MassDEP

Massachusetts DWM Watershed Planning Program

Standard Operating Procedure

**WinLIMS Sample Pre-Logging**

CN 001.96

June 18, 2019

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| --- | --- | --- |
| Revision Date | Nature of Change | Page # |
| 7/17/20 | Revise COC document location description | 5 |
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**SCOPE and APPLICATION**: Document the WinLIMS pre-logging process for samples going to WES

**TRAINING:** Any staff pre-logging DWM/WPP sample information into the WES LIMS system shall be trained by WES Laboratory Data Manager and/or her designee, prior to any work. Prior to starting steps described below, the following is assumed:

* You have been granted WinLIMS login credentials in your own name
* You have received “Intro to WinLIMS Training” directly from WES Laboratory Data Manager
* You have received “WinLIMS Sample Pre-Logging Training” from designated DWM/WPP staff

**WinLIMS Links: (Must use Google Chrome)**

Test Environment: [https://maeea01.qsius.com/WinLIMS7.44.TEST/default.aspx](https://urldefense.proofpoint.com/v2/url?u=https-3A__maeea01.qsius.com_WinLIMS7.44.TEST_default.aspx&d=DwMFAg&c=lDF7oMaPKXpkYvev9V-fVahWL0QWnGCCAfCDz1Bns_w&r=5PvA7jqYGOxYqcDtd-mMhzTH56vkDJAqvY44Nt2lFEmstL3BtYZwoPD8mnfJlN14&m=KXXaHrkEMmb-1ci5lj59F-pP5hu3jDbXsWfRLgfWWl8&s=IFUJ6Bu3lbBCORVjQoK-i3K9zI13GOncBvVNTPQJTPE&e=)

Production Environment: <https://maeea01.qsius.com/MassDEPWinLIMS/>

**Contacts:**

WES

* Beth McDonough, WES Laboratory Data Manager (978-242-1333/5-1333)

DWM/WPP

* Tom Dallaire, Data Manager (508-767-2740/3-2740)
* Kari Winfield, Data Manager (508-767-2862/3-2862)
* James Meek, Survey Coordinator (508-767-2863/3-2863)
* Suzanne Flint, QAQC Officer (508-767-2789/3-2789)
* Richard Chase, Data and Assessment Section Chief (508-767-2859/3-2859)

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**Applicability:** This SOP applies to samples to be submitted to WES ONLY

**Definitions:**

* **COC:** Chain-of-Custody
* **Login #:** Login batch or batch of samples to be submitted to WES, producing a single COC [NOTE: For pre-logging sample information for all DWM/WPP water quality surveys “Crew Trip” will be used to define “Batches” in WinLIMS (Login # = Crew Trip).]
* **Sample:** An individual\* sample bottle collected under field conditions. (\*Exception: When more than 1 bottle is required by the lab for the analyte/test, then this is considered a “sample”)

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**Preparation, Launching WinLIMS**

**Getting Started:**

1. Check with DWM/WPP Monitoring Coordinator (Art Johnson) to confirm that WES has been notified of sampling schedule and requested analytes
2. Complete a **sample summary list** including sampling stations, sample ID’s (OWMID’s), collection date, analytes/tests and crew #. [NOTE: For pre-logging sample information for all DWM/WPP water quality surveys “Crew Trip” will be used to define “Batches” in WinLIMS (Login # = Crew Trip)]. (FishTox – A separate section will be added to the SOP for Fish Tissue Samples in the near future)
3. Launch Google Chrome, Clear Cache:
   * In Chrome:
     + (<Ctrl> H)
     + Select “Clear browsing data”
     + Select “Advanced” tab
     + Select Time range “All time”
     + First time through, check boxes for all items. After that, leave “Site Settings” unchecked unless it has content from more than 2 sites.
     + Select Clear data button
4. Launch WinLIMS using Google Chrome and login using Username/Password provided by Lab Data Manager
   * Test Environment: [https://maeea01.qsius.com/WinLIMS7.44.TEST/default.aspx](https://urldefense.proofpoint.com/v2/url?u=https-3A__maeea01.qsius.com_WinLIMS7.44.TEST_default.aspx&d=DwMFAg&c=lDF7oMaPKXpkYvev9V-fVahWL0QWnGCCAfCDz1Bns_w&r=5PvA7jqYGOxYqcDtd-mMhzTH56vkDJAqvY44Nt2lFEmstL3BtYZwoPD8mnfJlN14&m=KXXaHrkEMmb-1ci5lj59F-pP5hu3jDbXsWfRLgfWWl8&s=IFUJ6Bu3lbBCORVjQoK-i3K9zI13GOncBvVNTPQJTPE&e=)
   * Production Environment: <https://maeea01.qsius.com/MassDEPWinLIMS/>

