What are Inactive Elements?

When reclassification or taxonomic revision results in the replacement or removal of an existing Element or Elements, the replaced Elements are inactivated by checking the Inactive box in the Global Element Tracking record. For example, a taxonomic lump may result in 2 existing taxa combined into 1 broader taxon. This requires the creation of a new Element record for the broad taxon and the inactivation of the 2 rejected Elements. For more information, see Biotics Online Help for "Inactive".

Why are you exchanging inactivated Elements?

When inactivated Elements are not exchanged, they remain active and out of date in Program databases. We had been manually identifying and deleting them as part of the data exchange QC process, but deleting these inactive Elements leaves Program staff in the dark. Exchanging inactivated Elements instead makes taxonomic updates and reclassifications transparent and more efficient to communicate and manage by allowing you to view lineage tracking (see more about this below).

How will inactive records affect my Biotics searches and reports?

Inactive records are not included in the results of Biotics Element Searches unless they are explicitly included by checking "Include Inactive" in the Search window.

And inactive records are unlikely to affect most or any of your queries, views, and reports. Since your local database contains many Elements which you do not track, your queries likely already include only Elements for which you maintain an EST. Such queries will already exclude inactive records unless you decide to keep ESTs on inactive records in your database (which we do not recommend). Likewise, if you remove inactive Elements from Managed Area (MA) records, your existing queries and reports for those will be unaffected.

However, queries, views, and reports that are not limited to Elements with an attached EST will need to be modified to exclude inactive records by using a line such as:

WHERE ELEMENT_GLOBAL.INACTIVE_IND = 'N'

Examples of queries that will and won't need to be modified are below in **Appendix: Examples of queries that will and won't need to be modified**.

Why should I care about Lineage?

When an Element is inactivated in the central database, central staff also update Lineage information. Lineage includes the date the Element became Inactive and Successor Elements. The Element being inactivated becomes a Predecessor and the Elements that replace it are the Successors. Lineage information shows you from where and to where related data should be moved.

How can I tell if a record/Element is inactive?

When the Inactive box is checked, the red label "**INACTIVE**" appears at the top left of the header of the Global Element Tracking record and ALL child records related to it. In the tabular data, the field is in the ELEMENT_GLOBAL table and called INACTIVE_IND. This field equals "Y" for inactive Elements.

What if I maintain an EST for one of these Inactive Elements?

Central staff typically do not inactivate Elements with locally maintained ESTs. Elements are made Nonstandard until programs have a chance to process the new classification (i.e., accept or reject it and move data if necessary), with some exceptions.

The decision to Inactivate an Element that has locally maintained ESTs is a judgement call made by central scientists which can differ by the -ology shop making the update and the circumstances of the update. Possible actions in the central database are:

1. If central staff believe it is very likely that a local program will follow the new classification and there is no question about where local data belong, they may inactivate the Element and move local data to the appropriate new Element in the central database.
2. If there is uncertainty about whether a local program will accept the taxonomic update or where local data belong, central staff leave the Element active but change Classification Status from Standard to Nonstandard, still entering Lineage.
3. In limited cases, such as when an Element is split and local experts must determine the proper sorting of EOs between two Successors, central staff may inactivate the Element and leave local data where they are until the local program has a chance to review the update and make appropriate changes.

What will happen when I receive Inactive records through data exchange?

Delivering inactive Elements will begin with the release of the new "Data Exchange Alerts Workbench." If an Element **for which you maintain a subnational (EST) record or that is used in a Managed Area (MA) record** is inactivated and your Biotics attempts to import that update, an alert will appear in the workbench. The data exchange process REJECTS the update, and you have two choices:

1. If you agree with the classification update, move EST, EO, or MA data as appropriate (see Reparenting an EST and Reparenting selected EOs). You should find information about the update in Classification/Taxonomy Comments of the successor EGT(s) (which will be imported as part of the exchange) and in lineage fields. Once data have been moved, in the workbench alert, click "Dismiss & Exchange Again Later" which will enable the update of the Element to Inactive at your next data exchange.
2. If you do not agree with the taxonomic update and prefer to keep your data associated with the Element that has been inactivated, contact appropriate central staff for your -ology. They can re-activate the Element, changing it to Nonstandard instead of Inactive, if necessary.

Any Element in your database for which there is no related EST and that is not used in an MA will simply be updated to Inactive during Central to Local data exchange.

