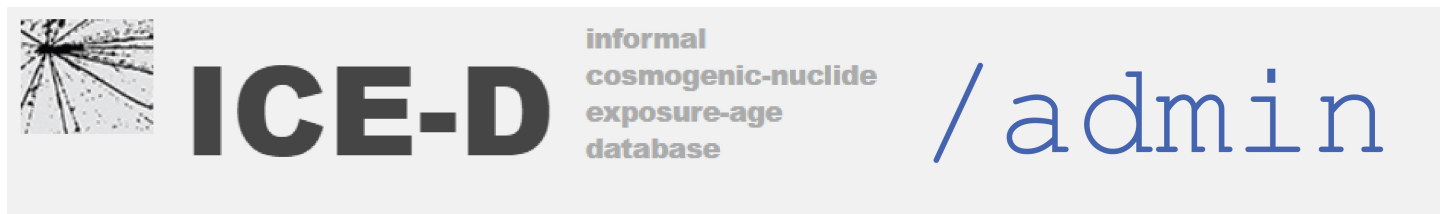# Adding data to ICE-D from the Admin Page

Joseph P Tulenko

ICE-D tutorial admin page data entry

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In this tutorial I will be teaching users our best practices for adding data to ICE-D through the admin page on the ICE-D website. In the past, we had folks from the community add data directly to the database through SQL clients such as Heidi and Sequel Pro, but users will now be adding data in excel spreadsheet format (other formats also available) to a page on the ICE-D website! We are hoping this will streamline the data entry process for ICE-D.

Before beginning, be sure to contact Greg Balco (balcs@bgc.org) or Joe Tulenko (jtulenko@bgc.org) and they will get you set up as a standard editor on the ICE-D admin page.

Step 1. Begin the tutorial by navagating to the admin page (https://version2.ice-d.org/admin/) on the ICE-D website. Use the credentials given to you either by Greg or Joe to log in. You should see a page similar to the one below:
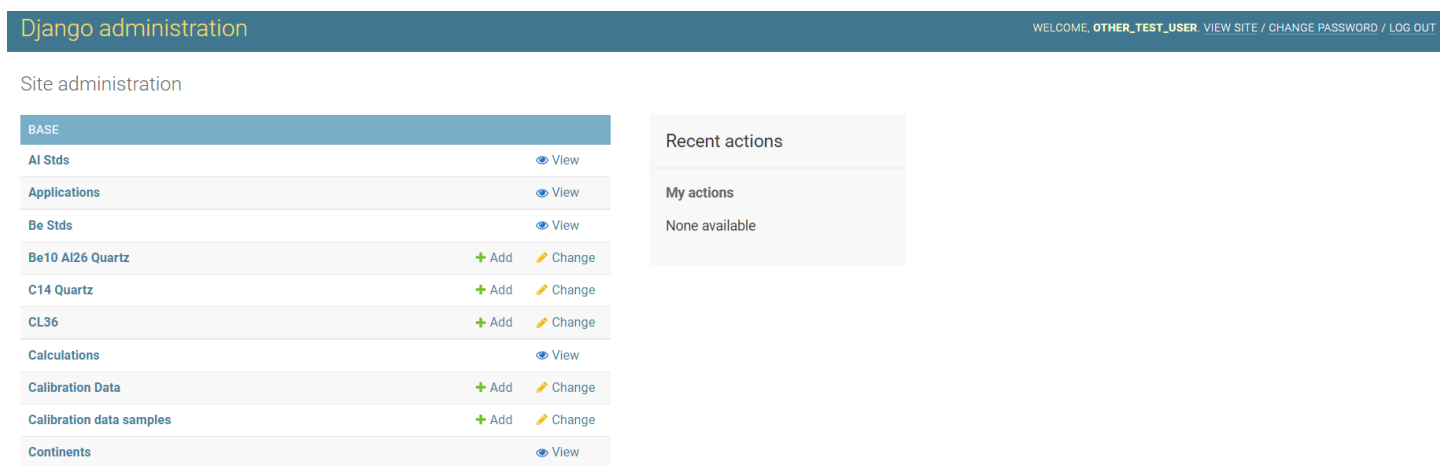
You will notice there are several links to various ICE-D tables on the left side of the screen. In this tutorial, for simplicity, I am going to focus only on the four most relevant tables for users adding new ^{10}Be

simple exposure entries (Regions, Sites, Samples and Be10 Al26 Quartz). Furthermore, these four tables have more columns/attributes beyond those necessary to calculate exposure ages but I am going to focus only on those that are necessary to calculate simple exposure ages (and make proper table relations; more on that below).

That said, we encourage admin users to be as thorough as possible when doing data entry because if you don't add column data now, people like me will have to fill in your blanks later.

Step 2. The general workflow for adding new data to the database needs to follow a specific path because of the way that tables in ICE-D are linked (aka, related). Following industry standards that make the database run quickly and ensure that each entry has a unique identifier, we rely on the database generating **unique id numbers** for each new entry. For those familiar with adding data to the original database, we used to rely on entry *names* (e.g., sample names or site names) to link tables as opposed to unique ids.

