

# RESTORATION AND PROTECTION PRIORITIZATION TOOL

## Background

The City of San Diego and other areas of California have a continuing need to assign management priorities to waterways. Often such prioritization is conducted informally based on subjective input from water resource managers and stakeholders. The Restoration and Protection Prioritization Tool (RPPTool), developed for the City of San Diego by Tetra Tech in association with the San Diego Regional Water Quality Control Board, is a screening application for decision-makers to assign priorities to stream segments for restoration or protection.

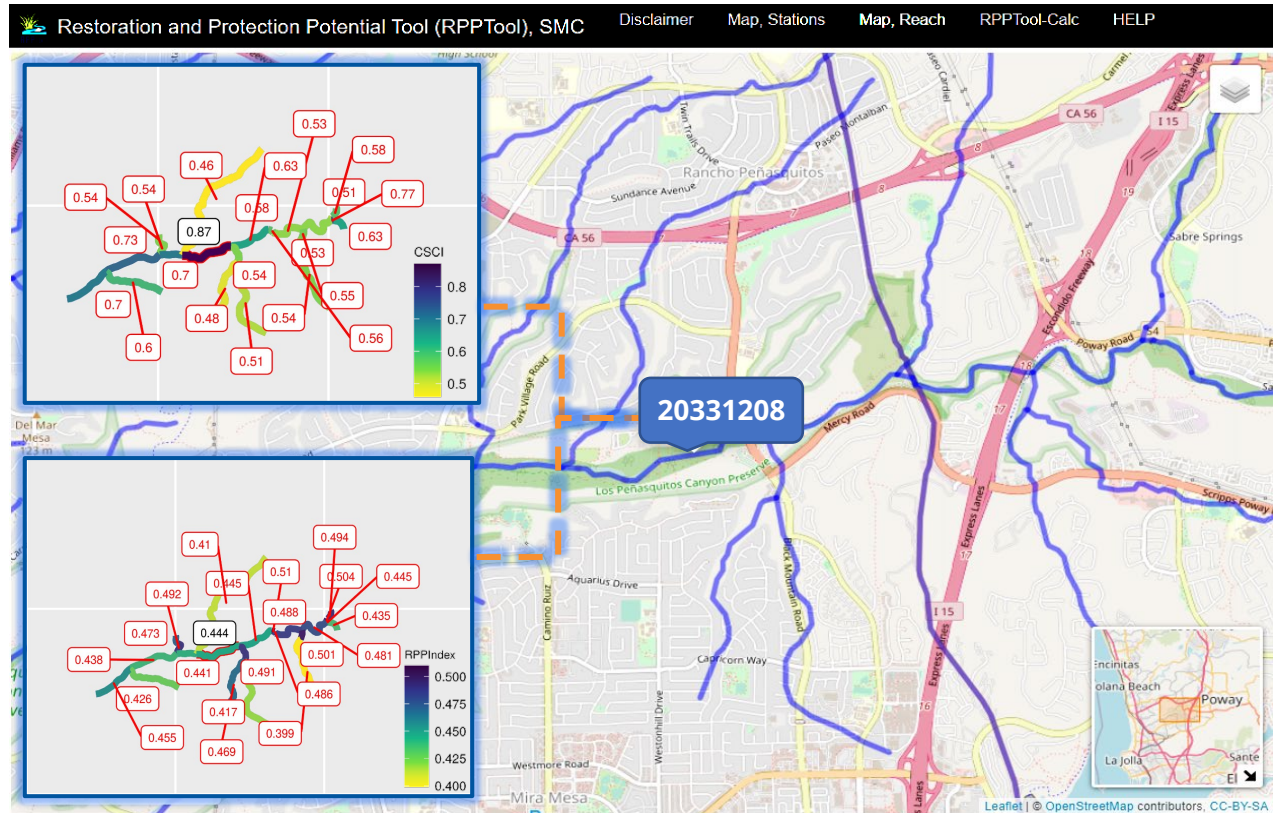
## Overview

RPPTool incorporates analyses of recovery potential factors, threats, and co-benefit opportunities in a systematic way to prioritize waterbodies for restoration or protection.

With the ability for users to adjust scoring weights of specific metrics, RPPTool outputs combined with information from existing planning can provide a powerful approach to target management efforts and achieve meaningful improvements in ecological conditions.

CSCI	BCGTier	BioType	IndexType	RPPIIndex
0.87	3	Observed	Protect	0.444
0.77	4	Observed	Restore	0.445
0.51	5	Predicted	Restore	0.504

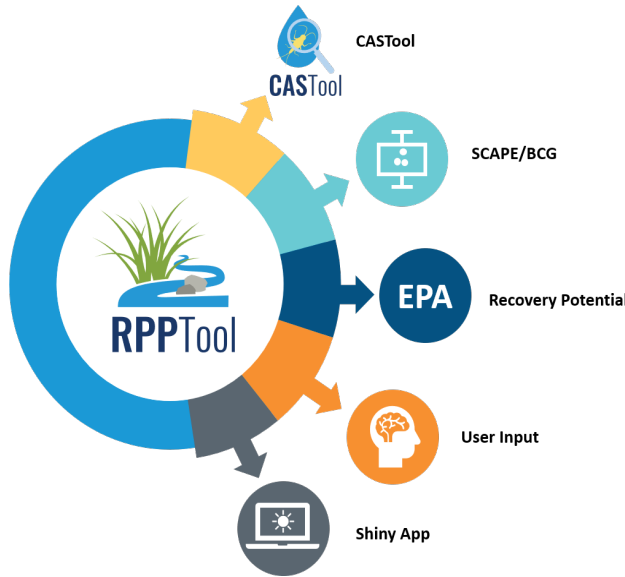
The table above highlights the RPPTool Protection Index Score for the stream reach selected on the map to the right.



Example stream reach map from the web-based version of the tool. The inset figures display the predicted or observed CSCI scores and the calculated RPPIIndex scores for the selected stream reach and connecting reaches. Red labels indicate degraded reaches (restore). Black labels indicate reaches that are not degraded (protect).

**RPPTool provides a transparent framework for water resource managers to support restoration planning and decision making**

# RESTORATION AND PROTECTION INDEX SCORING



## How it Works

### Data

The core data used in the RPPTool include geographic data, observed or measured data, such as measured biological condition on stream samples, and predicted data, such as predicted biological condition based on a model of landscape constraints.

### Scoring

The tool calculates the restoration and protection scores by averaging the scores from the three subindices. Each subindex score is the normalized, weighted average of its component indicator scores, including any user-specified weightings.

### User Interface

RPPTool is available via a user-friendly web-application framework built using Shiny. A more advanced application and enhancements to allow for additional user flexibility may be pursued in the future.

*The index score accounts for threats and opportunities that can affect restoration or protection success*

## RPPTool Index

The RPP Index is comprised of three subindices—Potential, Threat, and Opportunity—that combine to produce a score for each stream reach assessed with the RPPTool. A Restoration Index Score represents the ecological uplift that may be attained through restoration of an impaired reach, resulting in significant improvement of the biological community. The Protection Index Score represents the ecological condition of a reach that is not currently impaired and may be a good candidate for additional water resource protection.

The graphic to the right depicts RPPTool submetric, subindex, and final Restoration Index scores for a biologically impaired reach of the San Diego River.



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