	1014	10	12	HG	HH	RT		9	9		9	4	4		
TURKEY CREEK IMMEDIATELY DOWNSTREAM OF MEMORIAL DRIVE IN WEST HOUSTON	15847	1014K	10	12	HG	HH	RT		9	9		9	4	4		
BRAYS BAYOU IMMEDIATELY DOWNSTREAM OF SH 6 IN WEST HOUSTON	15848	1007B	10	12	HG	HH	RT		9	9		9	4	4		
BRAYS BAYOU AT DAIRY ASHFORD STREET IN WEST HOUSTON	15850	1007B	10	12	HG	HH	RT		9	9		9	4	4		
BRAYS BAYOU AT WILCREST DRIVE IN WEST HOUSTON	15851	1007B	10	12	HG	HH	RT		9	9		9	4	4		

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventional	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
BRAYS BAYOU IMMEDIATELY DOWNSTREAM OF BEECHNUT STREET IN WEST HOUSTON	15852	1007B	10	12	HG	HH	RT		9	9		9		4		
BRAYS BAYOU IMMEDIATELY DOWNSTREAM OF HILLCROFT STREET IN WEST HOUSTON	15853	1007B	10	12	HG	HH	RT		9	9		9		4		
BRAYS BAYOU IMMEDIATELY DOWNSTREAM OF SOUTH RICE AVENUE IN WEST HOUSTON	15854	1007B	10	12	HG	HH	RT		9	9		9		4		
BRAYS BAYOU IMMEDIATELY DOWNSTREAM OF STELLA LINK ROAD IN HOUSTON	15855	1007B	10	12	HG	HH	RT		9	9		9		4		
BRAYS BAYOU AT GREENBRIAR STREET IN SOUTHWEST HOUSTON	15859	1007B	10	12	HG	HH	RT		9	9	9	9		4		Gage 8075000
HALLS BAYOU AT HOMESTEAD ROAD IN NORTHEAST HOUSTON	15862	1006D	10	12	HG	HH	RT		9	9		9		4		
HALLS BAYOU AT HIRSCH RD IN NORTHEAST HOUSTON	15863	1006D	10	12	HG	HH	RT		9	9		9		4		
HALLS BAYOU AT MESA DR IN NORTHEAST HOUSTON	15864	1006D	10	12	HG	HH	RT		9	9		9		4		
HUNTING BAYOU AT JENSEN DRIVE IN NORTHEAST HOUSTON	15867	1007R	10	12	HG	HH	RT		9	9		9		4		
HUNTING BAYOU AT CAVALCADE ST IN NORTHEAST HOUSTON	15869	1007R	10	12	HG	HH	RT		9	9		9		4		
HUNTING BAYOU AT LOCKWOOD DRIVE IN NORTHEAST HOUSTON	15873	1007R	10	12	HG	HH	RT		9	9		9		4		
SIMS BAYOU IMMEDIATELY DOWNSTREAM OF ALMEDA ROAD IN SOUTH HOUSTON	15876	1007D	10	12	HG	HH	RT		9	9		9		4		
SIMS BAYOU AT MARTIN LUTHER KING JUNIOR BOULEVARD IN SOUTH HOUSTON	15877	1007D	10	12	HG	HH	RT		9	9	9	9		4		Gage 8075470
SIMS BAYOU AT SWALLOW STREET IN SOUTHEAST HOUSTON	15878	1007D	10	12	HG	HH	RT		9	9		9		4		
BRAYS BAYOU AT SOUTH WAYSIDE DRIVE 802 METERS UPSTREAM OF IH 45 IN SOUTHEAST HOUSTON	16479	1007B	10	12	HG	HH	RT		9	9		9		4		
GARNERS BAYOU IMMEDIATELY UPSTREAM OF OLD HUMBLE ROAD AT CONFLUENCE WITH RIENHARDT BAYOU IN	16589	1016A	10	12	HG	HH	RT		9	9		9		4		
UNNAMED TRIBUTARY OF GREENS BAYOU AT MESA DR/E. HOUSTON-DYERSDALE ROAD IN NORTHEAST HOUSTON	16590	1016B	10	12	HG	HH	RT		9	9		9		4		
SPRING BRANCH CREEK IMMEDIATELY UPSTREAM OF WIRT ROAD 331 METERS DOWNSTREAM OF IH 10 IN WEST HOUSTON	16592	1014D	10	12	HG	HH	RT		9	9		9		4		

FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventional	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
COLE CREEK IMMEDIATELY UPSTREAM OF BOLIVIA BLVD 792 METERS UPSTREAM OF CONFLUENCE WITH WHITEOAK BAYOU IN NW HOUSTON	16593	1017B	10	12	HG	HH	RT	9	9	9	9	9	4			
BRICKHOUSE GULLY AT US 290 IN NORTHWEST HOUSTON 2.03 KM UPSTREAM OF CONFLUENCE WITH WHITEOAK BAYOU	16594	1017A	10	12	HG	HH	RT	9	9	9	9	9	4			Gage 8074250
UNNAMED TRIBUTARY OF WHITE OAK BAYOU AT US290 INTERSECTION AT MANGUM ROAD IN NORTHWEST HOUSTON	16595	1017D	10	12	HG	HH	RT	9	9	9	9	9	4			
