Implementation of the ADWR relies on the individual air carriers to report information to EPA. As with any other regulatory program, the ADWR requires that certain records be maintained and be made available to EPA upon request.
Reporting Requirements

- Air carrier's inventory
- Coliform Monitoring and Sampling Plan
- O&M plan and activities
- Corrective actions
- Public notification
- Self-inspections and deficiencies
- Compliance audits
EPA is using an internet based electronic data collection and management system (ADWR Reporting and Compliance System (ARCS)). The data system will perform logic checks on data entered and will calculate final results for accountability and regulatory oversight. This system is intended to reduce reporting errors and limit the time involved in investigating, checking, and correcting errors at all levels.

ARCS consists of a spreadsheet for batch loading data and a web user interface. The spreadsheet allows for automatic data uploads so that the data is available in real time in the database and can be viewed and changed via the web user interface (UI). Air carriers’ authorized primary contact(s) will be issued a username and password to access ARCS. The Primary will then approve user ID and password requests for additional users and determine access rights.

The ADWR Reporting and Compliance System has a companion DRAFT User Guide which provides information pertinent to users of the system. The DRAFT user guide currently includes: the descriptions of the data elements, a description of the spreadsheet (format and process for downloading and uploading), how to access the system via the web user interface, and other key information. The user guide is considered a DRAFT until phase II of ARCS (which is the reporting and compliance determination phase) is developed and relevant information is added to it.
Reporting Inventory

All existing aircraft inventory must be reported no later than April 19, 2011. After initial reporting, any new aircraft being added to a carrier’s inventory or other changes to an existing inventory must be reported to EPA no later than 10 days following the calendar month in which the change or addition occurred.
Aircraft Inventory Reporting Requirements, cont.

- Information to report to EPA, at a minimum,
  - Unique aircraft identifier
  - Active or inactive status
  - Type and location of supplemental treatment
  - Whether the aircraft water system can be shut off or the flow of water prevented through the taps

- NOTE
  - See ARCS user guide for additional reporting data elements

The unique aircraft identifiers
This will be the combination of the aircraft’s make (or/manufacturer), the aircraft’s model number (such as 747, 787, etc.), and the aircraft serial number. When this information is submitted to ARCS, ARCS will generate an aircraft PWS number for each aircraft. This will be the official number that EPA will use to identify and track compliance of each aircraft.

Reporting the status of the aircraft as active or inactive
This was discussed in the O&M plan presentation, and refers to whether the aircraft is providing water for human consumption to it’s passengers. Refer to Section 3.2 of the guidance manual for more information on determining active and inactive status.

Reporting the type and location of any supplemental treatment equipment installed on the aircraft water system
Supplemental treatment equipment includes treatment applied to the finished water to maintain water quality or to change aesthetic water quality conditions. Examples include disinfection systems, carbon filters or particulate removal filters on water lines, or any other apparatus that changes the chemical, biological, or physical condition of the water. Although it is possible for increased temperature to cause changes to the chemical, biological, and physical condition of water, for the purposes of aircraft inventory, hot water heating units on coffee makers and/or hot water lines are not considered to be water treatment equipment.

Reporting whether the aircraft water system can be physically disconnected or shut off, or the flow of water prevented through the taps
This information is important because the ability to shut off the supply of water to all faucets and other plumbing fixtures that provide water to passengers or crew affects the requirements for public notification and the timeframe for implementation of corrective disinfection and flushing.
Each aircraft must have an associated coliform monitoring and sampling plan, as well as a set frequency for the sampling.

For existing aircraft, both sampling frequencies and coliform sampling plan completion must be reported to EPA by April 19, 2011. For any new aircraft placed into operation after the initial inventory is submitted, sampling frequencies and plan completion must be reported within the first calendar quarter of initial operation of the aircraft.

Copies of coliform sampling plans must be retained by the air carrier, but they are not required to be submitted to EPA. However, EPA can request a copy of the plan at any time, and may also view the plan during compliance audits.

Changes in coliform sampling frequencies must be reported to EPA no later than 10 days following the calendar month in which the change occurred. These changes must also be incorporated in the coliform sampling plan, although as stated earlier, the plan itself does not need to be submitted. Any changes to coliform sampling frequencies and coliform sampling plans would also require changes to disinfection and flushing frequencies and to the aircraft water system O&M plans.
For reporting sampling results, all coliform sampling results (whether they are routine, repeat, or follow-up) must be reported no later than 10 calendar days after the end of the monitoring period in which the samples were collected. The monitoring period is based on the monitoring frequency identified in the coliform sampling plan, and could vary for different aircraft in an air carrier fleet. Thus, the monitoring period could be monthly, every three months, every six months, or once a year.

