**Latest SS News: July 22, 2019**

Greetings Stock Synthesis (SS) Users,

In this release of Stock Synthesis (3.30.14.00), we have included some fixes and augmentations. Thank you to all users who have reported bugs so that we can continue to improve the code. You can find the changes listed in the [change log](https://vlab.ncep.noaa.gov/web/stock-synthesis/document-library/-/document_library/0LmuycloZeIt/view_file/2382426?_com_liferay_document_library_web_portlet_DLPortlet_INSTANCE_0LmuycloZeIt_redirect=https%3A%2F%2Fvlab.ncep.noaa.gov%3A443%2Fweb%2Fstock-synthesis%2Fdocument-library%2F-%2Fdocument_library%2F0LmuycloZeIt%2Fview%2F2382420%3F_com_liferay_document_library_web_portlet_DLPortlet_INSTANCE_0LmuycloZeIt_redirect%3Dhttps%253A%252F%252Fvlab.ncep.noaa.gov%253A443%252Fweb%252Fstock-synthesis%252Fdocument-library%253Fp_p_id%253Dcom_liferay_document_library_web_portlet_DLPortlet_INSTANCE_0LmuycloZeIt%2526p_p_lifecycle%253D0%2526p_p_state%253Dnormal%2526p_p_mode%253Dview) located in the SS document library and the 3.30.14.00 executables [here](https://vlab.ncep.noaa.gov/web/stock-synthesis/document-library/-/document_library/0LmuycloZeIt/view/5042555?_com_liferay_document_library_web_portlet_DLPortlet_INSTANCE_0LmuycloZeIt_redirect=https%3A%2F%2Fvlab.ncep.noaa.gov%3A443%2Fweb%2Fstock-synthesis%2Fdocument-library%3Fp_p_id%3Dcom_liferay_document_library_web_portlet_DLPortlet_INSTANCE_0LmuycloZeIt%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview), also within the SS document library. Between releases, we also post fixes to the release version of SS in the [latest executables folder](https://vlab.ncep.noaa.gov/web/stock-synthesis/document-library/-/document_library/0LmuycloZeIt/view/5042555?_com_liferay_document_library_web_portlet_DLPortlet_INSTANCE_0LmuycloZeIt_redirect=https%3A%2F%2Fvlab.ncep.noaa.gov%3A443%2Fweb%2Fstock-synthesis%2Fdocument-library%3Fp_p_id%3Dcom_liferay_document_library_web_portlet_DLPortlet_INSTANCE_0LmuycloZeIt%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview). These recent fixes and augmentations are also listed briefly at bottom of this document. Fortunately, all fixes are with specific configurations.

Of particular note in SS 3.30.14 is an augmentation to the tagging input in the control file. Users can now mirror tagging parameter input. Please see the [SS 3.30.14 user manual](https://vlab.ncep.noaa.gov/web/stock-synthesis/document-library/-/document_library/0LmuycloZeIt/view/4513132?_com_liferay_document_library_web_portlet_DLPortlet_INSTANCE_0LmuycloZeIt_redirect=https%3A%2F%2Fvlab.ncep.noaa.gov%3A443%2Fweb%2Fstock-synthesis%2Fdocument-library%2F-%2Fdocument_library%2F0LmuycloZeIt%2Fview%2F1933976%3F_com_liferay_document_library_web_portlet_DLPortlet_INSTANCE_0LmuycloZeIt_redirect%3Dhttps%253A%252F%252Fvlab.ncep.noaa.gov%253A443%252Fweb%252Fstock-synthesis%252Fdocument-library%253Fp_p_id%253Dcom_liferay_document_library_web_portlet_DLPortlet_INSTANCE_0LmuycloZeIt%2526p_p_lifecycle%253D0%2526p_p_state%253Dnormal%2526p_p_mode%253Dview) section “Tag Recapture Parameters” for more details on this option.

We also have new resources available for SS users:

* The helper spreadsheets have been completely overhauled and updated to illustrate different SS input setups with the latest version of SS. Find them [here](https://vlab.ncep.noaa.gov/web/stock-synthesis/document-library/-/document_library/0LmuycloZeIt/view/978337?_com_liferay_document_library_web_portlet_DLPortlet_INSTANCE_0LmuycloZeIt_redirect=https%3A%2F%2Fvlab.ncep.noaa.gov%3A443%2Fweb%2Fstock-synthesis%2Fdocument-library%3Fp_p_id%3Dcom_liferay_document_library_web_portlet_DLPortlet_INSTANCE_0LmuycloZeIt%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview) within the SS document library.
* There are two resources for relatively new SS users: an updated document version of “Getting Started with SS” (previously was a slide deck) and a new document, “Developing your first Stock Synthesis (SS) model.” They can be found in the [Introduction to Stock Synthesis folder](https://vlab.ncep.noaa.gov/web/stock-synthesis/document-library/-/document_library/0LmuycloZeIt/view/1933916?_com_liferay_document_library_web_portlet_DLPortlet_INSTANCE_0LmuycloZeIt_redirect=https%3A%2F%2Fvlab.ncep.noaa.gov%3A443%2Fweb%2Fstock-synthesis%2Fdocument-library%3Fp_p_id%3Dcom_liferay_document_library_web_portlet_DLPortlet_INSTANCE_0LmuycloZeIt%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview) within the SS document library.
* The VLAB platform itself continues to make user-interface improvements, especially with regard easing the controls for file downloading.
* The graphical interface, SSI, also continues to improve and add features for previewing selectivity and recruitment curves. Give it a try.