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**Data Entry**

**Creating a new Login Batch:**

1. Select a new login from the **Sample Life Cycle->** menu: **Manage Logins->new**
2. Enter the following fields: (Note: Only fields needing user input are listed here)

* **[Client ID]** Select “BWR DIV WATERSHED MGMNT - WATERSHED PLANNING” from pick list. (Note: “BWR-DWM-WP” will actually populate field)
* **[Project Name]** Select from one of DWM/WPP’s pre-defined project names. If project is not in the list, contact Tom Dallaire or Kari Winfield at DWM/WPP to get it added to the list prior to logging samples. [Note that the OWMID is tied to the project so you must have the correct project and OWMID prefix before proceeding].
* **[Point of Contact]** For all pre-logs, select “Dallaire, Thomas” as point of contact
* **[“Sample Disposal”]** “Dispose of samples 30 days after analyses are approved” should be used in most cases
* **[Priority]** (Default=Standard)
* **[Comments]** Enter comments as needed (e.g. survey group #, high analyte levels expected at a specific location, etc). (Note: Comments are for entire Login Batch #)
* Click Save (Save Button) icon
* Enter the **[No. Of Samples]** to initially add samples to a login batch (more can be added later)
* Click **[Next]** button
* Step 2 of 2: Fill in fields as needed, **[Grab/Comp]** is the only required field at this point (Note: Recommend leaving all fields blank at this point and fill in later based on “Data Entry Scheme” using tips and tricks that will be defined during training)
* Click Save (Save Button) icon

**Data Entry Schemes**

WinLIMS provides several features (tips and tricks) for streamlining the entry of sample batches. The use of these features can be optimized to reduce the time needed and accuracy of a data entry session. The selection of a specific scheme will depend on the structure or symmetry of the survey design. Data entry schemes will be covered in detail during training including the risks associated with using them.

Data Entry Schemes Include:

* Enter 1 sample Client Sample ID (OWMID) at a time, all fields and tests
* Enter 1 sample Client Sample ID (OWMID) by bottle group, replicate this sample and edit as needed
* Enter multiple samples using generic Client Sample ID’s (OWMID’s), Client Sample Descriptions, Matrix and Date Collected – Replicate samples for each bottle group before completing data entry into all fields
* An entire Login # (COC Batch) can be replicated

**Adding/Editing Login Samples:**

1. Enter ONLY the following fields: (Note: Only fields needing user input are listed here)

* **[Client Sample ID]** = OWMID # # followed by bottle group code (e.g. 10-9999\_B, where B is the code for the bacteria bottle)—see separate section or handout
* **[Client Sample Description]** Project Station Name (i.e. “MR01”) – will be used on bottle labels to help identify samples in the field
* **[Matrix]** Use ONLY the following selections: (If choice not good fit, please contact DWM/WPP Data Manager)
  + Water samples: Select “**NPWW**” (Non-Potable Water or Waste Water)
  + Salt water samples: Select “**ME**” (Marine/Estuarine Water)
  + Fish tissue samples: Select “**BIO**” (Biological Specimen)
* **[Date Collected]** planned date for site visit (mm/dd/yyyy)
* **[Time Collected]** Leave blank, to be entered by lab upon sample delivery (Must be hand written on paper COC)
* **[Container Type Code]** Select appropriate bottle type from list – DO NOT Make “Best Choice” (Contact Beth or Tom if bottle to be used in not in list)
* **[Preservative Code]** Select all that apply (i.e. 1,2 – 1,10), includes sample storage and handling
* **[Preserve in Lab]** Select Yes or No (Default is No)
* **[Filter in Lab]** Select Yes or No (Default is No)
* **[Number Bottles Submitted]** Enter number of bottles to be submitted (Default is 1). Several methods REQUIRE more than one bottle for the same ‘sample.’ (For example: VOC, SVOC, PFAS, etc. For these cases enter actual # bottles submitted.)
* **[Grab / Comp]** Grab “G” or Composite “C” (default is “G”- change to “C” for composite fish samples, etc.)
* Click the SaveSamples (Update) icon

