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# MORONGO BAND OF MISSION INDIANS ENVIRONMENTAL PROTECTION DEPARTMENT PLANNING FOR STAFF CHANGES

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RESILIENCE AND CONTINUITY DESPITE STAFF  
TURNOVER

# MORONGO ENVIRONMENTAL PROTECTION DEPARTMENT

- 6 Full-Time Staff Members + Interns
  - Tribal Water Program
  - Tribal Air Program
  - Pollution Prevention Program
- 70% funded through the Environmental Protection Agency
- Primary Objectives:
  - Protect Morongo's air, water, and land
  - Fulfill EPA's Strategic Plan - the National strategy for protecting human health and the environment



# HOW TO KEEP IMPORTANT WORK GOING WITH A SMALL DEPARTMENT?

- Specialized staff with specific program focus and limited back up
- Previously had program binders as primary succession resource
- Shared department drive
  - Collaboration
  - Remote Work
  - Unexpected leave access

# STANDARD OPERATING PROCEDURES

- Standard Operating Procedures in place for all programs in the department
- Created a centralized table of contents with all department SOPs and hyperlinks to file locations
- Regular aspects/tasks of each program in the department each have an SOP

SOP#	Version	SOP Name	Prepared By	Release Date	Revised By	Revision Date	Reviewed By	Reviewed Date
<b>TWP - Tribal Water Program</b>								
<b>TWP 1 Water Quality Monitoring</b>								
1.1.1	2	<a href="#">Troll 9500 Quick</a>	JT	01/03/08	KM	04/14/14		
1.1.2	1	<a href="#">Troll 9500 Full Calibration</a>	KM	04/14/14				
1.1.3	1	<a href="#">SmarTROLL Quick</a>	KM	10/19/15				
1.1.4	1	<a href="#">SmarTROLL Full Calibration</a>	KM	07/21/15				
--		<a href="#">Pre-Sampling Checklist</a>			KM	07/06/21	JS	07/08/21
1.2.1	2	<a href="#">Troll 9500 Surface Water</a>	JT	04/04/07	KM	12/17/13		
1.2.2	4	<a href="#">Low Flow Cell</a>	LR	10/27/10	KM	08/04/17		
1.2.3	1.2	<a href="#">SmarTROLL Surface Water</a>	KM	10/30/15	KM	07/06/21	JS	07/08/21
1.2.4	1	<a href="#">T-100 Turbidimeter Calibration and Operation</a>	KM	10/29/15				
1.3.1	2	<a href="#">Rugged Reader</a>	LR	09/27/10	KM	12/18/13		
1.3.2	2	<a href="#">Transferring Rugged Reader Data to Desktop</a>	LR	03/16/11	KM	10/29/13		
1.4	2.1	<a href="#">Laboratory Sampling</a>	JT	04/04/07	KM	07/06/21	JS	07/08/21
1.5	3	<a href="#">Measuring Stream Flow</a>	KM	06/04/14	KM	07/06/21		
1.5.1	2.1	<a href="#">Measuring Stream Flow</a>	KM	07/06/21				
1.5.2	1	<a href="#">Measuring Stream Flow</a>	KM	06/29/20			JS	08/11/20
--		<a href="#">Surface Water Flow Data</a>	KM	06/24/14				
1.6	3	<a href="#">Solution Inventory and</a>	JT	10/13/08	KM	07/06/21	JS	07/08/21
<b>TWP 2 Data Management and Reporting</b>								
2.1	1.2	<a href="#">Field Sheets</a>	KM	07/21/15	KM	02/16/17		
2.2	1	<a href="#">Field Activities Review</a>	KM	04/14/14				
2.3	1	<a href="#">WQX Template</a>	KM	03/21/14				
2.4	3	<a href="#">WQX Web</a>	LR	02/22/12	KM	10/29/15		
2.5	1	<a href="#">Annual WQAR for EPA</a>	KM	11/13/14				
2.6	1	<a href="#">Laboratory QA/QC</a>	KM	06/06/16			JS	06/07/16
2.7	1	<a href="#">Importing Data into</a>	KM	06/12/20			JS	09/21/20
2.8	1	<a href="#">Reviewing Data from the</a>	KM	12/28/18			JS	03/01/19
<b>TWP 3 Compliance Assistance</b>								
3.1	2.1	<a href="#">Army Corps of Engineers</a>			KM	01/23/20		
3.2	1	<a href="#">NPDES Construction</a>	KM	10/22/14				
<b>TWP 4 Nonpoint Source Management</b>								
4.1	1	<a href="#">Operating the Water Pump</a>	LR	07/08/10				
4.2	1	<a href="#">Hydroseeding</a>	KM	01/16/15				
4.3	1	<a href="#">Plotmaster Range Seeder</a>	JM	04/14/08				
4.4.1	2	<a href="#">Dew Drop Drill Operation</a>	LR	01/16/09	KM	06/10/15		
4.4.2	1	<a href="#">Dew Drop Drill Remote</a>	LR	07/06/09				
4.5	1	<a href="#">Soil Sampling</a>	LR	04/02/09				
4.6	1	<a href="#">Motion Sensor Camera and</a>	JM	07/14/08				
4.7	1	<a href="#">Silt Fencing</a>	LR	01/15/10				
4.8	2	<a href="#">Trough Monitoring</a>	LR	04/02/09	KM	07/20/17		
4.9	2	<a href="#">Bull Thistle Removal</a>	LR	10/08/09	KM	08/04/14	JC	09/02/14
4.10.1	1	<a href="#">Mistletoe Removal</a>	KM	06/10/15				
4.10.2	1	<a href="#">Mistletoe Monitoring</a>	KM	12/17/15				
4.11	1	<a href="#">Gold Spotted Oak Borer</a>	KM	10/13/14				