UNNAMED TRIBUTARY OF WHITE OAK BAYOU AT W 14TH IN WEST HOUSTON 516 METERS UPSTREAM OF CONFLUENCE WITH WHITE OAK BAYOU	16596	1017E	10	12	HG	HH	RT	9	9	9	9	9	4			
NEWMAN BRANCH / NEIMANS BAYOU AT MEMORIAL DRIVE IN WEST HOUSTON	16597	1014M	10	12	HG	HH	RT	9	9	9	9	9	4			
LITTLE WHITE OAK BAYOU AT WHITE OAK DRIVE IN NORTH HOUSTON	16648	1013A	10	12	HG	HH	RT	9	9	9	9	9	4			
UNNAMED TRIBUTARY OF BUFFALO BAYOU AT CLINTON DRIVE IN CENTRAL HOUSTON	16649	1007O	10	12	HG	HH	RT	9	9	9	9	9	4			
COUNTRY CLUB BAYOU/TRIBUTARY OF BRAYS BAYOU IMMEDIATELY UPSTREAM OF SOUTH WAYSIDE DRIVE/JUS90A IN CENTRAL HOUSTON	16650	1007K	10	12	HG	HH	RT	9	9	9	9	9	4			
COUNTRY CLUB BAYOU/TRIBUTARY OF BRAYS BAYOU AT HUGHES STREET IN CENTRAL HOUSTON	16651	1007K	10	12	HG	HH	RT	9	9	9	9	9	4			
WILLOW WATERHOLE AT MCDERMED DRIVE IN SOUTHWEST HOUSTON	16652	1007E	10	12	HG	HH	RT	9	9	9	9	9	4			
KUHLMAN GULLY/TRIBUTARY OF BRAYS BAYOU AT BROCK STREET 311 METERS UPSTREAM OF WHEELER STREET IN SOUTHEAST CENTRAL HOUSTON	16653	1007G	10	12	HG	HH	RT	9	9	9	9	9	4			
UNNAMED TRIBUTARY OF BRAYS BAYOU AT DUMFRIES DRIVE IN SOUTH WEST HOUSTON	16654	1007L	10	12	HG	HH	RT	9	9	9	9	9	4			
UNNAMED TRIBUTARY OF SIMS BAYOU AT DULCIMER STREET IN SOUTH HOUSTON	16655	1007N	10	12	HG	HH	RT	9	9	9	9	9	4			
SIMS BAYOU SOUTH BRANCH AT TIFFANY DRIVE IN SOUTH HOUSTON	16656	1007D	10	12	HG	HH	RT	9	9	9	9	9	4			
UNNAMED TRIBUTARY OF HUNTING BAYOU IMMEDIATELY UPSTREAM OF JOHN RALSTON ROAD IN EAST HOUSTON	16657	1007M	10	12	HG	HH	RT	9	9	9	9	9	4			

FY2012 CMS for H-GAC's Regional QAPP

(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventional	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
PLUM CREEK/TRIBUTARY OF SIMS BAYOU AT OLD GALVESTON ROAD IN SOUTH EAST HOUSTON	16658	1007I	10	12	HG	HH	RT	9	9	9	9	9	4			
PINE GULLY/TRIBUTARY OF SIMS BAYOU AT OLD GALVESTON ROAD IN SOUTH EAST HOUSTON	16659	1007H	10	12	HG	HH	RT	9	9	9	9	9	4			
BERRY BAYOU/TRIBUTARY OF SIMS BAYOU IMMEDIATELY UPSTREAM OF AHRENS DRIVE IN SOUTH EAST HOUSTON	16660	1007	10	12	HG	HH	RT	9	9	9	9	9	4			
BERRY BAYOU IMMEDIATELY UPSTREAM OF SOUTH RICHEY STREET IN SOUTH EAST HOUSTON	16661	1007F	10	12	HG	HH	RT	9	9	9	9	9	4			between gages 8075650 & 8075605
BIG GULCH AT WALLISVILLE ROAD IN EAST HOUSTON	16662	1006F	10	12	HG	HH	RT	9	9	9	9	9	4			
SPRING GULLY AT WEST TERMINUS OF BARNESWORTH DRIVE IN NORTHEAST HOUSTON	16663	1006H	10	12	HG	HH	RT	9	9	9	9	9	4			
GOODYEAR CREEK TIDAL IMMEDIATELY UPSTREAM OF IH 10 IN EAST HOUSTON	16664	1006	10	12	HG	HH	RT	9	9	9	9	9	4			
UNNAMED TRIBUTARY OF HALLS BAYOU IMMEDIATELY DOWNSTREAM OF LANGLEY ROAD IN NORTH HOUSTON	16665	1006I	10	12	HG	HH	RT	9	9	9	9	9	4			
UNNAMED TRIBUTARY OF HALLS BAYOU AT TALTON STREET IN NORTH EAST HOUSTON	16666	1006I	10	12	HG	HH	RT	9	9	9	9	9	4			
UNNAMED TRIBUTARY OF HALLS BAYOU AT WOODLYN ROAD IN NORTH EAST HOUSTON	16667	1006I	10	12	HG	HH	RT	9	9	9	9	9	4			
UNNAMED TRIB OF BUFFALO BAYOU AT GLENWOOD CEMETARY RD 160 M W OF INTERSECT OF LUBBOCK ST AND SAWYER ST IN CENTRAL HOUSTON /INACTIVE	16675	1013C	10	12	HG	HH	RT	9	9	9	9	9	4			
UNNAMED TRIBUTARY OF GREENS BAYOU AT SMITH RD IN	16676	1016D	10	12	HG	HH	RT	9	9	9	9	9	4			
SPRING GULLY AT SPRING CREEK OAKS DRIVE IN TOMBALL	17481	1009D	10	12	HG	HH	RT	9	9	9	9	9	4			