**Add Tests to a Login Sample:**

1. First, select all samples to add tests to (using check box)
2. In the Login Samples header section, click theAddSTTestGroup (add test) icon
3. Select the requested tests or test groups from the **[Tests for Matrix]** pick list (using check box). See DWM/WPP Bottle Group Definitions” on last page
4. Click the **[Submit]** button when all tests have been selected

(Note: Changing the matrix deletes the assigned tests. If you change the matrix, save then add the tests again)

**Copy Sample Configuration:**

1. First, select all samples to be replicated/duplicated (using check box)
2. In the Login Samples header section, click the DupeSample (Dupe Sample) icon
3. Select either “Copy Sample Configuration, OR “Create Duplicate Sample without Tests” then click “OK”. (Selection to be based on “Scheme”) (Note: DO NOT USE “Duplicate Sample with Current Tests” – it has known flaws)
4. Go back through the samples just duplicated and edit/add the information for the following fields as needed:
   * **[Client Sample ID]**
   * **[Client Sample Description]**
   * **[Matrix]**
   * **[Date Collected]**
   * **[Time Collected]** Leave blank, to be entered by lab upon sample delivery
   * **[Container Type Code]**
   * **[Preservative Code]**
   * **[Preserve in Lab]**
   * **[Filter in Lab]**
   * **[Number Bottles Submitted]**
   * **[Grab / Comp]**
   * Click the SaveSamples (Update) icon
5. NOTE: If too many samples were added, select all samples to delete (using check box) and then click DeleteSample(delete) icon
6. Add Tests to Login Samples (Repeat steps 8 thru 11 as needed)

**Delete Tests from a Login Sample: (Be Careful here! Emphasis during training – Individual vs group)**

1. First, in the Login Samples section, select all samples to delete tests from (using check box)
2. In the Login Samples header section, click the SampleTests (manage common tests) icon
3. Note: “Apply values to all samples in the Group” check box will remove tests from ALL samples from Login # – not just selected samples
4. Select Tests to be deleted (using check box)
5. Click the DeleteCommonSamples(DeleteCommonSamples) icon
6. [Note: If in doubt on what tests are assigned, review COC on screen – delete all tests and start over]

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**Data Entry Proofing**

**Print COC Form:**

1. Confirm that the correct Login # (i.e. batch number) is selected
2. Click the FlexibleReport01 (COC) icon, “Sample Tracking & Chain-of-Custody Record” will pop-up in a new window
3. Click the “Print” icon in top left hand corner of pop-up window, “Print to PDF” will pop-up in another new window
4. Click the “Export” button, find and open exported PDF file
5. Print Exported PDF – confirm that all fields have been entered correctly (compare to your sample summary list) And check for the following:
   * Confirm all items on page 1 of COC are correct
   * Confirm all samples are present
   * Confirm client sample ID’s are correct and include DWM/WPP bottle group designation
   * Confirm all other entered sample specific fields/data elements were entered correctly on “Sample” page(s)
   * Confirm that all samples are present on and are assigned to the correct tests on test page(s)

**Enter a New Batch:**

1. **Repeat steps 5 thru 28 for additional crews/trips as needed** using a different Login # for each Crew Trip.