## 1. Purpose

- 1.1. This standard operating procedure is to be followed when conducting surface water monitoring with the smarTROLL MP. Quarterly sampling will be done following this procedure. Laboratory sampling has a separate SOP.

## 2. Supplies

- 2.1. Refer to the “Pre-Sampling Event Checklist” located with this SOP.

## 3. Interferences/Comments

- 3.1. The smarTROLL should be calibrated prior to the sampling event (preferably the day before so that sampling can start first thing in the morning).
- 3.2. Surface water sampling generally takes 2 people. Schedule a coworker to assist. One or two days are needed for most quarterly sampling events. Reserve a department vehicle for use during the sampling event.
- 3.3. Use the list of sites included in the QAPP.
- 3.4. Use this SOP in conjunction with the T-100 Turbidimeter SOP.
- 3.5. Refer to the Field Data Sheet SOP for instructions on filling out the form.
- 3.6. The smarTROLL is used in conjunction with the iSitu app and an iPod. A working knowledge of the iPod is assumed and the iPod manual is located in the TWP electronic files.
- 3.7. The passcode for the device is 5197. Additional account information is located in the TWP iPod folder in the TWP files (C:\Users\kmiller\Desktop\TWP\Task 1 Water Quality Monitoring\Equipment).

## 4. Procedure

- 4.1. Calibrate smarTROLL according to TWP SOP 1.1.3 or 1.1.4.
- 4.2. Review SOPs for additional equipment you will be using (GPS unit, camera, etc.).
- 4.3. Go over checklist and load equipment into the truck you will be using.
- 4.4. Travel to sampling location.
- 4.5. Once at the site, record the GPS location from the site coordinates in the QAPP (if deviating from standard site due to flow or safety considerations, record GPS of actual sampling location with a GPS unit or using the location feature for the site in the iSitu app) along with all required information on the field data sheet. If site is dry, make a note of it (on the dry site form) before continuing to the next location.
- 4.6. Make sure that the cable is connected to the troll and the battery pack (should still be in place from calibration). Press the power button on the battery pack.



review for field and lab sampling. The other options may be used for other types of data reviews.

Data Source	Data Profiles
<input checked="" type="checkbox"/> NWIS (USGS)	<input type="radio"/> Organization Data
<input checked="" type="checkbox"/> STEWARDS (ARS)	<input type="radio"/> Site Data Only
<input checked="" type="checkbox"/> WQX (EPA)	<input type="radio"/> Project Data
<input type="checkbox"/> Comma-Separated	<input type="radio"/> Project Monitoring Location Weighting Data
<input type="checkbox"/> Tab-Separated	<input checked="" type="radio"/> Sample Results (physical/chemical metadata)
<input checked="" type="radio"/> MS Excel 2007+	<input type="radio"/> Sample Results (biological metadata)
	<input type="radio"/> Sample Results (narrow)
	<input type="radio"/> Sampling Activity
	<input type="radio"/> Sampling Activity Metrics
	<input type="radio"/> Result Detection Quantitation Limit Data
	<input type="radio"/> Biological Habitat Metrics

- 4.5. Click the **DOWNLOAD** button at the bottom of the page. The portal will validate the information you entered and then provide information on the type of data that resulted from your query.
- 4.6. In the download status pop up window, select continue if you believe the query results were correct.