LANGHAM CREEK AT SH 6 IN NORTHWEST HOUSTON	17482	1014E	10	12	HG	HH	RT	9	9	9	9	9	4			Gage 8072760 (0.15 mi upstream of site)
TURKEY CREEK IMMEDIATELY SOUTHEAST OF TANNER ROAD AND NORTH ELDRIDGE PARKWAY INTERSECTION IN HOUSTON	17483	1014K	10	12	HG	HH	RT	9	9	9	9	9	4			
BEAR CREEK AT OLD GREENHOUSE ROAD WEST OF HOUSTON	17484	1014A	10	12	HG	HH	RT	9	9	9	9	9	4			
UNNAMED TRIBUTARY OF HORSEPEN BAYOU TIDAL AT PENN HILLS	17485	1113C	11	12	HG	HH	RT	9	9	9	9	9	4			
BIG ISLAND SLOUGH AT HILLRIDGE ROAD IN SOUTHEAST HOUSTON	17486	1113E	11	12	HG	HH	RT	9	9	9	9	9	4			

FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventional	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
WILLOW SPRING AT BANDRIDGE ROAD IN SOUTHEAST HOUSTON	17487	1113D	11	12	HG	HH	RT		9	9		9		4		
SPRING CREEK IMMEDIATELY DOWNSTREAM OF KUYKENDAHL ROAD NORTHEAST OF HOUSTON	17489	1008	10	12	HG	HH	RT		9	9		9	4	4		
HALLS BAYOU AT AIRLINE ROAD IN NORTH HOUSTON	17490	1016D	10	12	HG	HH	RT		9	9		9		4		
HALLS BAYOU AT DEER TRAIL DRIVE IN NORTH HOUSTON	17491	1006D	10	12	HG	HH	RT		9	9	9	9		4		Gage 8076200
BUFFALO BAYOU AT SOUTH MASON ROAD WEST OF HOUSTON	17492	1014B	10	12	HG	HH	RT		9	9		9		4		
SOUTH MAYDE CREEK AT DULANEY ROAD WEST OF HOUSTON	17493	1014H	10	12	HG	HH	RT		9	9	9	9		4		Gage 8072700
MASON CREEK 151 METERS DOWNSTREAM OF PARK PINE DRIVE WEST OF HOUSTON	17494	1014L	10	12	HG	HH	RT		9	9		9		4		
GREENS BAYOU IMMEDIATELY UPSTREAM OF MILLS ROAD WEST OF HOUSTON	17495	1016	10	12	HG	HH	RT		9	9		9	4	4		
FAULKEY GULLY OF CYPRESS CREEK 105 METERS DOWNSTREAM OF LAKEWOOD FOREST DRIVE NORTHWEST OF HOUSTON	17496	1009C	10	12	HG	HH	RT		9	9		9		4		
SIMS BAYOU UPSTREAM TIDAL AT SOUTH POST OAK ROAD IN SOUTHWEST HOUSTON	17976	1007D	10	12	HG	HH	RT		9	9		9		4		
UNNAMED TRIBUTARY OF HUNTING BAYOU AT MINDEN STREET APPROXIMATELY 0.3 KM EAST OF LOCKWOOD AND S OF N 610 LOOP EAST	18689	1007V	10	12	HG	HH	RT		9	9		9		4		
BINTLIFF DITCH TRIBUTARY OF BRAYS BAYOU UNDER CENTER OF BISSONNET ST BRIDGE 317 M NE OF BISSONNET AT FONDREN RD IN SW HOUSTON	18690	1007T	10	12	HG	HH	RT		9	9		9		4		
MIMOSA DITCH TRIBUTARY OF BRAYS BAYOU AT NEWCASTLE DR IN SOUTHWEST HOUSTON	18691	1007U	10	12	HG	HH	RT		9	9		9		4		
POOR FARM DITCH TRIBUTARY OF BRAYS BAYOU AT EASTBOUND NORTH BRAESWOOD BLVD APPROX 200 M E OF BUFFALO SPEEDWAY IN SW HOUSTON	18692	1007S	10	12	HG	HH	RT		9	9		9		4		
KEEGAN'S BAYOU AT SYNOTT ROAD 1.1 KM SOUTH OF THE INTERSECTION OF SYNOTT ROAD AND BISSONNET STREET IN SOUTHWEST HOUSTON	20211	1007C	10	12	HG	HH	RT		9	9		9		4		
BUFFALO BAYOU NORTH SHORE IMMEDIATELY UNDERNEATH THE SOUTHBOUND FEEDER ROAD BRIDGE OF IH 610 WEST IN HOUSTON	20212	1014	10	12	HG	HH	RT		9	9		9	4	4		

FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventionals	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
WILLOW CREEK AT TUWA ROAD APPROXIMATELY 859 METERS DOWNSTREAM OF FM 2920 ROAD IN NORTHERN HARRIS COUNTY	20730	1008H	10	12	HG	HH	RT		9	9		9		4		
GREENS BAYOU AT WALLISVILLE ROAD APPROX 150 METERS NORTHEAST OF THE INTERSECTION OF DATTNER ROAD AND WALLISVILLE ROAD IN HOUSTON	21008	1006	10	12	HG	HH	RT		9	9		9		4		This site replaced 11277 in FY2012 due to safety issues.
