

Aquifer Storage and Recovery / Managed Aquifer Recharge Data

For Water Resources Program (WRP) and Office of Columbia River (OCR)

Version 1.2

August 2024

This guidance explains how to enter data and documents for aquifer storage and recovery (ASR) and managed aquifer recharge (MAR) projects into [Ecology's Environmental Information Management System \(EIM\)](#).

Why we store ASR/MAR data in EIM

ASR/MAR projects are complex and include multiple phases over several years. Different entities work on various phases. To promote consistency over a project's duration, we store all monitoring data in EIM and reports in an Ecology system. That way, all information is readily available to whoever is working on a project.

How to submit ASR/MAR documents and data

ASR/MAR project documents

Project documents contain valuable background information and explain the data in EIM. Electronic access to these documents for the project duration is important.

What to submit

Submit ASR/MAR reports and documents that provide context for **water quantity or quality monitoring data**, including:

- Quality Assurance Project Plans (QAPPs).
- Major project reports that describe a project phase.
- Annual reports that document the volume of water recharged and recovered.

Document accessibility

If your grant agreement was executed after July 1, 2019, **AND has document deliverables** meant for publication Ecology's public website, they **MUST meet current accessibility guidelines**. At a minimum, run documents through Word and Acrobat (PDF) accessibility checkers and correct any issues.

For addition information on digital accessibility, see [Washington State's accessibility website](#).

How to submit

Email PDF copies of your documents to the [WRP/OCR EIM data coordinator](#). They will confirm they received them and upload them to an Ecology system.

EIM ASR/MAR data

Basic info

For basic data submittal information, download "[WRP/OCR Grantee Info for EIM Data Submittal](#)."

Well data

Fill out the [Location Template](#). See the [Location Help](#) for guidance. For entering well data, download help for "[EIM Well Information and Data](#)." Use a consistent naming convention for your locations.

Save your template as a comma-separated value (CSV) file for upload to the EIM Loader.

Result data

Submit these types of ASR and MAR data to EIM.

- Water quality data (field or analytical laboratory).
- Water quantity data. Includes groundwater levels collected as discrete measurements and continuous time-series data obtained with pressure transducers.

EIM has three templates for Result data.

1. Discrete Results [Template](#) and [Help](#).
2. Time-Series Results [Template](#) and [Help](#).
3. Well Water Levels [Template](#) and [Help](#).

For time-series (e.g., transducer) data, also follow “[How to Submit Time-Series Data to EIM.](#)” If you post-processed your data, see “[Adjusted Time-Series Data.](#)”

Save your templates(s) as a comma-separated value (CSV) file for upload to the EIM Loader.

Data EIM can't take

EIM can't take the following types of data. You don't need to submit them:

- Quantities of water recharged.
- Quantities of water stored.
- Quantities of water recovered.

File naming convention

For result data files you upload to EIM, assign filenames that relate to the study, location, and project phase (e.g. pre-recharge, recharge, storage, or recovery).

Example: “ASR9999-MW1-PRCH.csv” for data collected under EIM Study ID “ASR9999,” at monitoring well “MW1,” during the pre-recharge project phase.

Result comments

Comment your results to help data users understand the data collection context. The comments should reflect the ASR/MAR project phase during data collection.

Example: For ASR water quality data collected downgradient during pre-recharge, “Water quality results from a downgradient monitoring well, collected during a pre-recharge phase.”

Use these fields for your comments (2000 character limit each):

- **Result Template:** Result Comment (column AZ) or Result Additional Comment (column BA).
- **Time-Series Result Template:** Comment (column U).

Data qualifiers

Use data qualifiers to inform data users about specific conditions during measurements or observations.

EIM has specific [water level data qualifiers](#) and [general data qualifiers](#). Each result can have only one associated data qualifier, so enter the most important one in the Result Qualifier field. Enter additional qualifiers in the Result Comment or Result Additional Comments fields.

Get help

If you need help, contact your [WRP/OCR EIM Data Coordinator](#). You can also [contact an EIM Team member using our online form](#).

Document revision history

Revision Date	Revision No.	Summary of Changes	Reviser(s)
9/10/21	1.0	Original Document	TC, CN
11/08/21	1.1	Updated accessibility language to specify date.	CN, TC
08/23/24	1.2	Updated contact email for WRP/OCR EIM Data Coordinator	KC