

# Appendix E. Example File Form for Observations and Measurement Notes

November 2013



## U. S. GEOLOGICAL SURVEY SURFACE-WATER QUALITY NOTES

Station No. \_\_\_\_\_

NWIS Record No. \_\_\_\_\_

Station No. \_\_\_\_\_ Station Name \_\_\_\_\_ Field ID \_\_\_\_\_  
 Sample Date \_\_\_\_\_ Mean Sample Time \_\_\_\_\_ Time Datum \_\_\_\_\_ (eg. PST, PDT)  
 Sample Medium: SS (susp. sed) \_\_\_\_\_ SSQ (QC-SS) \_\_\_\_\_ WS (SW) \_\_\_\_\_ WSQ \_\_\_\_\_ Sample Type: 9 (regular) 7 (replicate) 1 (spike)  
 QC Samples Collected? Y N Blank Replicate Spike Other \_\_\_\_\_  
 Project No. \_\_\_\_\_ Project Name \_\_\_\_\_  
 Sampling Team \_\_\_\_\_

### FIELD MEASUREMENTS

Property	Parm Code	Method Code	Result	Units	Remark Code	Value Qual.	Null Value Qual.	NWIS Result-Level Comments
Gage Height	00065			ft				
Discharge, instantaneous	00061			cfs				
Turbidity (DTS-12)	63680	TS032		FNU				
Turbidity (hand-held)	63680	TS087		FNU				
Temperature, Air	00020	THM04 (thermister) THM05 (thermometer)		°C				
Temperature, Water	00010	THM01 (thermister) THM02 (thermometer)		°C				
Specific Conductance	00095	SC001 (contacting sensor)		µS/cm				
Dissolved Oxygen	00300	LUMIN		mg/L				
Barometric Pressure	00025	BAROM		mm Hg				
pH	00400	PROBE (electrode)		units				
Alkalinity, filtered, incr.	39086	TT061		mg/L				
Carbonate, filt, incr.	00452	SSM01		mg/L				Advanced Speciation Method
Bicarbonate, filt, incr.	00453	SSM01		mg/L				Advanced Speciation Method
Suspended Sediment	80154			mg/L				
Susp. Sed., < 62.5 µm	70331			%				
QC Sample Collected	99111							
Type of Replicate	99105							
Purpose, topical QC	99112							

### SAMPLING INFORMATION

Parameter	Pcode	Value	Information
Sampler Type—for suspended sediment chemistry	84164	3044 DH-81 3051 DH-95 Teflon 3053 D-95 Teflon 3055 D-96 Bag Sampler 3058 DH-2 Bag Sampler 3070 Grab 3045 DH-81 Teflon 3052 DH-95 Plastic 3054 D-95 Plastic 3057 D-99 Bag Sampler 3060 Weighted-Bottle Sampler 4115 Sampler, point, automatic	Sampler ID: _____ Sampler bottle/bag material: plastic <u>teflon</u> other _____ Nozzle material: plastic teflon other _____ Nozzle size: 3/16" 1/4" 5/16"
Sampler Type—for water chemistry and suspended sediment physical parameters	84164	3044 DH-81 3051 DH-95 Teflon 3053 D-95 Teflon 3055 D-96 Bag Sampler 3058 DH-2 Bag Sampler 3070 Grab 3045 DH-81 Teflon 3052 DH-95 Plastic 3054 D-95 Plastic 3057 D-99 Bag Sampler 3060 Weighted-Bottle Sampler 4115 Sampler, point, automatic	Sampler ID: _____ Sampler bottle/bag material: plastic <u>teflon</u> other _____ Nozzle material: plastic <u>teflon</u> other _____ Nozzle size: 3/16" 1/4" <u>5/16"</u>
Sampling Method—for physical parameters	82398	10 EWI; <u>20</u> EDI; 30 single vertical; 40 multiple vertical; 50 Point Sample; 70 Grab (dip sample)	Bottle size: pint quart 1 L bottle 1 L bag <u>3 L bag</u> 6 L bag
Transit Rate	50015	ft/sec	
Hydrologic Condition	N/A	X Not applicable; 4 Stable, low stage; 5 Falling stage; 6 Stable, high stage; 7 Peak stage; 8 Rising stage; 9 Stable, normal stage	
Observations [Codes: 0=none; 1=mild; 2=moderate; 3=serious; 4=extreme]		Oil-grease (01300) _____ Detergent suds (01305) _____ Atm. Odor (01330) _____ Fish kill (01340) _____	Floating garbage (01320) _____ Floating algae mats (01325) _____ Floating debris (01345) _____ Turbidity (01350) _____

