

Range Edits and QA/QC

Data is messy. It comes from many different sources and is of different levels of quality. PISCES has several methods for cleaning up data that has been imported into the data base. For instructions about adding new data sets to the database, please looking at the **Importing Data** section in the documentation.

Collections

Collections are a way to group observation records for retrieval by the PISCES tools. Collections are defined by the user to distinguish database level differences in the type and quality of the data. It is a quick way to subset records for map outputs and database queries that belong to the same data group.

One of the main use for data collections is for distinguishing quality controlled data. Many map sets and queries are set up to run using only quality controlled data. Data records that don't belong to the collection are not included in the output until the records are reviewed by experts and then added to the collection.

Quality controlled (QC) data sets are established collections of vetted and reviewed species records. Members of the quality controlled data collection have gone through a quality control process with taxa experts. Members of quality controlled collections represent the best available knowledge and are considered authoritative.

Imported Data

By default, new records imported to PISCES are not part of quality controlled collections. Data sources vary in quality and completeness, which can introduce errors

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in the database. New data should be reviewed by appropriate taxa experts to verify that the records are classified correctly and valid.

Data can be imported incorrectly for a number of reasons. Often, the original data is incomplete or species are not identified at the right taxonomic resolution since identification of fish can be difficult in the the field. PISCES will import these records but it is up to the user to verify the records before committing them to a quality controlled data set.

Quality Control Process

Local taxonomic experts verify records in the PISCES data base by undergoing a rigorous quality control process. Data that is ambiguous should be removed from the database. Data that conflicts with the expert's knowledge for the area is removed unless it is from a reputable source.

Data is broken up into several categories:

Observations should be backed up by real data and verifiable. Expert opinion is from taxonomic experts best judgment based on records in nearby locations and similar habitat. Model distributions are given a different class in the database. Please see observation types for more information.

QC Collections 5 & 15 represent the best available expert knowledge for all native California native and non-native fish that have under gone a rigorous quality control process.

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Unlimited Maps

The main distinction between Unlimited Range Maps and Main Range Maps is quality controlled data. Main Range will only include data and records that are in quality controlled data collections. Unlimited Range maps will include **ALL** data that is in the database. Unlimited map outputs should not be distributed without a disclaimer that the data included in the range maps is unverified and could possibly be wrong.

Range Edits

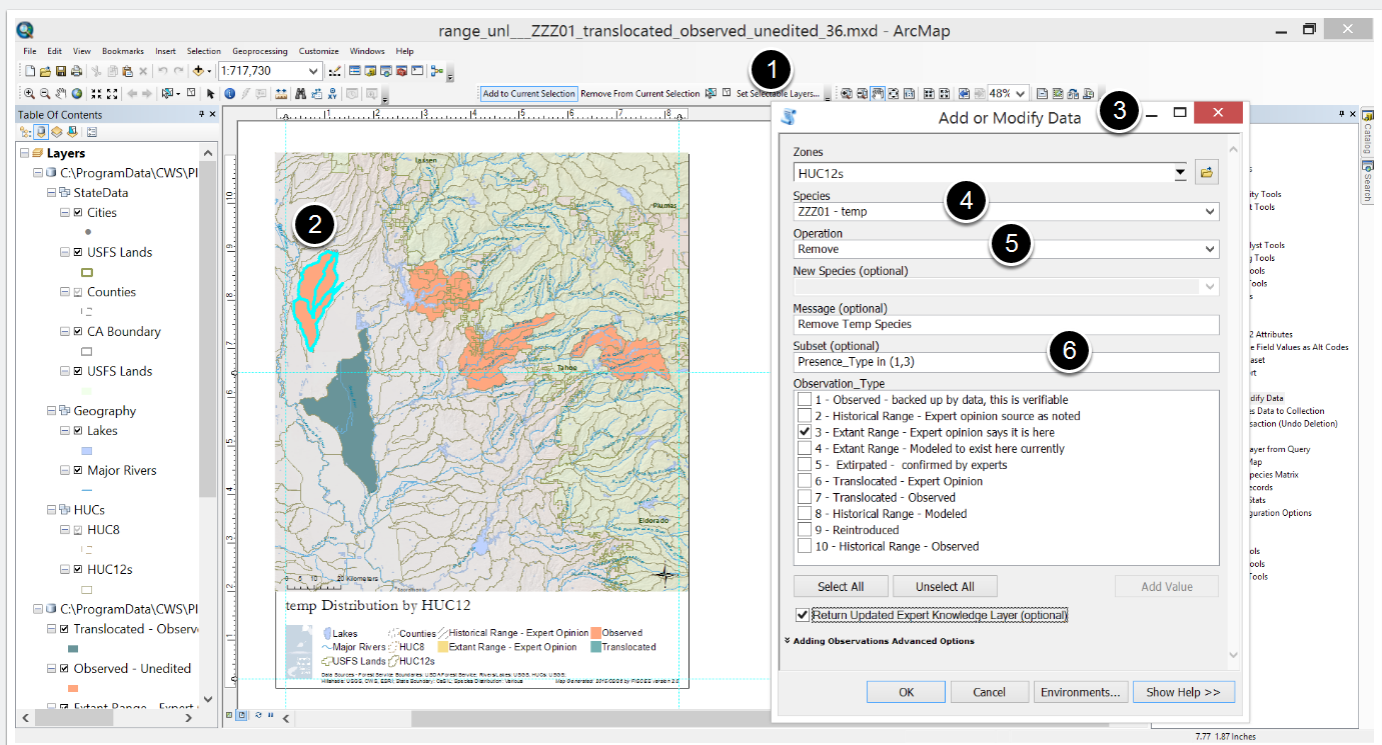
To manually edit a range:

Use the **Generate Map** tool to generate an Unlimited Range Map for the species. The edits can be made in the generated unlimited range mxd or the layers can be added to the editing.mxd document from the layer_cache.gdb.

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Remove HUCs from a Range

1. Make the HUC12s layer the only selectable layer in the map document.
2. Select the HUC12 features to remove from the Range.
3. Open the Add or Modify Data tool from the PISCES toolbox.
4. Select the species FID or name.
5. Operation: Remove
6. Subset - select the Presence_Type to remove. The option check boxes will not work for the remove records operation so please set the presence type in the subset box.

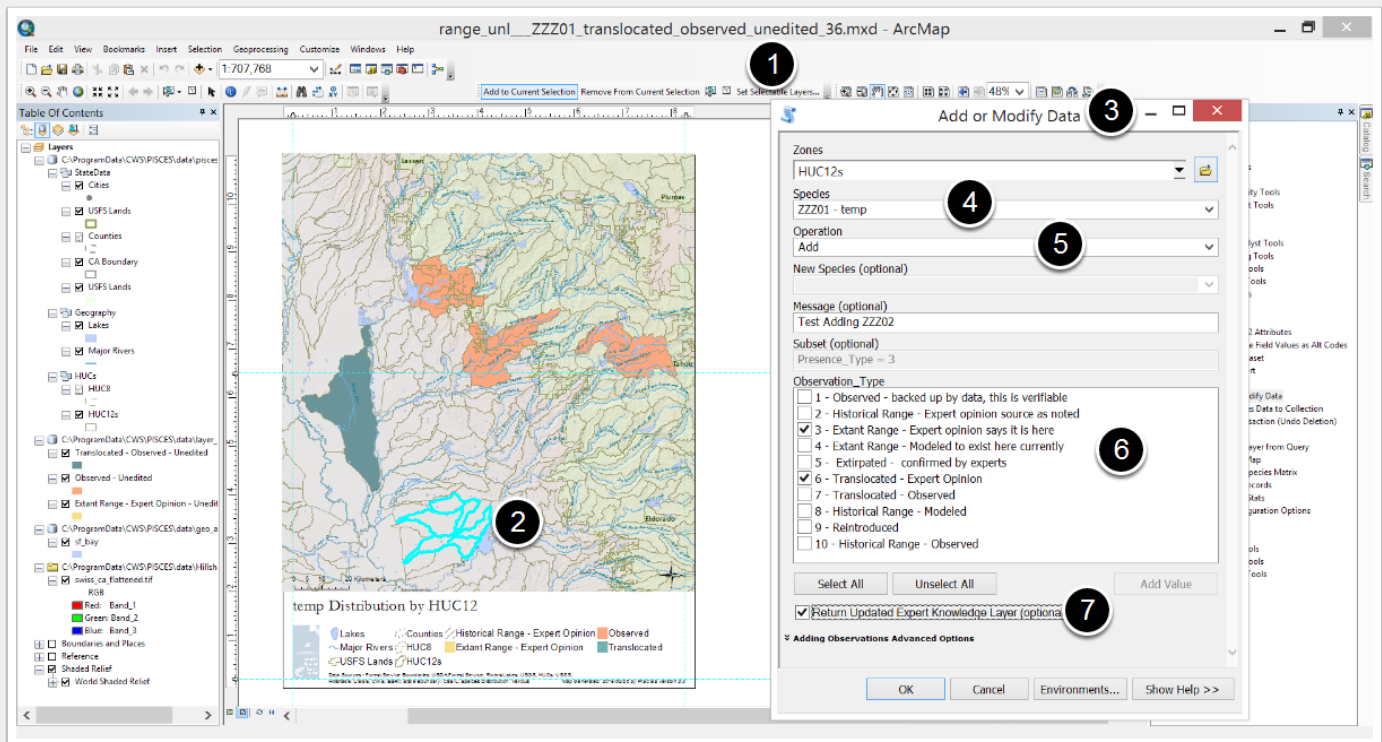


Add HUCs to a Range

1. Make the HUC12s layer the only selectable layer in the map document.
2. Select the HUC12 features to add to the range.
3. Open the Add or Modify Data tool from the PISCES toolbox.
4. Select the species FID or name.