Our four most important tables for ^{10}Be simple exposure ages:

- **REGION**
- **SITES**
- **SAMPLES**
- **BE10 AL26 QUARTZ**

are related in the following way:

REGION	->	**SITES**	unique id generated ***for*** a REGION and ***referenced*** in SITES table
SITES	->	**SAMPLES**	unique id generated ***for*** a SITES and ***referenced*** in SAMPLES table
SAMPLES	->	**BE10/AL26 QUARTZ**	unique id generated ***for*** a sample and ***referenced*** in BE10 AL26 QUARTZ table

Note that unique ids are generated by the database/admin window on ICE-D and users will not be required to generate the ids on their own. However, users will need to reference unique ids generated by ICE-D to make the correct table relations (as outlined in the table above).

Because certain tables need a referenced id from another table to exist before an entry can be created and properly related, it makes the most sense to create tables in a specific ordered fashion: Region first, Sites second, Samples third and Be10 Al26 Quartz last.

Briefly, we set up these table relations to avoid certain impossibilities. For example, we link the Region table and Sites table through a unique Region id so that multiple sites can fall under the same Region (i.e., multiple entries in the Sites table can use the same Region id) **BUT** the set up makes it impossible for a single site to be referenced in multiple Regions (i.e., a single moraine can't exist in two geographic locations at once).

We currently have other tables set up that allow for two-way relations, such as sample-publication matching (i.e., a sample can be referenced in more than one publication, and of course a single publication can reference more than one sample). In this case, a user would have created sample entries all with their own unique ids, a user would create one/more publications in the publications table each with their own set of unique ids, and then there is a third table, the *Sample Publication Matches* table where each relation is a new entry.

For example, a publication with 10 samples requires 10 entries in the Sample Publication Matches table, one for each sample. Additionally, if a later publication references let's say 5 of those samples in the original publication, there needs to be 5 new entries in the Sample Publication Matches table to link those 5 samples to the new publication.

Step 3. Beginning with the Region table, users can view all of the entries in the Region table by selecting Region from the list of tables on the admin home page. In the Region table page, there should be an "add Region" button near the top of the page. Select it and it should take you to a new window.

Fill out the entry window with whatever geographic name you wish to call your Region of interest. Please note that by the date of this tutorial there are 718 Regions; it is entirely possible that your Region of interest already exists! Check the ICE-D webpage to make sure that you need to generate a new Region.

(In the event that the new samples you wish to add fall under a Region that already exists, be sure to find the unique id for that Region since you will need it for the Sites table.)

For the remaining tables - Sites, Samples and Be10 Al26 Quartz - the admin page allows users to directly upload excel spreadsheets. For each table, I am including a screenshot of the basic columns needed to set up proper table relations and allow for calculating simple exposure ages using the version 3 Cronus Earth calculator.

IMPORTANT: If you miss any of these entries your samples will not show up properly and you may cause an error on the ICE-D web page (don't worry you won't kill ICE-D, you just need to ammend your entries for the error to go away.)

SITES

	A	B	C	D	E	F
1	**short_name**	**region**	**name**	**what**	**continent**	**range**
2	what it is called in the publication	region id (number) goes here	descriptive name (use geographic and stratigraphic terms)	what type of land feature is it? i.e., moraine, erratic, etc.	continent id (number) goes here. See continents table for correct id	mountain range where samples exist (ex: Alaska, Alaska Range)

SAMPLES

|	name	lat_DD	lon_DD	elv_m	shielding	thick_cm	lithology	site	density	what	collected_by	date_collected
1												
2	sample name from publication	latitude must be in decimal degrees	longitude must be in decimal degrees	can rount to nearest whole meter	from paper	from paper	from paper	site id (number) ICE-D created goes here	from paper	e.g., cobble, moraine boulder, erratic, etc	first initial, last name(s)	admin page accepts M/D/YYYY entries

BE10 AL26 QUARTZ

	sample	aliquot	chem_lab	analyst	Be_AMS_lab	N10_atoms_g	delN10_atoms_g	Be10_std
1								
2	sample id (number) ICE-D created goes here	if sample is only measured once put an "a" here (w/out quotes)	check SQL database for names used here (ex: UVM)	first initial, last name(s)	check SQL database for names used here (ex: LLNL)	from paper	from paper	from paper (also check SQL database for names used ex: 07KNSTD)

Step 4. Once you have these three excel tables set up, one by one import them into their respective ICE-D tables in the admin page. I will show what it looks like to import entries for the Sites table, but the others look more or less the same.

Navigate to the Sites table in the admin page. You will see a list of sites arranged latest to first. There should be an import button near the top of the page, select that button.