COMPILED BY: \_\_\_\_\_ DATE \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ LOGGED INTO NWIS BY: \_\_\_\_\_ DATE \_\_\_\_\_

**SAMPLING CONDITIONS**

Stream width: \_\_\_\_\_ ft Notes: \_\_\_\_\_

Sediment Sampling points: \_\_\_\_\_

Sediment Sampling location: wading bridge upstream downstream side of bridge 0.8 mi below gage

Total number of sediment bottles: \_\_\_\_\_ A and B set?: \_\_\_\_\_ Sediment mean time: \_\_\_\_\_ (attach sediment field sheet)

Chemistry Sampling location (tubing intake): \_\_\_\_\_ (ft from REW) \_\_\_\_\_ (ft below water surface)

Sonde Location: \_\_\_\_\_ (ft from REW) \_\_\_\_\_ (ft below water surface)

Sonde No. \_\_\_\_\_ Calibrated by: \_\_\_\_\_ Calibration Location: \_\_\_\_\_ (attach calibration information)

Turbidity Meter: make/model: \_\_\_\_\_ S/N: \_\_\_\_\_ ID: \_\_\_\_\_

Probe: make/model: \_\_\_\_\_ S/N: \_\_\_\_\_ ID: \_\_\_\_\_

Calibration information: \_\_\_\_\_

Sampling site: pool riffle open channel braided backwater Bottom: bedrock rock cobble gravel sand silt concrete other \_\_\_\_\_

Stream color: brown green blue gray clear other \_\_\_\_\_ Stream mixing: well-mixed stratified poorly-mixed unknown other \_\_\_\_\_

Weather: **sky**- clear partly cloudy cloudy **precipitation**- none light medium heavy snow sleet rain mist \_\_\_\_\_

**wind**- calm light breeze gusty windy est. wind speed \_\_\_\_\_ mph **temperature**- very cold cool warm hot \_\_\_\_\_

No. days since last significant rainfall \_\_\_\_\_

Field Observations:

Sample Comments (for NWMS; 300 characters max.):

**LABORATORY INFORMATION** *Sample Set ID* \_\_\_\_\_

**SAMPLES COLLECTED:** *If Pesticides are collected, circle Organics bottle type and Laboratory Schedule number.*

Nutrients:   WCA   FCC   FCA   CC Major cations:   FA   RA Major anions:   FU Trace elements:   FA   RA   CU

Mercury:   FAM   RAM   Wis. Hg Lab Lab pH/SC/ANC:   RU

VOC: GCV (   vials) Organics:   GCC filtered   unfiltered   **X** BGC   C18    Kansas OGRG Lab

Suspended solids:   SUSO Turbidity:   TBY

Phenols:   PHE Oil&Grease:   OAG Methylene Blue Active Substances:   MBAS Color:   RCB

Carbon:   **X** TPCN   PIC filter1-vol filtered \_\_\_\_\_ mL filter2-vol filtered \_\_\_\_\_ mL filter3-vol filtered \_\_\_\_\_ mL   DOC   DIC

Stable isotopes:   FUS   RUS Radiochemicals:   FUR   RUR   SUR   FAR   RAR   CUR   RURCT   RURCV

  BOD   COD Chlorophyll:   CHL Algae:    Invertebrates:   IQE   IQL   IQM   IRE Fish tissue:   TBI

Ultraviolet Absorbing Substances:   UAS

Other: \_\_\_\_\_ (Lab \_\_\_\_\_) Other: \_\_\_\_\_ (Lab \_\_\_\_\_) Other: \_\_\_\_\_ (Lab \_\_\_\_\_)

Other: \_\_\_\_\_ (Lab \_\_\_\_\_) Other: \_\_\_\_\_ (Lab \_\_\_\_\_) Other: \_\_\_\_\_ (Lab \_\_\_\_\_)

