# AWQMS 3.20 Enhancements and Bug Fixes (revised)

## Enhancements

| # | Category | Summary | Details |
|---|---|---|---|
| 2226 | Administration | Enhanced the "Copy these rights to" feature on the User Access Rights Page | Added an option to include Import Configuration Rights and allow rights to be merged or completely replaced. |
| | Data Analysis | Enhanced the Characteristics Summary displayed on the Data Analysis Page | The list now includes four new "count" columns:<br><br>• **# Quantified**: Results that have a numeric value<br>• **# Below Limit**: Results with a value like <0.5 or where the detection condition is "Not Detected", "Present Below Quantification Limit", …<br>• **# Above Limit**: Results with a value like >5000 or where the Detection Condition is "Present Above Quantification Limit"<br>• **# Non-numeric**: Results with a value that is text (e.g. "unknown") or where the characteristic is one with a pick list (e.g. "Cloud Cover (choice list)" |
| 2259 | Data Analysis | Enhance the Data Analysis Tool to support Time Basis and Statistical Base Code | The list of parameters on the Criteria Page will now include Time Basis and Statistical Base Code so that you can distinguish between raw result values and statistical values (e.g. 30-day geometric mean or 24 hour max) and select them individually.  Likewise graphs, reports, and exports will include Time Basis and Statistical Base Code.<br><br>For the Crosstab/Excel Export, results with a Time Basis or Statistical Base Code will get a parameter column for each unique combination.  For example: |

<table>
<tr><td rowspan="2">Date</td><td colspan="2">Dissolved oxygen (DO) (mg/l) Total</td><td colspan="2">Dissolved oxygen (DO) (mg/l) Total</td></tr>
<tr><td>Daily Maximum</td><td>Result Count</td><td>Daily Minimum</td><td>Result Count</td></tr>
<tr><td>11-06-2001</td><td>11.23</td><td>6</td><td>6.23</td><td>6</td></tr>
<tr><td>11-14-2001</td><td>10.20</td><td>6</td><td>5.97</td><td>6</td></tr>
<tr><td>11-23-2001</td><td>10.43</td><td>6</td><td>6.45</td><td>6</td></tr>
</table>

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| 2264 | Data Analysis | Standardize the way we implement exceedances in the data analysis tool | We merged these two exceedance reports: <br><br> • Number of Exceedances per Location Report <br> • Percent Exceedance Report <br><br> Into a new "Result Exceedance Report" with the combined features of the previous two reports. <br><br> We also changed the Results Exceedance Report and the Exceedance Exports so they behave the way the Exceedance Map behaves with respect to thresholds: <br><br> You now have the option of using thresholds entered on the Data Analysis page or you can leverage the thresholds saved in the database for each organization |
|  | Data Analysis | Standardize the search criteria (to the extent possible) used for data analysis | The following search criteria is now available on nearly all graphs, reports, maps, and exports: <br><br> • Media <br> • Only include this period (within each year) <br><br> These criteria are available on nearly all report, maps and exports: <br><br> • Organization(s) <br> • Monitoring Location Type(s) <br> • Eco-region Level 3 <br> • Eco-region Level 4 |
| 2165 | Data Analysis | Allow for Acute/Chronic variations of thresholds. | Threshold groups have been expanded to allow a user to manage both acute and chronic thresholds for their organization. The Data Analysis criteria page will allow the user to select either an acute or a chronic threshold group when running graphs, reports, or exports. |
| 2251 | Data Analysis | Labels on Graph Axes and Legends are larger and more readable. | Instead of showing Monitoring Location ID and Name on graphs, just show the ID and allow the Name to be visible when you hover over the ID. <br><br> Make Labels on Graph Axes, Legends, and Titles larger. |
| 1711 | Data Analysis | Created a new Graph called the "Single Characteristic Yearly Comparison Line Graph" | This graph allows you to pick a single location and a time period and then see one line plotted for each year (with one point per month) so that you can compare mean values between years. |

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| 2265 | Data Analysis | Enhance the Single Characteristic Mean Value Bar Graph to support various "Group By" periods | We have added the following "Group By" options on the search criteria page:<br><br>• Entire Period<br>• Year<br>• Month<br>• Day |
| 2205 | Data Analysis | Merged the two Mean Value Graphs and added support for metrics as well | Merged the existing "Multiple Characteristic Mean Value Line Graph" and "Multiple Characteristic Mean Value Line & Bar Graph" and added support for graphing metrics as well.<br><br>Called the new graph "Multiple Characteristic & Metric Mean Value Line & Bar Graph" |
| 2244 | Data Analysis | Create an "Exceedance Summary (Abbreviated)" Export | Created an "Exceedance Summary (Abbreviated)" Export on the Data Analysis Index page. This will have all the same criteria and functionality of the Exceedance Summary, but with fewer columns, and a slightly different column order. |
|  | Data Analysis | Added a new column to the Crosstab/Excel Export for the # of source results used to calculate the mean value (result) | The Crosstab/Excel Export now includes two columns for each parameter that is output to the file. The first one (that has always existed) includes the result value. The second one includes a count of the number of results that were used to calculate the result value in the first column. In other words, if there is only one result for that particular Date or Activity row, then the result value is likely a raw result value. If the second column shows a value greater than one, then the result is a mean/average value.<br><br>There are also one or two asterisks that can be placed on the result count to further qualify the result value.<br><br>\* Value for this parameter had to be averaged (because there were more than one)<br><br>\*\* Value for this parameter includes one or more results with a detection condition (e.g. Not Detected or Present Above Quantification Limit)<br><br>See table below. |