Additional Questions

Please contact Biotics Support (preferably), or one of the following individuals:

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Appendix: Examples of queries that will and won't need to be modified

1. **Examples of queries that you do NOT need to update**, assuming that like most programs you do NOT keep ESTs or MAs linked to inactive records*****

   a. **no element_global in query** (EST example)

```
select est_elcode(es.element_subnational_id) elcode
  , sn.scientific_name sname
  , s_rank
from element_subnational es, scientific_name sn
where es.sname_id = sn.scientific_name_id
  and sn.d_name_category_id=6 --fungus
```

   b. **element_global with INNER JOIN to element_subnational** (via element_national)

```
select eg.elcode_bcd elcode
  , snG.scientific_name gname
  , eg.g_rank
  , eg.inactive_ind
  , snS.scientific_name sname
  , es.s_rank
from element_global eg, element_national en, element_subnational es,
scientific_name snG, scientific_name snS
where eg.element_global_id = en.element_global_id     --INNER JOIN
  and en.element_national_id = es.element_national_id --INNER JOIN
  and eg.gname_id = snG.scientific_name_id
  and es.sname_id = snS.scientific_name_id            --INNER JOIN
  and snG.d_name_category_id=6 --fungus
order by elcode
```

2. **Examples of queries that need INACTIVE_IND='N' added to exclude inactive elements**

   a. **element_global with OUTER JOIN to element_subnational (via element_national)**

```
select eg.elcode_bcd elcode
  , snG.scientific_name gname
  , eg.g_rank
  , eg.inactive_ind
  , snS.scientific_name sname
  , es.s_rank
from element_global eg, element_national en, element_subnational es,
scientific_name snG, scientific_name snS
where eg.element_global_id = en.element_global_id --inner or outer join ok
  and en.element_national_id = es.element_national_id (+) --OUTER JOIN
  and eg.gname_id = snG.scientific_name_id
  and es.sname_id = snS.scientific_name_id (+)            --OUTER JOIN
  and snG.d_name_category_id=6 --fungus
  AND eg.INACTIVE_IND = 'N'
order by elcode
```

b. **element_global with no link to element_subnational**

```
select select eg.elcode_bcd elcode
  , snG.scientific_name gname
  , eg.g_rank
  , eg.inactive_ind
from element_global eg, scientific_name snG
where eg.gname_id = snG.scientific_name_id
  and snG.d_name_category_id=6 --fungus
  AND INACTIVE_IND = 'N'
order by elcode
```

c. ***If you decide to keep ESTs or MAs linked to inactive records but want to exclude them from queries, views, and reports, you'll have more to update many more existing queries, views, and reports.** You'll always need to add element_global to queries in order to filter by INACTIVE_IND. This example is the same as 1b except INACTIVE_IND is added to remove inactive ESTs. 1a would need to become this as well.

```
select eg.elcode_bcd elcode, snG.scientific_name gname, eg.g_rank,
eg.inactive_ind, snS.scientific_name sname, es.s_rank
from element_global eg, element_national en, element_subnational es,
scientific_name snG, scientific_name snS
where eg.element_global_id = en.element_global_id     --INNER JOIN
  and en.element_national_id = es.element_national_id --INNER JOIN
  and eg.gname_id = snG.scientific_name_id
  and es.sname_id = snS.scientific_name_id            --INNER JOIN
  and snG.d_name_category_id=6 --fungus
  AND eg.INACTIVE_IND = 'N'
order by elcode
```

3. QC for inactive ESTs

```
select eg.elcode_bcd elcode
  , dn.name_category_desc
  , snG.scientific_name gname
  , eg.inactive_ind
  , snS.scientific_name sname
  , es.s_primary_common_name
  , es.s_rank
  , (select count(1) from eo
     where element_subnational_id=es.element_subnational_id) EO_count
  , des.eo_track_status_desc eo_status
  , es.s_eo_tracking_com
  , snS.author_name sname_author
from element_global eg, element_national en, element_subnational es,
scientific_name snG, scientific_name snS, d_name_category dn,
d_eo_track_status des
where eg.element_global_id = en.element_global_id
  and en.element_national_id = es.element_national_id
  and eg.gname_id = snG.scientific_name_id
  and es.sname_id = snS.scientific_name_id
  and snS.d_name_category_id = dn.d_name_category_id
  and es.d_eo_track_status_id = des.d_eo_track_status_id (+)
  and eg.inactive_ind = 'Y'
order by elcode
```