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**Final Survey Preparation (COC and Labels)**

**COC, Print Form:**

1. Select the Login # that COC is to be printed for
2. Click the FlexibleReport01 (COC) icon, “Sample Tracking & Chain-of-Custody Record” will pop-up in a new window
3. Click the “Print” icon in top left hand corner of pop-up window, “Print to PDF” will pop-up in another new window
4. Click the “Export” button, find and open exported PDF file
5. Print Exported COC PDF – this copy to be used by field staff
6. Rename and secure a copy of the PDF file to project planning files. Naming convention: Login # and “PreLog” string in file name (i.e. “20190058PreLog.pdf”)

**Bottle Labels, Export Excel File:** (Both side and top labels)

**Option #1: (1 row for each sample)**

1. Select: Sample Life Cycle-> Manage Logins
2. Select the Login # that will be exported to an Excel File
3. Click on GridToExcel (Export to Excel) icon to export data to Excel for bottle label production, find and open exported Excel file (Note: Exported file has 1 row for each sample ONLY)
4. Rename and secure a copy of the Excel file in project planning files. Naming convention: Login # and “PreLog” string in file name (i.e. “20190058PreLog.xlsx”)

**Option #2: (1 row for each sample/test assigned)**

1. Select: Sample Life Cycle-> Client Browse Login Details
2. Click Toggle panel Open (Toggle Panel Open) icon
3. Enter Login # into Login # field and click SearchQBE (Execute QBE Search) icon
4. Select all (using check box)
5. Click on GridToExcel (Export to Excel) icon to export data to Excel for bottle label production, find and open exported Excel file (Note: Exported file has 1 row for each sample/test combination – this will need to be processed prior to printing labels)
6. Rename and secure a copy of the Excel file in the project planning files. Naming convention: Login # and “PreLog” string in file name (i.e. “20190058PreLog.xlsx”)

**Making Corrections:**

1. Changes/corrections to COC forms can be made prior to initiation of sampling run; however, these changes MUST be made to the finalized COC form, entered into the LIMS and reflected on the labels affixed to bottles. Once samples have been submitted to WES, NO CHANGES ARE TO BE MADE TO DATA IN THE LIMS!!! If changes are needed after delivery of samples to WES, please see Tom Dallaire to facilitate these changes! WES has final login authority for all samples logged into WinLIMS.

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## DWM/WPP Bottle group definitions, as of 6/12/19

* 2019 bottle group definitions

|  |  |  |
| --- | --- | --- |
| **Bottle Group Code** | **Analyte** | **Method** |
| A | Diatom (speciation, counts) | HPMA |
| AT | Anatoxin-a | EPA 545 |
| Anatoxin-a, Total | Abraxis ELISA |
| Cylindrospermopsin | EPA 545 |
| B | E. coli | SM 9223 B |
| Enterococci | SM 9223 B |
| HM | Bacteroidetes Group Marker (GB32 @55 C) | PCR (2000 AEM 66:1587-1594) |
| Bacteroidetes Human Marker (HF134 @68 C) | MassDEP nested PCR |
| Bacteroidetes Human Marker (HF183 @68 C) | MassDEP nested PCR |
| Enterococcal Human Marker (esp gene) | PCR (2005 ES&T 39:283-287) |
| Enterococci | EPA 1600 |
| Enterococci Human Marker by PCR Assay | PCR (2005 ES&T 39:283-287) |
| Evidence of Human-Sewage Source | weight-of-evidence decision matrix |
| FWA-1 | SPE-HPLC-FL |
| FWA-2 | SPE-HPLC-FL |
| FWA-4 | SPE-HPLC-FL |
| OB-1 | SPE-HPLC-FL |
| OB-2 | SPE-HPLC-FL |
| I | Chlorophyll a | EPA 445 |
| MC | Microcystins and Nodularins, Total | Abraxis ELISA |
| N | Ammonia-N | SM 4500-NH3 G |
| Chloride | SM 4500 Cl E |
| Nitrate/Nitrite-N | SM 4500-NO3 F |
| Total Nitrogen | SM 4500-N C |
| Total Phosphorus | SM 4500-P F |
| PC | Phycocyanin | TBD |
| R | True Color | SM 2120C |
| Turbidity | SM 2130 B |