GARNERS BAYOU AT NORTH SAM HOUSTON PARKWAY/SH LOOP 8 NE OF HOUSTON	11125	1016A	10	12	HG	HP	RT		15		15	15	15			Project jointly funded by HCFCD and COH-Public Works. Delete TKN
HALLS BAYOU AT JENSEN DRIVE IN HOUSTON	11126	1006D	10	12	HG	HP	RT		15		15	15	15			Project jointly funded by HCFCD and COH-Public Works Delete TKN
HUNTING BAYOU AT NORTH LOOP EAST/IH 610 IN HOUSTON	11129	1007R	10	12	HG	HP	RT		15		15	15	15			Project jointly funded by HCFCD and COH-Public Works Delete TKN
SIMS BAYOU AT TELEPHONE ROAD/SH 35 IN HOUSTON	11132	1007D	10	12	HG	HP	RT		15		15	15	15			Project jointly funded by HCFCD and COH-Public Works Delete TKN
SIMS BAYOU AT HIRAM CLARKE RD IN HOUSTON	11135	1007D	10	12	HG	HP	RT		15		15	15	15			Project jointly funded by HCFCD and COH-Public Works Delete TKN
BRAYS BAYOU AT SOUTH MAIN ST IN HOUSTON	11139	1007B	10	12	HG	HP	RT		15		15	15	15			Project jointly funded by HCFCD and COH-Public Works Delete TKN
BRAYS BAYOU AT SOUTH GESSNER DRIVE IN HOUSTON	11140	1007B	10	12	HG	HP	RT		15		15	15	15			Project jointly funded by HCFCD and COH-Public Works Delete TKN
CYPRESS CREEK IMMEDIATELY DOWNSTREAM OF GRANT ROAD NEAR CYPRESS	11332	1009	10	12	HG	HP	RT		15		15	15	15			Project jointly funded by HCFCD and COH-Public Works Delete TKN
BUFFALO BAYOU IMMEDIATELY DOWNSTREAM OF DAIRY ASHFORD ROAD WEST OF HOUSTON	11362	1014	10	12	HG	HP	RT		15		15	15	15			Project jointly funded by HCFCD and COH-Public Works Delete TKN
GREENS BAYOU AT US 59 NORTH OF HOUSTON	11371	1016	10	12	HG	HP	RT		15		15	15	15			Project jointly funded by HCFCD and COH-Public Works Delete TKN
LUCE BAYOU/SAN JACINTO RIVER EAST FORK AT HUFFMAN-NEW CANEY ROAD	11187	1002B	10	12	HG	HW	RT		6	6		6	4	4		Monitoring Entity changed from HH to HW in FY2010
LAKE HOUSTON NORTH SIDE OF MISSOURI PACIFIC RAILROAD BRIDGE 137 METERS SOUTH AND 1.36 KM WEST OF INTERSECTION OF PINO LN AND SUNOCO RD	11208	1002	10	12	HG	HW	RT		12	12		12	4	4	4	
LAKE HOUSTON AT FM 1960 WEST END PASS BRIDGE 269 M N AND 731 M E OF INTERSECTION OF ATASCOCITA SHORES AND FM 1960/CITY HO SITE 9	11211	1002	10	12	HG	HW	RT		12	12		12	4	4	4	
LAKE HOUSTON AT FM 1960 EAST END PASS BRIDGE 235 M S AND 950 M WEST OF INTERSECTION OF FM 1960 AND FAIRLAKE LANE/CITY HO SITE 13	11212	1002	10	12	HG	HW	RT		12	12		12	4	4	4	

FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventional	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
EAST FORK SAN JACINTO RIVER AT FM 1485	11235	1003	10	12	HG	HW	RT		6	6	6	6	4	4		Add flow reporting - Gage 8070200
EAST FORK SAN JACINTO RIVER IMMEDIATELY UPSTREAM OF SH 105 WEST OF CLEVELAND	11238	1003	10	12	HG	HW	RT		6	6	6	6	4	4		Add flow reporting - Gage 8070000 Site added in FY11
WEST FORK SAN JACINTO RIVER IMMEDIATELY UPSTREAM OF SH 242	11243	1004	10	12	HG	HW	RT		6	6		6	4	4		This site ID replaces site ID 16624. Data was moved from 16624 to 11243.
WEST FORK SAN JACINTO RIVER IMMEDIATELY DOWNSTREAM OF SH 105 NW OF CONROE	11251	1004	10	12	HG	HW	RT		6	6	6	6	4	4		Add flow reporting - Gage 8067650
SPRING CREEK BRIDGE AT IH 45 20 MILES NORTH OF HOUSTON	11313	1008	10	12	HG	HW	RT		6	6	6	6	4	4		Add flow reporting - Gage 8068500
CYPRESS CREEK BRIDGE ON IH 45 15 MI NORTH OF HOUSTON	11328	1009	10	12	HG	HW	RT		6	6	6	6	4	4		Add flow reporting - Gage 8069000
CANEY CREEK IMMEDIATELY DOWNSTREAM OF FM 1485	11334	1010	10	12	HG	HW	RT		6	6		6	4	4		