If sample results are TC+ or EC+, the event must be reported to EPA within 10 days of being informed of sample results by the laboratory. If public notification occurred, the air carrier must also report whether the notification was provided to crew only, or to passengers and crew.

This is also true for any other event triggering repeat sampling, or when follow-up samples are collected after disinfection and flushing.
Air carriers must also notify EPA when they cease to provide public notification or resume providing unrestricted access to the aircraft water system and return to routine monitoring.
These are some of the options available for scheduling routine coliform sampling and routine disinfection and flushing, and the respective reporting deadlines.

<table>
<thead>
<tr>
<th></th>
<th>Quarterly D&amp;F</th>
<th>Every 4 months D&amp;F</th>
<th>Semi-annual D&amp;F</th>
<th>Annual or less D&amp;F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting Deadline</td>
<td>P1 by April 10; P2 by July 10; P3 by Oct. 10; P4 by Jan. 10</td>
<td>P1 by May 10; P2 by Sept. 10; P3 by Jan. 10</td>
<td>P1 by July 10; P2 by Jan. 10</td>
<td>P1 by Jan. 10 YR2; or, Jan. 10 YR3 (D&amp;F “less” than annual)</td>
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</table>

- **Annual sampling**: P1 by Jan. 10 YR2; P2 by July 10; P3 by Jan. 10
- **Semi-annual sampling**: P1 by April 10; P2 by July 10; P3 by Oct. 10; P4 by Jan. 10
- **Quarterly sampling**: P1 by Feb. 10; P2 by May 10; P3 by Apr. 10; P4 by May 10; P5 by June 10; P6 by July 10 (etc.)

**ADWR D&F Reporting Requirement:**
Routine D&F events must be reported no later than 30 calendar days following the D&F period in which the D&F occurred.

**ADWR sampling Reporting Requirement:**
For TC results: “All sampling results no later than 10 calendar days following the monitoring period in which the sampling occurred”

For TCW results: “...non-routine sampling, within 10 days of the event (e.g., notification of the positive sample result by laboratory)”

EPA intends for air carriers to schedule routine D&F and routine monitoring at regular intervals throughout the calendar year. Routine D&F should be scheduled so that the amount of time between each D&F event is approximately equal.” (Source: Preamble p. 53597 and RHC)
Additionally, any failure to comply with the monitoring requirements of this regulation must also be reported to EPA within 10 calendar days of discovery of the failure.

Failure to comply with monitoring requirements includes, but is not limited to:
• Failure to collect routine samples according to the schedule in the coliform sampling plan,
• Failure to collect repeat samples or follow-up samples within the time required, and
• Failure to use a state-certified or EPA-certified laboratory, or EPA-approved analytical methods.
For existing aircraft, both routine disinfection and flushing frequency and O&M plan completion must be reported to EPA by April 19, 2011. For new aircraft placed into operation after the initial inventory is submitted, frequency of routine disinfection and flushing and O&M plan completion must be reported within the first calendar quarter of initial operation of the aircraft.
Any changes in routine disinfection and flushing frequencies must be reported to EPA no later than 10 days following the calendar month in which the change occurred. These changes must also be incorporated in the O&M plans, although the plan itself need not be submitted. Changes to the routine disinfection and flushing frequencies require changes to the routine coliform sampling frequencies and coliform sampling plans.

Air carriers must report the completion of a routine disinfection and flushing event within 10 calendar days following the period in which it occurred. The disinfection and flushing (D&F) period is based on the frequency identified in the O&M plan and may vary for different aircraft in an air carrier fleet. Thus, the D&F period could be every three months, every four months, every six months, or once per year or less.
Any corrective action is implemented

- Within 10 calendar days of restriction
  - Report reason (e.g., positive results, failure, etc.)
  - Report what type of corrective action was taken (e.g., repeat samples, RPA, etc.)
  - Report whether notification was provided to passengers or crew or both

Shutting off an aircraft water system

- Within 10 calendar days of notification
  - Report that the water system has been shut off

Any time corrective action is implemented (e.g., restriction of public access or disinfection and flushing), air carriers must notify EPA within 10 calendar days of the event and report the reason for the corrective action, the type of corrective action implemented, and whether notification was provided to the passengers, crew, or both.