If there are additional resources you would like to see created to help SS users, please send your suggestions to [nmfs.stock.synthesis@noaa.gov](mailto:nmfs.stock.synthesis@noaa.gov).

Please remember to check the change log when you download a new version so you are aware of anything relevant for your SS project. It also is a good idea to look over the \*.ss\_new files created by the newest version of SS so you can see listed all available input options. Of course, the user manual, examples, and r4ss have been updated.

If you have any SS usage questions or issues, please post in the [forums](https://vlab.ncep.noaa.gov/group/stock-synthesis/discussions-forums-) (for registered users) or email the SS team at [nmfs.stock.synthesis@noaa.gov](mailto:nmfs.stock.synthesis@noaa.gov).

Please contact VLAB administrators at [vlab.admin@noaa.gov](mailto:vlab.admin@noaa.gov) to change your username or password.

**Future big SS features (6-12 months):**

* Gavin Fay and Ashleigh Novak at University of Massachusetts Dartmouth are currently working to improve the incorporation of tagging data into SS. This will include changing the input of tagging parameters to use a more concise design matrix approach.
* Option to replace input of growth parameters with input of empirical length-at-age
* Adding otolith weight as a proxy for fish age as a new data type
* Area-specific spawner-recruitment
* Area-specific growth in addition to morph specific growth
* More R tools: updating ss3sim to work with 3.30, diagnostics tools, generic MSE control, etc. If you are working on some R tools for SS and want to share with the community, please let us know!

**Change Log since 3.30.13 release**

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| --- | --- | --- |
| **Version** | **Date** | **Description** |
| 3.30.14.00 | 7/19/2019 | Roll up fixes and upgrades to version 3.30.13 |
| 3.30.14.00 | 7/19/2019 | revise recruitment assignment algorithm to safeguard a rare situation |
| 3.30.14.00 | 7/19/2019 | clean-up a report omission |
| 3.30.14.00 | 7/16/2019 | Fix an unassigned variable in spawn\_recr method 7, caused poor convergence |
| 3.30.14.00 | 7/16/2019 | Improve internal consistency of jitter calculation |
| 3.30.14.00 | 7/12/2019 | Revise tag parameter input to allow mirroring (sharing) |
| 3.30.14.00 | 7/12/2019 | Revise movement parameter input to set old fish movement = young fish movement rate |
| 3.30.13.10 | 7/10/2019 | Fix error in uninitialized nabins (number of age bins) issue (occurs when nabins = 0) |
| 3.30.13.10 | 7/10/2019 | Fix forecast error with new buffer methods 3 and 4 |
| 3.30.13.09 | 7/1/2019 | Fix error in Lorenzen M for seasonal models |
| 3.30.13.09 | 7/1/2019 | Fix error in Richards growth. Noticed with seasonal models but could affect annual also for first age with growth |
| 3.30.13.09 | 6/28/2019 | revise the SPR search to search for SPR\*100 to improve numerical precision |
| 3.30.13.08 | 6/15/2019 | improve forecast robustness |
| 3.30.13.08 | 6/16/2019 | fix storing body-wt-at-age in forecast, which fixes calculation of totbio in time\_series output |
| 3.30.13.07 | 6/13/2019 | fix to mean size-at-age Input check |
| 3.30.13.06 | 6/10/2019 | fix to forecast recruitment when using recent mean |
| 3.30.13.06 | 6/10/2019 | fix to Fit\_SizeComp output when using a one sex model |
| 3.30.13.05 | 6/4/2019 | minor fix to repair fatal interaction between Lorenzen M and growth specification. |
| 3.30.13.04 | 5/31/2019 | add parm\_gradient for F parameters |
| 3.30.13.04 | 5/31/2019 | fix output of dirichlet parameters to control.ss\_new |
| 3.30.13.04 | 5/31/2019 | fix assignment of forecast relF when bycatch fleet is not associated with input catch |
| 3.30.13.03 | 5/14/2019 | revise format of LIKELIHOOD table in report.sso so all rows have 3 elements and info for Laplace calculations is shown |
| 3.30.13.02 | 5/8/2019 | change trans so that conversion of retention asymptotic parm always occurs |
| 3.30.13.02 | 5/8/2019 | fix implementation of profilevalues.ss for spawn\_recruitment parameters |
| 3.30.13.01 | 4/19/2019 | fix implementation of catch\_mult and its time-varying capability |