PEACH CREEK BRIDGE AT FM 2090 IN SPLENDORA	11337	1011	10	12	HG	HW	RT		6	6		6	4	4		This site was substituted for 11336 in
CANEY CREEK AT SH 105	14241	1010	10	12	HG	HW	RT		6	6		6	4	4		
LAKE HOUSTON 90 M S AND 349 M W OF INTERSECTION OF MAGNOLIA PT DR AND DIAMOND WAY CANEY CREEK ARM IN HOUSTON	16623	1002	10	12	HG	HW	RT		12	12		12	4	4	4	
PEACH CREEK IMMEDIATELY UPSTREAM OF OLD HWY 105	16625	1011	10	12	HG	HW	RT		6	6		6	4	4		
STEWARTS CREEK 175 METERS DOWNSTREAM OF SH LOOP 336 SOUTHEAST OF CONROE	16626	1004E	10	12	HG	HW	RT		6	6		6	4	4		
CRYSTAL CREEK AT SH 242 SOUTHEAST OF CONROE	16635	1004D	10	12	HG	HW	RT		6	6		6	4	4		Replaces site 11181 Crystal Creek at FM1314
LK HOUSTON W OF LK SHADOWS SUBDIVISION MID LAKE NW OF HOUSTON 2.09 KM N AND 1.38 KM E OF INTERSECT OF LK HOUSTON PKWY AND DITE CAYLIN	16668	1002	10	12	HG	HW	RT		12	12		12	4	4	4	
LAKE HOUSTON IN THE WEST FORK SAN JACINTO RIVER CHANNEL 270 M EAST AND 60 M NORTH OF MISTY COVE AT ATASCOCITA PLACE DR	18667	1002	10	12	HG	HW	RT		12	12		12	4	4	4	
LAKE HOUSTON/LUCE BAYOU 123 M NORTH AND 188 M WEST OF LAKEWATER DR AT WATERWOOD DR IN WATER WONDERLAND SUBDIVISION IN HARRIS COUNTY	18670	1002	10	12	HG	HW	RT		12	12		12	4	4	4	

FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

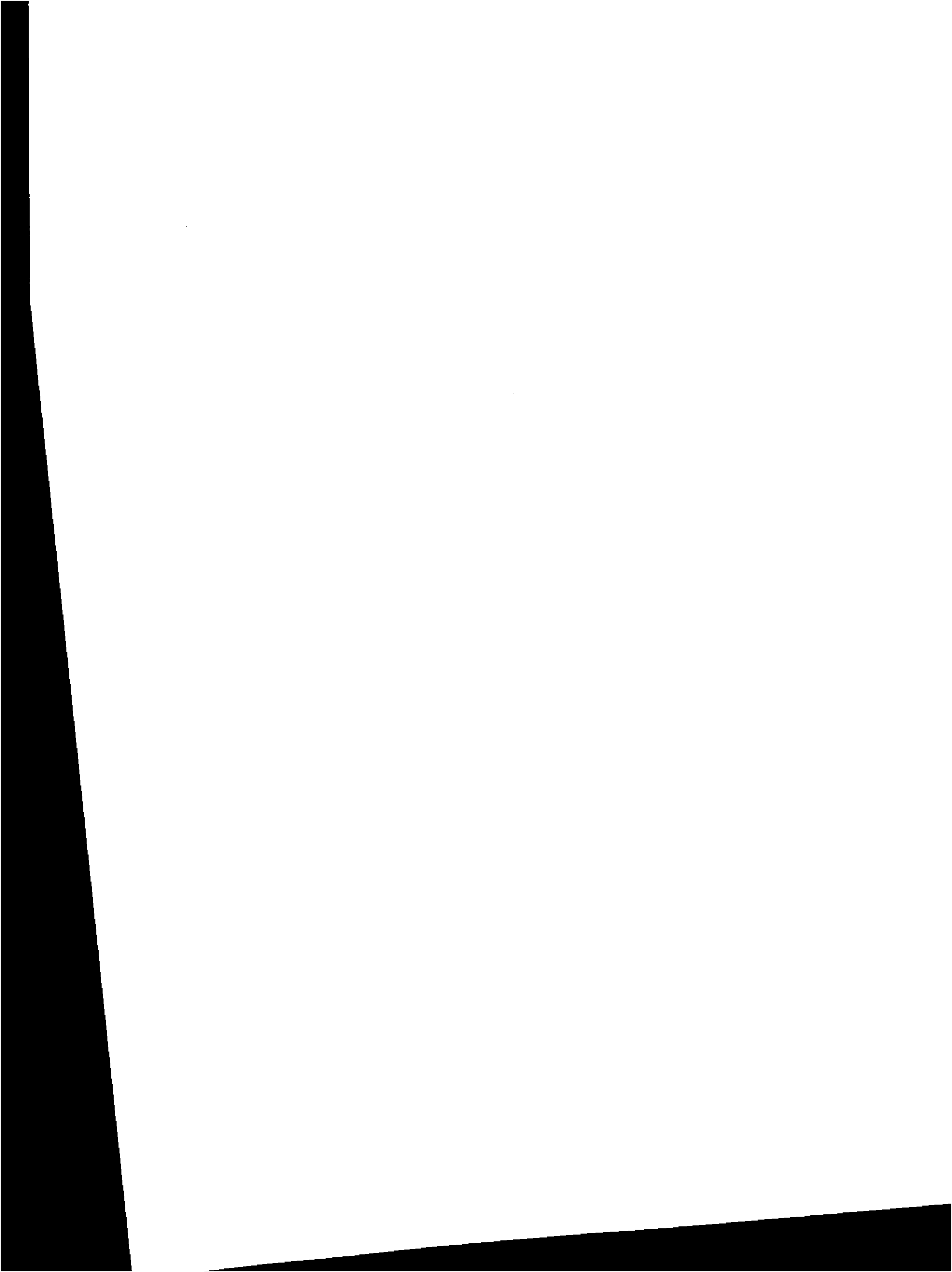
Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entry)	CE (Collecting Entry)	MT (Monitoring Type)	24 hr DO	Field	Conventional	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
LAKE HOUSTON WEST FORK SAN JACINTO RIVER ARM UNDER POWER LINES 567 METERS EAST AND 538 METERS NORTH FROM THE INTERSECTION OF BELLEAU WOOD DRIVE AND SOUTHWEST DRIVE IN HOUSTON	20782	1002	10	12	HG	HW	RT		12	12		12	4	4	4	added site in FY2011 want to know if OSSF community upstream is affecting ambient water quality
LAKE CONROE AT DAM MID CHANNEL 85 M OUT FROM MIDDLE TAINTER GATE 922 M N AND 426 M E OF INTERSECTION OF DAM SITE RD AND SH 105	11342	1012	10	12	HG	SJ	RT		12	12		12		4	4	
LAKE CONROE AT FM 1375 IN THE MAIN CHANNEL 4TH PILING FROM THE EAST 541 M SOUTH AND 1.40 KM W OF INTERSECTION OF KAGLE RD AND FM 1375 USGS SITE GC	11344	1012	10	12	HG	SJ	RT		12	12		12		4	4	
LAKE WOODLANDS AT WESTERN REACH 104 METERS NORTH AND 306 METERS E OF INTERSECTION OF LEEWARD CV AND PANTHER CREEK DR IN THE WOODLANDS	16481	1008F	10	12	HG	SJ	RT		12	4		4	4	4		
LAKE WOODLANDS AT SOUTH END 147 METERS NORTH AND 48 METERS EAST WEST EDGE OF DAM IN THE WOODLANDS	16482	1008F	10	12	HG	SJ	RT		12	4		4	4	4	4	
LAKE WOODLANDS AT MID POINT 69 METERS NORTH AND 513 METERS EAST OF INTERSECTION OF N WINDSAIL PL AND SHORELINE PT IN THE WOODLANDS	16483	1008F	10	12	HG	SJ	RT		12	4		4	4	4	4	
LAKE WOODLANDS AT NORTH END 111 METERS DOWNSTREAM OF RESEARCH FOREST DRIVE IN THE WOODLANDS	16484	1008F	10	12	HG	SJ	RT		12	4		4	4	4		
LOWER PANTHER BRANCH 89 M UPSTREAM OF SAWDUST RD APPROX 25 M UPSTREAM OF PERMIT WQ0011401-001 LOCATED AT 2436 SAWDUST ROAD	16627	1008C	10	12	HG	SJ	RT		12	4		4	4	4		
LOWER PANTHER BRANCH 134 DOWNSTREAM OF SAWDUST RD APPROX 240 M DOWNSTREAM OF PERMIT WQ0011401-001 LOCATED AT 2436 SAWDUST ROAD	16628	1008C	10	12	HG	SJ	RT		12	4	4	4	4	4		
UPPER PANTHER BRANCH APPROX 80 M UPSTREAM OF PERMIT WQ0012597-001 LOCATED AT 5402 RESEARCH FOREST DR	16629	1008B	10	12	HG	SJ	RT		12	4		4	4	4		