| Date | Dissolved oxygen (DO) (mg/l) | | Total Coliform (MPN) | |
|------|-------|--------------|-------|--------------|
|  | Value | Result Count | Value | Result Count |
| 11-06-2001 | 5.78 | 1 | 782 | 1 |
| 11-14-2001 | 5.80 | 2* | 123 | 2* |
| 11-23-2001 | 6.90 | 1 | 2419.6 | 1** |

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| 2269 | Maps | Save a user's preferred location (and zoom level) for the map | The map now has a "Save Map Position" button that will save your current location and zoom level on the map. Whenever you return to the map (even outside the current session), it will return to this location. |
| | Import/R.D.E. Configuration | Added the ability to flag an import configuration as a template that is shared with all users | Users with the Admin Role can flag an import configuration as a shared template that is available to all users. Additionally there are some built-in templates in AWQMS 3.2 that are available to all users:<br><br>Import Configurations:<br><br>• Standard Export Format (Template)<br>• Monitoring Locations List Page Export Format (Template)<br><br>Rapid Data Entry Configurations:<br><br>• Quanti-Tray 2000 MPN Calculator (Template)<br><br>Additional built-in templates are expected down the road |
| | Import/R.D.E. Configuration | Increased the size of the Name and Description fields on an Import Configuration | Name increased from 35 to 60<br><br>Description increased from 100 to 500 |
| 2168 | Lookup Tables | Automated the synchronization of Analytical Methods, Characteristics, and Taxa with WQX. | There is a new routine that will automatically query the list of allowed values in the Analytical Method, Characteristic, and Taxon tables at WQX and add or update the tables in AWQMS so that AWQMS is kept up to date on these frequently changing tables. |

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| 2245 & 2133 | Rapid Data Entry Page | Created an enhanced data entry page with the ability to calculate an MPN value (and optional 30-day geometric mean value) for bacteria (based on large/small tray counts) | Created a custom rapid data entry page than can calculate an MPN value (most probable number) for bacteria using an IDEXX Quanti-Tray 2000<br><br>Inputs:<br><br>• Large Tray Positive Count<br>• Small Tray Positive Count<br><br>Outputs:<br><br>• MPN (most probable number)<br>• Upper Confidence Limit<br>• Lower Confidence Limit<br>• Detection Condition<br>• Detection Limit Type<br>• Detection Limit Value<br><br>The page also supports diluted samples (in cases where all trays are positive). User will be able to provide a dilution factor (e.g. 1:10) and the MPN value will be multiplied by that same factor.<br><br>The page can also support the calculation of a 30-day geometric mean value (for the past 30 days – including the values just created) |
| 2167 | WQX Export | Enhanced the "Export to WQX" feature so it can calculate a daily min, max, and mean value for continuous data | Although it is not optimized for continuous data, AWQMS can store it. However, EPA has asked that raw continuous data not be submitted to WQX. They would like summary statistics only.<br><br>This enhancement will calculate a daily min, max, and mean value for continuous data and send it to WQX (rather than the raw data).  You must use the new activity type name "Field Msr/Obs-Continuous Data" to take advantage of this feature |
|  | WQX Export | Moved the feature to "Resubmit An Existing WQX Submission File" from the Import page to the "Export to WQX" page | We moved the feature, where you can upload an existing WQX Submission file and then resubmit it to CDX.  It is now part of the "Export to WQX" page, rather than the "Import" page (where it was sometimes confused with a way to import data into AWQMS). |
| 2262 | General | Enhance Password Rules | 1. Added support for 3 password security levels (low, medium, and high)<br><br>• Low:  password must be 4 or more characters |

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| | | | • Medium: password must be 6 or more characters (including 1 letter and 1 number or special character)' <br> • High: password must be 8 or more characters (including 1 capital letter, 1 small letter, 1 number, and 1 special character) <br>     o password expires every 90 days' <br><br> 2. Automatically lock accounts after a number of failed login attempts. <br><br> • Low: 8 attempts <br> • Medium: 5 attempts <br> • High: 3 attempts <br><br> 3. Provide a new "Change Password" option for a user to change his/her own password. <br><br> 4. Add a "Reset Password" option for an administrator/support user to be able to reset the password for another user and then require that user to change their password the next time they log into AWQMS |
| | General | Added a new element called "Source Results Count" to the Result record in AWQMS | The "Source Results Count" element is part of a Result record (or entity) in AWQMS. It can be used in import files, data entry pages, or on the Result Detail Page. Its purpose is to qualify an aggregate result (such as a 30-day mean or daily maximum result) to indicate the number of (source) results that were used to calculate the aggregate (or statistical) result. <br><br> For example, if you calculated a 30-day geometric mean value for Total Coliform, and there were five (source) results from which that calculations was made, then the result that was entered or imported for the 30-day geometric mean value could include a value of "5" for the "Source Result Count" to further qualify the calculated value. <br><br> The "Source Result Count" element will also be reflected in the Crosstab/Excel Export (in the new column for the result count). |