The page displayed should look similar to the screenshot below:
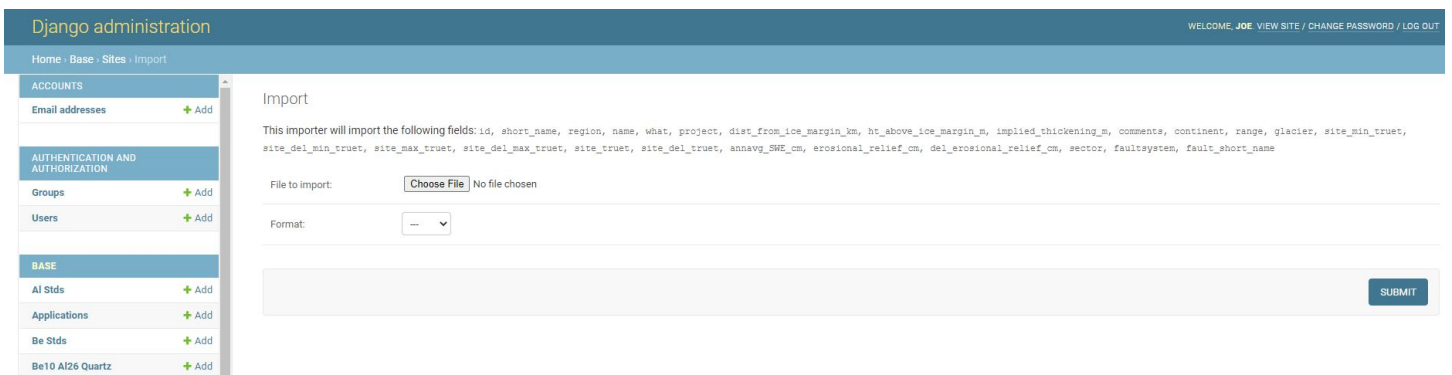
Note here that all of the columns with their respective titles show up on this page in the order they need to be entered. If there is additional info you want to add besides the info I outline in this tutorial, refer to the import page for column names and order.

choose the file you wish to import (be sure that it is saved as a .xlsx file), and from the *format* drop down menu select .xlsx (this works for other file formats such as csv, but xlsx is the simplest to work with so I suggest sticking with that file format).

Once you have done this, you can hit the submit button, which takes you to a preview page before the submission is complete. In the example below, I am creating two new sites for the Revelation Mountains Region (id 354) in the Alaska, Alaska Range. They are late Holocene moraines, so under the 'what' column I put moraine, and in the name, I use the geographic term NSR (north swift river; from the publication) and age/stratigraphic terms Late Holocene 4 and Late Holocene 5 (4 assuming to have some stratigraphic relationship to 5).

In this example, each entry is highlighted in green and columns with filled in information are shown along with empty fields for columns where information was not entered. If your preview page looks any different from this do not proceed until you figure out what went wrong.

Note here that the admin page auto-generated two new unique Site ID's 5033 and 5034. When I go to add samples, I will need to update my Samples spreadsheet to include these ids for whichever samples belong to each respective site.

Once you are satisfied with the preview page, hit confirm import. This should send you back to the Sites table and you should see your sites added to the table! Nice.

Go through and add the remaining two tables (Samples and Be10 Al26 Quartz) to the database. When you are done, there is one final step to ensure that the samples are correctly added to the database.

Step 5. If you were to check version2.ice-d.org right now for your samples they would not show up. This is because there is a final step that needs to be done to tell ICE-D which specific database application these new samples belong to, such as ICE-D Greenland, ICE-D Alpine, etc.

Navigate back to the Sites table in the admin page and select a site that you just created. It should take you to a page where all of the information you entered for the site is displayed (and editable; check the entries now to make sure everything is correctly entered).

Scroll to the very bottom of the page and you should see a separate section titled **Application-Site Relationships**. Similar the previous discussion about table relations, a site entry can belong to multiple applications. For example, the Boundary Stream Tarn Site (id 4897) from Aaron Putnam et. al.'s production rate calibration in New Zealand is an alpine glacier moraine and also a production rate calibration site. Thus, in each Sites page, users need to specify which application the site belongs to by adding the application(s) in the drop down menus in the **Application-Site Relationships** section.

In the BST example shown below, there are two entries listed, one for production rate calibration (id 5) and the other alpine (id 2).

Be sure to do this for all of the sites you created! And once you have done so, go check the ICE-D webpage to make sure all of your data entry is correct! The webpage calculates exposure ages using the version 3 calculator, the default production rate and two scaling schemes (St and LSDn). If those calculations do not show up you may have missed a necessary column or made an error in your data entry. If it is an easy fix you can edit any Sites, Samples, or Be10 Al26 Quartz entry directly in the admin by selecting the entry and editing information displayed on the page.

Hint: ICE-D also prints out sample information in the version 3 exposure age calculator format. Check here first to see if there are any obvious errors.

As always, please don't hesitate to contact Greg Balco (balcs@bgc.org) or Joe Tulenko (jtulenko@bgc.org) if something gets horribly messed up or if there is any confusion, you have questions, etc. We are always welcoming suggestions from the commmunity as well so please email us if you have suggestions that may improve ICE-D.

Thanks for following along!