UPPER PANTHER BRANCH APPROX 60 M DOWNSTREAM OF PERMIT WQ0012597-001 LOCATED AT 5402 RESEARCH FOREST DR	16630	1008B	10	12	HG	SJ	RT		12	4		4	4	4		

FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventional	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
BEAR BRANCH BRIDGE 153 METERS DOWNSTREAM OF RESEARCH FOREST DRIVE	16631	1008E	10	12	HG	SJ	RT		12	4	4	4	4	4		
LAKE CONROE AT APRIL POINT MID CHANNEL 559 M N AND 586 M E OF INTERSECTION OF APRIL POINT PLACE AND APRIL HILL	16638	1012	10	12	HG	SJ	RT		12	12		12		4	4	
LAKE CONROE AT SOUTH END OF LAKE ON EAST SIDE 201 METERS SOUTH AND 732 METERS WEST OF INTERSECTION OF S VALLEY DRIVE AND CREST DRIVE	16639	1012	10	12	HG	SJ	RT		12	12		12		4	4	
LAKE CONROE S OF BENTWATER ISLAND WEST COVE S OF FM 1097 BRIDGE 769 M N AND 89 M E OF INTERSECTION OF	16640	1012	10	12	HG	SJ	RT		12	12		12		4	4	
LAKE CONROE AT AQUARIUS POINT MID CHANNEL N OF FM 830 BOAT RAMP 437 M N AND 924 M W OF INTERSECT OF FM 830 AND LAKEVIEW MANOR DR	16641	1012	10	12	HG	SJ	RT		12	12		12		4	4	
LAKE CONROE AT LAKE MID POINT MID CHANNEL AT FM 1097 BRIDGE 57 M S AND 520 M W OF INTERSECTION OF FM 1097 AND BLUEBERRY HILL	16642	1012	10	12	HG	SJ	RT		12	12		12		4	4	
LAKE CONROE AT HUNTERS POINT CANEY CREEK ARM E OF SCOTTS RIDGE BOAT RAMP 640 M N AND 558 M E OF INTERSECT OF TEEL RD AND HUNTERS TRL	16643	1012	10	12	HG	SJ	RT		12	12		12		4	4	
LAKE CONROE AT PARADISE POINT MID CHANNEL 396 METERS S AND 309 M WEST INTERSECTION OF PARADISE VIEW DRIVE AND PARADISE POINT DRIVE	16644	1012	10	12	HG	SJ	RT		12	12		12		4	4	
LAKE CONROE AT MOUTH OF SANDY BRANCH COVE 2.63 KM EAST OF INTERSECTION OF HARDY SMITH ROAD AND F S 218 A	16645	1012	10	12	HG	SJ	RT		12	12		12		4	4	
MOSES BAYOU AT NORTHBOUND SH 146 BRIDGE AT MID-BRIDGE NORTH OF LA MARQUE	11400	2431A	24	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08
HIGHLAND BAYOU AT FAIRWOOD ROAD IN LA MARQUE IN GALVESTON COUNTY	11415	2424A	24	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08
HALLS BAYOU AT FM 2004 SW OF ALTO LOMA	11422	2432C	24	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08
MUSTANG BAYOU AT FM 2917 SOUTH OF ALVIN	11423	2432A	24	12	HG	UI	RT		4	4	4	4	4	4		Added site in FY2012
COWART CREEK AT FM 518 IN FRIENDSWOOD	11425	1102A	11	12	HG	UI	RT		4	4	4	4	4	4		Reduced frequency for FY08
CEDAR CREEK AT FM 517 W OF DICKINSON	11434	1103E	11	12	HG	UI	RT		4	4	4	4	4	4		Reduced frequency for FY08
GUM BAYOU AT FM 517 E OF DICKINSON	11436	1103D	11	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08
DICKINSON BAYOU TIDAL AT SH 146 BRIDGE EAST OF DICKINSON	11455	1103	11	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08
DICKINSON BAYOU TIDAL AT IH 45	11462	1103	11	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08

FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventional	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
CHOCOLATE BAYOU TIDAL FM 2004 BRIDGE SOUTH OF ALVIN	11478	1107	11	12	HG	UI	RT		4	4		4	4	4	4	Added chlorophyll a in FY2012; Reduced frequency for FY08
CHOCOLATE BAYOU TIDAL 27 METERS DOWNSTREAM FROM MISSOURI-PACIFIC RAILROAD AT LIVERPOOL	11480	1107	11	12	HG	UI	RT		4	4		4	4	4		Reduced frequency for FY08
WEST BAY OFFAT BAYOU MID BAYOU OPPOSITE LAKE MADELINE CANAL	13322	2424D	24	12	HG	UI	RT		4	4		4	4	4	4	Reduced frequency for FY08.