Result

https://www.waterqualitydata.us/data/Result/search?organization=NWIS&startDataOn=12-01-2021&endDataOn=02-07-2022&nameType=biowata&profile=DataProfileResultPhysChem&providers=NWIS&providers=STEWARDS&providers=STORET

curl -X POST -header "Content-Type: application/json" -d '{"organization": "NWIS", "startData": "2021-12-01", "endData": "2022-02-07", "nameType": "biowata", "profile": "DataProfileResultPhysChem", "providers": "NWIS,STEWARDS,STORET"}' https://www.waterqualitydata.us/request/GetWaterQualityData?request=GetWaterQualityData&startDataOn=12-01-2021&endDataOn=02-07-2022

WQP GetFeature

What is the WQP? | Contributions | Explore WQP sites

USGS | EPA

Agency Contact Center

Download Status

Your query will return 495 sample results from 12 sites:  
From BIOWATA: 0 sample results from 0 sites  
From NWIS: 0 sample results from 0 sites  
From STEWARDS: 0 sample results from 0 sites  
From STORET: 495 sample results from 12 sites

Click Continue to download the data

Cancel Continue

- 4.7. Once the file downloads, select the file to open it.
- 4.8. To make the file easier to reference, sort the results by start date and then start time to correspond to the order of the field sheets.
  - 4.8.1. If you are reviewing data for a laboratory sampling event with field data as well, sort the data by “ProjectIdentifier” first, the start date and time next, and finally the “ActivityTypeCode.” The ABS identifier is for lab sampling and the SWQM is for field measurements.
- 4.9. For each site, reference the start time, parameters, results, and units to verify they match with the field sheets or lab report.
  - 4.9.1. If you are reviewing lab data, the lab report has the site ID listed rather than the site name. You can confirm the ID with the site name on the field sheet.

# CROSS TRAINING

- Try to have at least two people in the department know each primary task and everyone to have brief familiarity of other programs
- This provides assistance with small staff for turnover or brief work interruptions
- New staff members can be caught up by someone who has seen/done task
- Essential coverage can be provided with maternity leave, COVID, travel, etc.



# OTHER ITEMS

- Training plan for new hires
- Basic program schedule
- Weekly department meeting

Updated March 2021												
Tribal Water Quality Schedule Check List												
Colored boxes with an x indicate the activity must be completed that month. Colored boxes with no x provide a range for the activity to be completed.												
Activities in gray are optional dependent upon need and are listed for scheduling reference.												
	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Social Media Post	x	x	x	x	x	x	x	x	x	x	x	x
Quarterly Reports (due on 15th)	x			x			x			x		
Quarterly Sampling	x			x			x			x		
Flows	x			x			x			x		
Upload to WQX Web		x			x			x			x	
Newsletter (due on 1st)			x			x			x			x
Outreach & Events			School	School/ Earth Day		Cultural Days						
Lab Samples												
Benthic Macroinvertebrate Samples												
Annual WQAR												x
Mistletoe Removal												
Mistletoe Monitoring												
Reseed												
Bull Thistle Upkeep												
GSOB Traps					Put Up	x	x	x	Take Down			

Miscellaneous	Status	Date	Verified	Comments
Program Related Trainings/Workshops/Seminars ect.				
Review Morongo Ordinance 12				
Review Website and Department Brochures				
Review TWP Binder				
Review Grant Work Plan				
Review FY2011-2015 EPA Strategic Plan				
Review CWA 106 Reporting Requirements				
Review QAPP for CWA 106 Water Quality Management Program revised 2010				
Review Monitoring Strategy				
Review Standard Operating Procedures and Sampling Sheets				
Review In-situ and Rugged Reader manuals				
Review Win-Situ program manual				
Review Babcock Lab Sampling Requirements and Procedures				
Visit Sampling Sites				
Request a WQX/CDX log in				
Review past data and Water Quality Annual Reports				
Watershed Academy Web - Introduction to the Clean Water Act				
Review appropriate sections of the CWA				
Review TWP Paper/Electronic Files and reference materials				
Review STORET/WQX Tutorials, Fact Sheets, Training Manuals, etc				
Watershed Academy Web Watershed Management Training				

# QUESTIONS?

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