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| 2134 2276 | General | Enhanced support for the various detection/quantitation limit types in AWQMS and for result values with greater-than or less-than symbols in the value | 1. The data analysis tool is now able to graph the following types of detection/quantification limits (when a result value does not exist):<br><br>• Method Detection Level<br>• Lower Quantitation Limit<br>• Lower Reporting Limit<br>• Upper Quantitation Limit (new)<br>• Upper Reporting Limit (new)<br>• Estimated Detection Level (new)<br>• Instrument Detection Level (new)<br>• Interim Report Level (new)<br>• Practical Quantitation Limit (new)<br>• Long Term Method Detection Level (new)<br>• Sample-specific min detect conc (new)<br><br>There are also separate options for including values above or below [detection/quantification limits] and separate factors to apply to the limits when including them as values on a graph.<br><br>2. The data analysis tool is now able to graph values with greater-than or less-than symbols in the value (like "<1" or ">2419.6") in the same way that it would graph a result with a detection condition (like "Present Above Quantification Limit") and a detection limit (like "Upper Quantitation Limit").<br><br>3. When a result has a detection condition and detection limit, it will now show up like "<1" or ">2419.6" (on the following pages) rather than just showing a blank result value:<br><br>• Results List Page<br>• Activity Detail Page<br>• Results Report (on the map)<br><br>4. Two new validation rules were created on a Result:<br><br>• Detection/Quantitation Limit must have a value.<br>• Detection/Quantitation Limit Type is validated based on the Detection Condition. Previously AWQMS only validated that you had a detection/quantitation limit, but didn't make sure it made sense. |

## Bugs that have been fixed

| # | Category | Summary | Bug Details |
|---|----------|---------|-------------|
| 2166 | Data Analysis | Improve the implementation of hyperlinks on the Exceedance Report | Corrected the Return button on the Result Detail Page so that it returns to the report (when appropriate), rather than the Activity Detail Page |
| 2113 | General | Index Type Page (Edit Mode) very slow to pull up a large list | If an organization has a long list of index types (hundreds), the lookup page (for editing them), can be quite slow to open.  Force a page size of 100 (independent of user preference) so that the page will be more responsive |
| 2263 | WQX Export | Processing Report was not being downloaded from CDX after the submission completed. | CDX made a change to one of their data services that AWQMS uses to get a list of documents for a particular transaction at CDX. Sometime in early May 2014, this caused AWQMS to fail to download the processing report from CDX once a submission file had completed or failed. |
| 2264 | WQX Export | Export to WQX, using manually-defined subset, did not include all projects, locations, or indexes | There was a flaw in the Export to WQX process, when you chose "Manually-defined subset" on the "Include" drop-down list and then chose either "Projects", "Monitoring Locations" or "Indexes" from the "Type of Data" drop-down list.<br><br>It was previously only sending records that had changed since the last submission. It should send all records. |
| 2213 | Import | Error "More columns than expected..." when a file has extra columns (even when there's no data in the extra columns) | If a file has more columns than are listed in the import configuration you would receive the following error:<br><br>"More columns than expected. Import Configuration does not match the import file."<br><br>However this occurs even when the extra columns are empty. Sometimes these extra columns in the CSV or tab-delimited file are created by Excel when there was once data in those columns (even if there isn't data any more).<br><br>AWQMS will no longer log this error unless there's data in the extra columns |

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| 2312 | Data Analysis | Cumulative Frequency Graph errors | Cumulative Frequency Graph gets an error when all the result values are the same. |
| | | | Also, any value that matches the maximum value (in the set of values) is not being counted in the last frequency class. |
| | | | These two issues have been resolved. |
| 2292 | Import Configuration | Lost Translations on Import Configuration when choosing Save As after choosing Save To File | Clicked the Save To File button (which worked fine). |
| | | | Clicked the Save As button and provided a new name for the copied import configuration. The new/copy had all of the translations, but the original import configuration no longer had any translations on the import configuration. |
| 2289 | General | Issues with Attachments for read-only and public users | Fixed the following issues: |
| | | | A user with the "Public User" Role was still able to see attachments that were marked "Private" on the Project, Monitoring Location, Activity and Result Page. |
| | | | A user with Read-Only access to an organization was still able to add/remove attachments on the Project, Monitoring Location, Activity and Result Page. |