WEST BAY AT RANGE MARKER D BETWEEN SOUTH DEER ISLAND AND TEICHMAN POINT	14622	2424	24	12	HG	UI	RT		4	4		4	4	4	4	Reduced frequency for FY08.
OFFATTS BAYOU OFF CM 18	14645	2424D	24	12	HG	UI	RT		4	4		4	4	4	4	Reduced frequency for FY08.
BORDENS GULLEY AT FM517 BRIDGE 0.10MI UPSTREAM OF CONFLUENCE OF DICKINSON BAYOU IN DICKINSON	16469	1103B	11	12	HG	UI	RT		4	4		4	4	4		Reduced frequency for FY08
GEISLER BAYOU AT FM517 BRIDGE 0.19MI UPSTREAM OF DICKINSON BAYOU IN DICKINSON	16470	1103C	11	12	HG	UI	RT		4	4		4	4	4		Reduced frequency for FY08
BENSONS BAYOU ON WAGON RD 0.22 MI SOUTH OF FM 517 IN DICKINSON 0.10 MI UPSTREAM OF DICKINSON BAYOU	16471	1103A	11	12	HG	UI	RT		4	4		4	4	4		Reduced frequency for FY08
MARYS CREEK AT MARYS CROSSING IN NORTH FRIENDSWOOD	16473	1102B	11	12	HG	UI	RT		4	4	4	4	4	4	4	Reduced frequency for FY08 Gage 8077540??
ROBINSONS BAYOU AT FM270 IN LEAGUE CITY	16475	1101D	11	12	HG	UI	RT		4	4		4	4	4		Reduced frequency for FY08
JARBO BAYOU AT FM2094 APPROX 0.3MI DOWNSTREAM OF CLEAR LAKE CONFLUENCE IN KEMAH	16476	2425B	24	12	HG	UI	RT		4	4		4	4	4		Reduced frequency for FY08
HIGHLAND BAYOU 80 M NORTHEAST OF SH 6 BRIDGE CENTERPOINT IN BAYOU VISTA WEST OF IH 45 IN GALVESTON COUNTY	16488	2424A	24	12	HG	UI	RT		4	4		4	4	4	4	Reduced frequency for FY08.
MARCHAND BAYOU TIDAL AT FM519 IN HITCHCOCK	16490	2424C	24	12	HG	UI	RT		4	4		4	4	4	4	Reduced frequency for FY08.
HIGHLAND BAYOU AT FM 2004 IN HITCHCOCK IN GALVESTON COUNTY	16491	2424A	24	12	HG	UI	RT		4	4		4	4	4		Reduced frequency for FY08
CHIGGER CREEK AT FM528 BRIDGE IN FRIENDSWOOD	16493	1101B	11	12	HG	UI	RT		4	4	4	4	4	4		Reduced frequency for FY08
MOSES LAKE FLOOD GATES AT GALVESTON BAY CONFLUENCE AT SHELL ISLAND	16551	2431	24	12	HG	UI	RT		4	4		4	4	4	4	Reduced frequency for FY08
LAKE MADELINE AT CORNER OF BELUCHE DRIVE AND DOMINIQUE DRIVE IN GALVESTON	16564	2424B	24	12	HG	UI	RT		4	4		4	4	4	4	Reduced frequency for FY08
CLEAR CREEK TIDAL AT BROOKDALE DR APPROX 0.1MI DOWNSTREAM OF GRISSOM RD IN COUNTRYSIDE PARK IN CANOE LAUNCHING AREA IN LEAGUE CITY	16576	1101	11	12	HG	UI	RT		4	4		4	4	4		Reduced frequency for FY08
MAGNOLIA CREEK APPROX 600M UPSTREAM OF FM518	16611	1101A	11	12	HG	UI	RT		4	4	4	4	4	4	4	Reduced frequency for FY08
HICKORY SLOUGH AT ROBINSON DRIVE IN PEARLAND	17068	1102C	11	12	HG	UI	RT		4	4	4	4	4	4	4	site added to UI schedule in FY2012



FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventional	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
CHOCOLATE BAY 600 M SOUTH OF CHANNEL MARKER 9 1.2 KM EAST OF WHARTON BAYOU	17085	2432	24	12	HG	UI	RT		4	4		4		4	4	this site replaces site 13346
CHOCOLATE BAY 200 M NORTHWEST OF HORSE GROVE POINT	17086	2432	24	12	HG	UI	RT		4	4		4		4	4	this site replaces site 13347
MOSES BAYOU AT SH 3 IN TEXAS CITY	17910	2431A	24	12	HG	UI	RT		4	4	4	4	4	4		Reduced frequency for FY08
NEW BAYOU AT FM 2004 S/SW OF HITCHCOCK	17911	2432E	24	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08
PERSIMMON BAYOU AT FM 2004 S/SW OF HITCHCOCK	17913	2432D	24	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08
COW BAYOU AT NASA ROAD 1 IN WEBSTER 100 M EAST OF FM 270/EL CAMINO REAL	17928	1101C	11	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08
AUSTIN BAYOU AT FM 2004 APPROXIMATELY 4 MILES SOUTHEAST OF ANGLETON TEXAS IN BRAZORIA COUNTY	18048	1105C	11	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08
BASTROP BAYOU OFF BAYOU WOOD DR DUE EAST OF BRAZORIA CR 201 AT BASTROP BAYOU DR APPROX 1.1 KM UPSTREAM OF SH 2888 IN RICHWOOD VILLAGE	18502	1105	11	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08
