**ABOUT**

**General Description:**

This App contains a variety of riparian ecological models of different frameworks, applications, and evaluation methods. As an interface for these models, this App provides two main tools: (1) a model comparison capability that guides a user in choosing a riparian model based on a set of criteria or a keyword, and (2) a set of calculators that correlates to each individual certified model that is included in the App.

**Model Comparison Tool:**

The Model Comparison Tool includes two tabs that can assist the user in selecting a riparian model depending on their intent. The **Criteria** tab is useful in guiding users in finding a model that may be the “best fit” for them based on their own criteria. This tab layout is set up to include a list of qualitative data that is associated with the included riparian models. Users have the option to search for a model based on region, model type, or metrics that are included in the model, which are categorized by instream and riparian zone processes. The Region and Model Type criteria are displayed as drop-down menus where the user can select one option for each. The metric criteria are displayed as check boxes to allow the user to select multiple metrics that may apply. Once criteria are selected, a display of all the riparian models will appear on the right side of the screen. These models will be ranked by user input and appear in ascending order according to relevancy to the selected criteria. Providing a list of all of the riparian models allows the user to look at multiple models based on their interest.

The second option under the Model Comparison Tool is the **Keyword** tab. This tab serves less as a guide and is intended for users who are looking for a riparian tool based on specific criteria. If the user already has a criterion in mind based on region, model type, or metric, they can enter it as a keyword in the search bar on the left. Once the keyword has been inputted, a list of model(s) will appear on the right and ranked in ascending order by relevancy to the user’s input. Each model will appear with a table that includes columns of qualitative data that include the model name, general description, region of application, model type, geographic scope, degree of model review, numerical structure, and associated metrics.

**Model Calculators:**

Lower Willamette River Ecosystem Restoration Project

Partnered By: U.S. Army Corps of Engineers Portland District and Environmental Services City of Portland

Prepared By: Tetra Tech Inc.

Tetra Tech, Inc. 2014. “Lower Willamette River ecosystem restoration project.” *Appendix F: habitat evaluation model planning models documentation*. Portland, OR. <https://publibrary.planusace.us/document/073ec527-bae3-49fd-849c-a19e830bcf6e>

“The purpose of the Lower Willamette River Ecosystem Restoration Project habitat evaluation model is to evaluate the increase in ecological function and habitat benefits as a result of restoring aquatic, riparian, and floodplain habitats along the Lower Willamette River in Portland, Oregon. The model is comprised of multiple species Habitat Suitability Indices (HSIs) within the Habitat Evaluation Procedures (HEP) framework developed by the U.S. Fish and Wildlife Service (USFWS 1980a).

The habitat evaluation model is proposed for one-time use for the Lower Willamette River Ecosystem Restoration Study being conducted by the U.S. Army Corps of Engineers, Portland District and its costshare partner, the City of Portland. All HSIs described in this model have been approved for one-time use on this project, except for the Mainstem Salmonid HSI, which is under review for certification.”

Resaca Reference Condition Model

Prepared By: U.S. Army Corps of Engineers Galveston District

USACE (US Army Corps of Engineers) Galveston District. 2016. *Model approval plan resaca reference condition for Brownsville Resaca Ecosystem Restoration Study*. [ERDC Knowledge Core: Model approval plan resaca reference condition for Brownsville Resaca Ecosystem Restoration Study (dren.mil)](https://publibrary.planusace.us/document/ed2d5451-3af3-4708-940b-f36adbb39c9e)

“The Resaca Reference Condition Model (RRCM) is designed to quantify the habitat quality of potential resaca restoration sites by comparing the existing habitat against reference conditions of high quality resacas and their associated riparian habitats. Three modules are included in the RRCM, one for each vegetation community that may be encountered in the study area: Texas Ebony Resaca Forest, Texas Ebony-Snake Eyes Shrubland, and Subtropical Texas Palmetto Woodland. The reference conditions were based on data from 10 sampling locations: four at Resaca de la Palma State Park, three at the Nature Conservancy’s Southmost Preserve, and two at Camp Lula Sams.”