Additionally, if the aircraft water system has been shut-off, the air carrier must report it to EPA within 10 calendar days.
Failure to comply with the disinfection and flushing requirements of this regulation must also be reported to EPA, again, within 10 calendar days of discovery of the failure. Failure to comply with disinfection and flushing requirements includes failure to perform routine disinfection and flushing according to the schedule in the O&M plan, and failure to conduct corrective disinfection and flushing.

If this failure occurred, the carrier must also report whether notification was provided to passengers or crew, and report corrective action taken.
All events requiring notification to passengers and crew must also be reported to EPA within 10 days of the event triggering the notification. This reporting must include an indication of whether the required notification was provided to passengers or crew or both [40 CFR 141.806(b)(4)]. This does not require that a copy of a notification be provided to EPA; however, a copy must be made available to EPA as part of a compliance audit.
Air carriers must provide evidence of a self-inspection to EPA within 90 days of completion of the self-inspection (self-inspections of aircraft water systems are required every 5 years).

When the rule specifies reporting “evidence” of a self inspection, it means that completion of the inspection must be reported in ARCS.

ARCS will ask whether there were deficiencies identified during the audit. If the answer is yes, click “yes,” and ARCS will ask whether the deficiencies have been addressed.
Additionally, if any deficiencies have not been addressed within 90 days of identification of the deficiency, the air carrier must report a description of each unaddressed deficiency, an explanation as to why it has not been addressed, and a schedule for addressing each deficiency as quickly as possible [40 CFR 141.806(c)].
If more than 90 days have elapsed since a deficiency was identified and it has not been addressed, the air carrier will incur a violation of the ADWR if the aircraft is used in passenger service, even if public access to the water is restricted [40 CFR 141.808(c) and 141.810(e)]. If the aircraft is not returned to service, such as during extended or heavy maintenance activity, more than 90 days are allowed for addressing the deficiency without incurring a violation.
EPA may conduct compliance audits as necessary as part of the regulatory oversight process to ensure that air carriers are properly implementing the requirements of the ADWR.

Compliance audits may include, but are not limited to:

1. Bacteriological sampling of aircraft water systems
2. Reviews and audits of records as they pertain to water system operations and maintenance such as log entries, D&F procedures, and sampling results
3. Additionally, EPA may observe procedures involving the handling of finished water, watering point selection, boarding of water, operation, D&F, and general maintenance and self-inspections of aircraft water systems.
In the same manner as the self inspection deficiency reporting, if a deficiency is identified during a compliance audit, the carrier must report to EPA within 90 days of completion of the audit that the deficiency has been addressed.

If any deficiencies have not been addressed within 90 days of identification of the deficiency, the air carrier must report a description of each unaddressed deficiency, an explanation as to why it has not been addressed, and a schedule for addressing each deficiency as quickly as possible [40 CFR 141.806(c)].
If more than 90 days have elapsed since a deficiency was identified and it has not been addressed, the air carrier will incur a violation of the ADWR if the aircraft is used in passenger service, even if public access to the water is restricted [40 CFR 141.808(c) and 141.810(e)]. If the aircraft is not returned to service, such as during extended or heavy maintenance activity, more than 90 days are allowed for addressing the deficiency without incurring a violation.
Recordkeeping

Air carrier records can be stored electronically or by hard-copy.

To meet the recordkeeping requirements, air carriers must keep self-inspection records for 10 years, sample analyses and D&F data for 5 years, and must keep any public notifications for 3 years.
Supplemental Treatment
The rule does not require supplemental treatment. The ADWR prescribes the minimum requirements necessary to provide safe drinking water to passengers and crew onboard aircraft, including the requirement to board finished water. However, supplemental treatment, depending on the type of treatment and type of contaminant encountered, may provide an additional barrier of protection.

Any supplemental treatment units installed onboard existing or new aircraft must be acceptable to FAA and FDA. It must be installed, operated, and maintained in accordance with the manufacturer’s plans and specifications and any FAA requirements.

It is important to understand that having supplemental treatment does not reduce or replace any of the requirements of the ADWR.
Thank you!