Suspended sediment:   **X** **CONC.** **S/F** **FINES** [No. bottles   1   ] **NOTE: from pumped sample, see attached field notes for bridge sample info**

Microbiology: \_\_\_\_\_ (Lab \_\_\_\_\_)

Laboratory Schedules: \_\_\_\_\_ see analytical lab contract \_\_\_\_\_

Lab Codes: \_\_\_\_\_ add/delete \_\_\_\_\_ add/delete \_\_\_\_\_ add/delete \_\_\_\_\_ add/delete \_\_\_\_\_ add/delete

Comments: \_\_\_\_\_

Date shipped: \_\_\_\_\_ Lab(s): \_\_\_\_\_

Date sediment sample shipped: \_\_\_\_\_ Sediment Lab: **CVO**

**\*\*Notify the NWQL in advance of shipment of potentially hazardous samples—phone 1-866-ASK-NWQL or email LabLogin@usgs.gov**

**SAMPLE TIMES:**

Instantaneous Discharge Measurement: \_\_\_\_\_ Time: \_\_\_\_\_ Initials: \_\_\_\_\_

Water Sample Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_ Mean Time: \_\_\_\_\_

Suspended Sediment Physical Parameters Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_ Mean Time: \_\_\_\_\_

Suspended Sediment Chemistry Pump Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_ Mean Time: \_\_\_\_\_

From pump:

1-L amber glass bottle for TPCN: \_\_\_\_\_

1-L poly bottle for TSS: \_\_\_\_\_

3-L poly bottle for SSC/PSD: \_\_\_\_\_

**BED SEDIMENT SAMPLING**

Bed Sediment Sample Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_ Mean Time: \_\_\_\_\_

Bed Sediment Sample GPS Locations:

- |          |           |
|----------|-----------|
| 1. _____ | 2. _____  |
| 3. _____ | 4. _____  |
| 5. _____ | 6. _____  |
| 7. _____ | 8. _____  |
| 9. _____ | 10. _____ |

**GENERAL WATER QUALITY**

Time	Water Temp (°C)	pH	Specific Cond. (uS/cm)	DO (mg/L)	Turbidity (NTU)	Air Temp (°C)	Barometric Pressure (mm Hg)	Notes

**OTHER FIELD NOTES:**

**QUALITY-CONTROL INFORMATION**

**PRESERVATIVE LOT NUMBERS**

4.5N H <sub>2</sub> SO <sub>4</sub> (NUTRIENTS&DOC)	4.5N H <sub>2</sub> SO <sub>4</sub> (NUTRIENTS&DOC)	4.5N H <sub>2</sub> SO <sub>4</sub> (NUTRIENTS&DOC)	7.5N HNO <sub>3</sub> (METALS&CATIONS)	7.5N HNO <sub>3</sub> (METALS&CATIONS)
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1:1 HCl \_\_\_\_\_ Number of drops of HCL added to lower pH to ≤ 2 \_\_\_\_\_ (NOTE: Maximum number of drops = 5)  
(voc)

**BLANK WATER LOT NUMBERS**

Inorganic (99200) \_\_\_\_\_ 2nd Inorganic (99201) \_\_\_\_\_  
 Pesticide (99202) \_\_\_\_\_ 2nd Pesticide (99203) \_\_\_\_\_  
 VOC/Pesticide (99204) \_\_\_\_\_ 2nd VOC/Pesticide (99205) \_\_\_\_\_

**FILTER LOT NUMBERS**

capsule \_\_\_\_\_ pore size \_\_\_\_\_ brand \_\_\_\_\_  
 142mm GFF (organics) \_\_\_\_\_ pore size \_\_\_\_\_ brand \_\_\_\_\_  
 25mm GFF (organic carbon) \_\_\_\_\_ pore size \_\_\_\_\_ brand \_\_\_\_\_

**SPIKES**

<b>99106 Spike-sample type</b> 10 Field 20 Lab	<b>99107 Spike-solution source</b> 10 NWQL
<b>99108 Spike-solution volume, mL</b> _____	
<b>99104 Spike-vial lot number</b> _____	
<b>Expiration Date</b> _____	

