

## **What's New in Version 9.0 of the CWHR Software?**

### **CWHR Has a New Look!**

The CWHR software application has been reprogrammed to make it compatible with 64 bit operating systems such as Windows 7. The interface has also been altered to be more user-friendly and intuitive, while preserving the functionality. All queries and reports from previous versions are still present in 9.0, with the exception of the Species by Element report. The information that goes into this report is still available through the Element Information window.

CWHR now links dynamically with online content from the Department of Fish and Wildlife, such as range maps, life history accounts, and habitat descriptions from California's Guide to Wildlife Habitats (Mayer and Laudenslayer, eds., 1988). If no internet connection is present, CWHR will still run and will perform queries, but online content will not be accessible. The new application will also check the online source for any updates, and automatically prompt the user to download the latest version. This will allow us to continuously release updates to the model, rather than compiling updates to release all at once every few years.

Users can now save the query results as a PDF for reports, or as a spreadsheet (.csv format) for further analysis. Reports now include all the query parameters that were used, making verification, replication, and comparison of outputs easier. There is no longer a limit to the number of habitat types and stages that can be included in a single query.

### **Data Updates**

Version 9.0 contains:

- Updated range maps and location predictions for 118 species
- A new species list that reflects the latest, accepted taxonomic sequence
- Habitat suitability models and element ratings for 17 newly identified species
- New maps representing the geographic range of each habitat type
- Ability to view and print subspecies range maps (if available)

### **Changes to Queries**

In previous versions, when a user selected a habitat that did not occur in a previously selected location, the model would return a list of species for both the habitat type and the location (e.g. Sonoma county and Desert Wash). Version 9.0 has been modified to return a null set in such instances, and advise the user to check their parameters; this was done in an attempt to prevent erroneous interpretation of the model's results.

The logic for excluding elements in queries has been modified to more closely reflect the original intent of element ratings. As with previous versions, the threshold for each life history requisite can be set independently. At the "Essential" threshold level, elements with "E" ratings that are excluded for any life requisite will cause a species that finds that element to be essential

(no substitute) to drop off the list; this is consistent with previous versions. For species where the element is rated “S”, meaning there is an acceptable substitute, the new logic will check to see if the other secondary elements for that life requisite are still present in the query. If so, that species will remain on the list unless all secondary essential elements for that life requisite are eliminated. This is different from the old version, which would drop the species off the list if a secondary element was excluded, even if other secondary elements were present, and it applies to both single and two-condition queries. The logic for “Preferred” threshold levels remains the same: a “Preferred” rating for an excluded element for any life requisite does not result in the species being dropped from the query.

Results for two-condition queries were previously ordered by magnitude of change. In the new version, they are sorted by species name.

The output produced now shows query parameters used at the end of the report (if all species were selected then it states that, otherwise lists species used). There is now no limit to the number of habitat types and stages that can be queried at once.

Users can load a previous query; however, a file that worked with a previous version of CWHR will not work in the new version. Users will need to re-create and re-save their queries in the new version.

### **Changes to Bioview**

There is a limitation on the number of records that can be included in a Bioview query. Previously, the limit was 30,000 records, the limit for a '97 excel spreadsheet. The new limit is 1150 records (SQL limit). A pop-up warning will warn users if the query includes too many records. Previously, both .csv and .txt files could be imported into Bioview; in the current version, only .csv files are supported.

Previously, if a combination of habitat, size, and cover class was not rated for a species in CWHR, Bioview would return a 0 value. Now, no result will be produced.