



Public Water System Water Audit Resources

The purpose of this guide is to provide information on preparing an annual water audit for a public water system using the American Water Works Association (AWWA) Free Water Audit Software, which is the recommended resource for completing water audits.

Download the Water Audit Software:

- Download the Free Water Audit Software (version 6) from the [AWWA website](#)
- Although it's called "software," it's actually a Microsoft Excel file that can be edited once it's downloaded.
- To download the software, fill out the user information boxes about halfway down the webpage and click the "Submit" button (see screen shot below).

Free Water Audit Software

The new Free Water Audit Software (v6.0) is now available!

Check out the following items to learn more about it:

- [AWWA Water Software v6.0 Release Memo](#)
- [Watch the AWWA Water Audit Software v6.0 Orientation Video](#)

Other supporting resources for v6.0 include:

- [Example Water Audit v6.0](#)
- [Data Grading Matrix v6.0](#)

Fill out the short form to download the **AWWA Free Water Audit Software v6.0** (2020).

Version 5.0 (2014) is also available in English and French by completing this form (version Francaise - MAMH du Quebec). AWWA recommends using v6.0 unless your regulatory agency requires you to use v5.0. Version 6.0 will be available in French in mid to late-2021.

Your information will not be shared with third parties or used for marketing purposes.

[Contact AWWA](#) with any questions.

Fullname
First Name
Last Name
Email
Company
Country
State/Province
Captcha
 I'm not a robot

- You will be taken to a new webpage. Click the "DOWNLOAD v6.0 SOFTWARE IN ENGLISH" button (see screen shot below).

Thank You

Thank you for your interest in the Free Water Audit Software.

Please click the link below to download the new water audit software (v6.0). We hope this software provides you with perspective on issues facing the water industry today.

[DOWNLOAD v6.0 SOFTWARE IN ENGLISH](#)

Gather Data for the Water Audit:

- Collect relevant data/paperwork for the time period of the water audit, which is typically a calendar year. The most common types of information needed for the water audit include the following:
 - Records of the volume of water supplied to the distribution system
 - Meter testing and/or calibration records for the distribution/master/supply meter(s)
 - Customer water usage records (volumes from actual meter readings and billed volumes)
 - Keep in mind that the volumes from the meter readings are sometimes adjusted by billing staff to prepare bills, so it's a good practice to track those adjustments.

NHDES Web Site: www.des.nh.gov

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- Operational tracking records for authorized unbilled unmetered water volumes
 - Examples: flushing, street cleaning, and Fire Department activities
 - Leakage is not included in this category, because it isn't "authorized"
- Customer meter testing and/or calibration records
- Total length of mains (miles)
- Total number of active and inactive service connections
- Average length of a customer service line (feet)
- Average system operating pressure (psi)
- Customer retail rate (use the weighted average if there are multiple tiers and/or categories)
- Variable production cost (cost of producing and supplying water [ex. pumping, chemicals])
- Tip: In order to have a useful end-product, it is helpful to include colleagues throughout the water audit process and especially during the data gathering phase. Important colleagues are those performing the various utility functions associated with water loss control and auditing, such as the superintendent, operators, meter readers, and billing staff.

Complete the Water Audit using the Free Water Audit Software:

- The software is just a Microsoft Excel file with tabs. Please refer to this [Quick Start Water Audit Guide](#) for a brief overview of the software. Some quick highlights are also below:

“Start Page” tab:

- It has a brief overview of the software.
- It is where you enter basic system information, contact information, and audit parameters.

“Worksheet” tab:

- It is where you enter the collected data.
- Make sure that you enter a value for every cell that is shaded blue. The cells that are shaded orange are automatically populated.
- Use the best available numbers. To explain the numbers, add notes in the “Notes” tab of the spreadsheet. The software will also show areas to improve the data validity for future water audits.

“Interactive Data Grading” tab:

- It is where you answer a handful of questions for each data input related to operational practices. This grading allows you to better understand the validity of the data.
- The data grading is interactive, so you just select the most appropriate answer from a drop-down list for each question.
- A data grade (1-10) will be automatically generated based on the answers. A breakdown of the grades is explained in [this matrix](#).
 - If the data grade is less than 10, you'll see “Limiting” in the column on the far-right next to the question(s) that you should focus on to improve the data grade.
- The boxes with acronyms at the top of the tab will be color-coded to indicate which inputs need data grading.

“Dashboard” tab:

- The results of the water audit are displayed in different formats and for a variety of key performance indicators (KPIs).
 - The gauges on the right side of the spreadsheet show how the results compare to a sample of other validated results for water audits at systems in North America. Each gauge is meant to help you put your results in perspective and is not necessarily meant to be a goal.
- There is a chart at the bottom of the spreadsheet that explains the suitable purposes and uses of each KPI.

“Notes” tab:

- It is where you can add information for any data input about where and how you got the data, any ways that you manipulated the data, and any notes about the data grading.
- By adding notes, you’ll have a reference for how to approach future water audits.
- In addition to or instead of using the “Notes” tab, you can add notes about the water audit process to a standard operation procedure (SOP).
 - The Environmental Finance Center (EFC) has developed a [water audit SOP template](#).

“Blank Sheet” tab:

- It is where you can add any information or data for your own analysis, just like any other Microsoft Excel spreadsheet. For instance, you may need to quickly do a calculation before adding a final number to the “Worksheet” tab.

“Water Balance” tab:

- It is a visualization of the water audit data inputs and components.
- Note: The term “water balance” in this software is not the same as the term “water balance” in the Water Conservation Rules (Env-Wq 2101). For more information, please see [this overview](#).

“Definitions” tab:

- The terms used in the software are defined in this tab.

Resources:

- General
 - [AWWA Website](#) (includes background information and a completed water audit example)
- Manuals/Guides:
 - [AWWA M36 Manual: Water Audits and Loss Control Programs](#)
 - [Quick Start Water Audit Guide](#) (free; developed by the State of Indiana)
 - [Comprehensive Water Audit Guide](#) (free; developed by the State of Indiana)
- Webinars:
 - [AWWA Webinar Recording- Overview of Version 6 of the Free Water Audit Software](#)
 - [EFC Webinar Recording- Overview of Approaching a Water Audit](#)
- Tools:
 - [EFC Water Loss Control Toolbox](#) (includes dozens of tools and links to resources)
 - [AWWA Water Audit Compiler](#) (helpful tool to analyze data from multiple water audits)

Consultants and Technical Assistance Providers:

- [Environmental Finance Center \(EFC\)](#)
 - Free and available to any system serving fewer than 10,000 people
- [Granite State Rural Water Association \(GSRWA\)](#)
- [Rural Community Assistance Partnership \(RCAP\)](#)
 - NH Contacts: etoledo@rcapsolutions.org and mmistretta@rcapsolutions.org
- [Engineering Firms That Could Be Hired](#)
 - NHDES has *not* contacted each firm to confirm experience with the AWWA M36 methodology

NHDES Contact:

Please contact the NHDES Water Conservation Program with any questions at waterconservation@des.nh.gov.

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