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5. Operation: Add
6. Select the desired observation presence types to add.
7. Optional: return a updated export opinion layer (presence_type = 3) to the current map document.



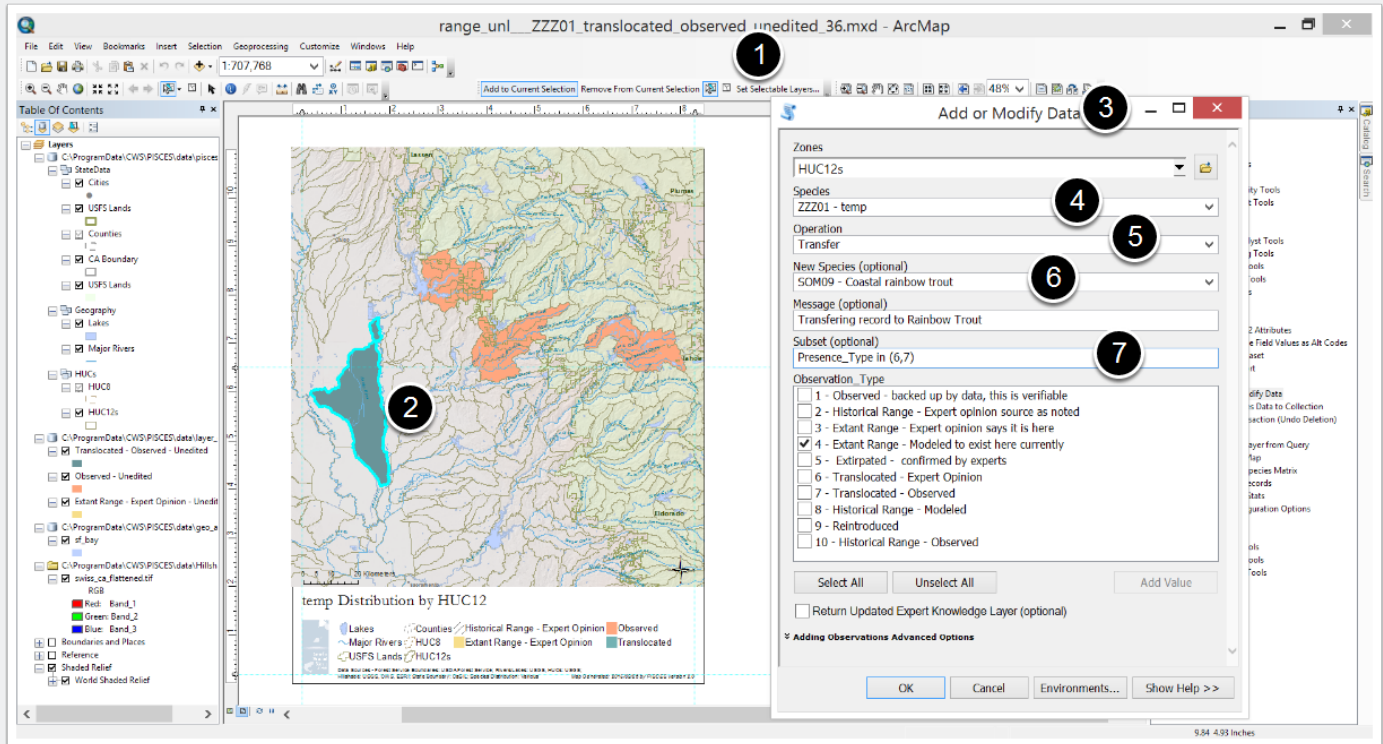
Transfer Records to a Different Species

You can use the Add or Modify Data to transfer records from one species in the database to another species.

1. Make the HUC12s layer the only selectable layer in the map document.
2. Select the HUC12 with the records to transfer.
3. Open the Add or Modify Data tool from the PISCES toolbox.
4. Select the species FID or name for the species to be transferred (the **from** species).
5. Operation: Transfer
6. Select destination for the records in New_Species (the **to** species)

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7. Subset - select the Presence_Type to move. The option check boxes will not work for the transfer records operation so please set the presence type in the subset box.



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Add Species to Collections

After all the edits to a species range are finished and verified by experts, it is time to add the records to a QC data collection. Use the **Add Species Data to a Collection** tool in the PISCES toolbox to append all the new records for a species to a quality controlled data set.