BASTROP BAYOU TIDAL APPROXIMATELY 15 M OFF NORTH BANK AND 1.55 KM UPSTREAM OF FM 2004 IN RICHWOOD VILLAGE	18503	1105	11	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08
BASTROP BAYOU TIDAL MID CHANNEL AT NORTH END OF BASTROP BEACH ROAD 350 M DOWNSTREAM OF FM 523 SE OF ANGLETON	18504	1105	11	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08
BASTROP BAYOU TIDAL 38 M NORTH OF N END OF COMPASS DR/BRAZORIA CR 504 APPROXIMATELY 4.4 KM DOWNSTREAM OF FM 523 SE OF ANGLETON	18505	1105	11	12	HG	UI	RT		4	4		4		4	4	Reduced frequency for FY08
AUSTIN BAYOU IMMEDIATELY UPSTREAM OF DANBURY-ANGLETON ROAD/BRAZORIA CR 210 EAST OF DANBURY	18506	1105C	11	12	HG	UI	RT		4	4	4	4	4	4		Reduced frequency for FY08
AUSTIN BAYOU MID CHANNEL 189 M UPSTREAM OF CONFLUENCE WITH BASTROP BAYOU TIDAL UPSTREAM OF CR	18507	1105B	11	12	HG	UI	RT		4	4		4		4	4	Reduced frequency for FY08
FLORES BAYOU IMMEDIATELY UPSTREAM OF DANBURY-ANGLETON ROAD/BRAZORIA CR 210 EAST OF ANGLETON	18508	1105A	11	12	HG	UI	RT		4	4	4	4	4	4		Reduced frequency for FY08
BRUSHY BAYOU IMMEDIATELY UPSTREAM OF BRAZORIA CR 210 EAST OF ANGLETON	18509	1105D	11	12	HG	UI	RT		4	4	4	4	4	4		Reduced frequency for FY08
MUSTANG BAYOU IMMEDIATELY UPSTREAM OF EAST SOUTH STREET 85 METERS WEST OF SOUTHBOUND SH 35 IN ALVIN USGS ID 8077890	18554	2432A	24	12	HG	UI	RT		4	4	4	4	4	4		site added in FY2012

FY2012 CMS for H-GAC's Regional QAPP
(includes all partners)

Site Description	Station ID	Waterbody ID	Basin	Region	SE (Submitting Entity)	CE (Collecting Entity)	MT (Monitoring Type)	24 hr DO	Field	Conventional	Flow	Bacteria	Enterococci	TKN	Chlorophyll a	Comments
UNNAMED TRIBUTARY OF CLEAR CREEK TIDAL IN FOREST PARK CEMETERY IMMEDIATELY UPSTREAM OF S FEEDER RD OF I 45/GULF FWY S OF NASA RD 1 IN WEBSTER	18591	1101F	11	12	HG	UI	RT		4	4	4	4	4	4		Reduced frequency for FY08
UNNAMED TRIBUTARY OF MOSES LAKE AT STATE LOOP 197/25TH AVE NORTH 432 M EAST OF NORTHBOUND SH 146 IN TEXAS CITY	18592	2431	24	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08
HIGHLAND BAYOU DIVERSION CANAL MID CHANNEL AT SECOND STREET BRIDGE 467 M UPSTREAM OF PRICE ROAD WWTP RELEASE IN HITCHCOCK	18593	2424G	24	12	HG	UI	RT		4	4		4		4		Reduced frequency for FY08
WILLOW BAYOU AT BAKER ST 404 M UPSTREAM OF FM 2004 SOUTH OF SANTA FE IN GALVESTON COUNTY	18668	2432B	24	12	HG	UI	RT		4	4	4	4	4	4		Reduced frequency for FY08
ENGLISH BAYOU MID BAYOU 250 M EAST AND 83 M SOUTH OF 61ST ST BRIDGE CENTERPOINT IN GALVESTON	18695	2424E	24	12	HG	UI	RT		4	4		4		4	4	Reduced frequency for FY08
CLEAR CREEK ABOVE TIDAL AT YOST ROAD TERMINUS IN PEARLAND IN BRAZORIA COUNTY	20010	1102	11	12	HG	UI	RT		4	4	4	4	4	4		site added to UI schedule in FY2012
BORDENS GULLY AT SPRUCE DRIVE IN DICKINSON	20724	1103B	11	12	HG	UI	RT		4	4	4	4	4	4		replaces temp id HG-188 collect for 2 years then compare results against 16469
GEISLER BAYOU AT SUNSET DRIVE 49 METERS SOUTH AND 80 METERS WEST FROM THE INTERSECTION OF SUNSET DRIVE AND WILMINGTON DRIVE IN DICKINSON	20726	1103C	11	12	HG	UI	RT		4	4		4		4		replaces temp id HG-189 collect for 2 years then compare results against 16470
BENSONS BAYOU AT SUNSET DRIVE IN DICKINSON	20727	1103A	11	12	HG	UI	RT		4	4		4		4		replaces temp id HG-190 collect for 2 years then compare results against 16471
UNNAMED TRIBUTARY OF GUM BAYOU AT OWENS DRIVE 1.51 KILOMETERS UPSTREAM OF CONFLUENCE WITH GUM BAYOU IN DICKINSON	20728	1103D	11	12	HG	UI	RT		4	4	4	4	4	4		replaces temp id HG-191 this site was added after site 11446 was dropped for being a duplicate with WCFO