**QC SAMPLES**

Starting date for set of samples (99109) (YMMDD) \_\_\_\_\_ Ending date for set of samples (99110) (YMMDD) \_\_\_\_\_  
 Starting time for set of samples (82073) (2400 hours) \_\_\_\_\_ Ending time for set of samples (82074) (2400 hours) \_\_\_\_\_

Sample Type	NWS Record No.	Sample Type	NWS Record No.	Sample Type	NWS Record No.
Equip Blank _____	_____	Sequential _____	_____	Trip Blank _____	_____
Field Blank _____	_____	Spike _____	_____	Other _____	_____
Split _____	_____	Concurrent _____	_____	Other _____	_____

NWQL Schedules/lab codes (QC Samples) \_\_\_\_\_

COMMENTS: \_\_\_\_\_

(Circle appropriate selections)

<p><b>Sample Medium Codes</b></p> <p>WS Surface water                  WSQ Quality-control sample                  OAQ Artificial</p>	<p><b>Sample Type Code</b></p> <p>9 Regular                  7 Replicate                  2 Blank                  1 Spike                  5 Duplicate</p>	<p><b>99111 QC sample associated with this environmental sample</b></p> <p>1 No associated QA data                  10 Blank                  30 Replicate Sample                  40 Spike sample                  100 More than one type of QA sample                  200 Other</p>	<p><b>99102 Blank-sample type</b></p> <table style="width: 100%;"> <tr><td>1 Source Solution</td><td>90 Ambient</td></tr> <tr><td>30 Trip</td><td>100 Field</td></tr> <tr><td>40 Sampler</td><td>200 Other</td></tr> <tr><td>50 Splitter</td><td></td></tr> <tr><td>60 Filter</td><td></td></tr> <tr><td>70 Preservation</td><td></td></tr> <tr><td>80 Equipment (done in non-field environment)</td><td></td></tr> </table>	1 Source Solution	90 Ambient	30 Trip	100 Field	40 Sampler	200 Other	50 Splitter		60 Filter		70 Preservation		80 Equipment (done in non-field environment)	
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<p><b>99105 Replicate-sample type</b></p> <table style="width: 100%;"> <tr><td>10 Concurrent</td><td>40 Split-Concurrent</td></tr> <tr><td>20 Sequential</td><td>50 Split-Sequential</td></tr> <tr><td>30 Split</td><td>200 Other</td></tr> </table>	10 Concurrent	40 Split-Concurrent	20 Sequential	50 Split-Sequential	30 Split	200 Other	<p><b>99100 Blank-solution type</b></p> <p>10 Inorganic grade (distilled/deionized)                  40 Pesticide grade (OK for organics and organic carbon)                  50 Volatile-organic grade (OK for VOCs, organics, and organic carbon)                  200 Other</p>	<p><b>99112 Purpose, Topical QC data</b></p> <p>1 Routine QC (non-topical)                  10 Topical for high bias (contamination)                  20 Topical for low bias (recovery)                  110 Topical for variability (field collection)</p>	<p><b>84164 Sampler Type</b></p> <p>3044 US DH-81                  3045 US DH-81 With Teflon Cap And Nozzle                  3051 US DH-95 Teflon Bottle                  3052 US DH-95 Plastic Bottle                  3053 US D-95 Teflon Bottle                  3054 US D-95 Plastic Bottle                  3055 US D-96 Bag Sampler                  3067 US D-99 Bag Sampler                  3070 Grab Sample                  3071 Open-Mouth Bottle                  3080 VOC Hand Sampler                  8000 None                  8010 Other</p>								
10 Concurrent	40 Split-Concurrent																
20 Sequential	50 Split-Sequential																
30 Split	200 Other																
<p><b>99101 Source of blank water</b></p> <p>10 NWQL                  55 Wisconsin Mercury Lab                  140 EMD Chemicals                  150 Ricca Chemical Company                  200 Other</p>	<p><b>82398 Sampling Method</b></p> <p>10 Equal Width Increment (EWI)                  20 Equal Discharge Increment (EDI)                  30 Single Vertical                  40 Multiple Verticals                  50 Point Sample                  70 Grab Sample (Dip)                  8010 Other                  8030 Grab Sample At Water-Supply Tap</p>																

A complete set of fixed-value codes can be found online at:  
<http://www.nwis.er.usgs.gov/currentdocs/index.html>