



Piloting the Riparian Rapid Assessment Method in Four Central Coast Watersheds



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What is RipRAM?

Rapid Assessment Methodologies (RAMs) are standardized, qualitative methods for providing low-cost information to natural resource professionals concerned with an area's relative value and ecological function. The **Riparian Rapid Assessment Method for California (RipRAM)** was developed by testing the efficacy of metrics used in other riparian assessment methods from multiple countries at 20 sites in the central coast region of California. A subset of these metrics were then selected based on their ability to detect varying levels of riparian condition in the region. Thus, RipRAM was created as a new assessment method for inexpensively and rapidly assessing California's riparian conditions.

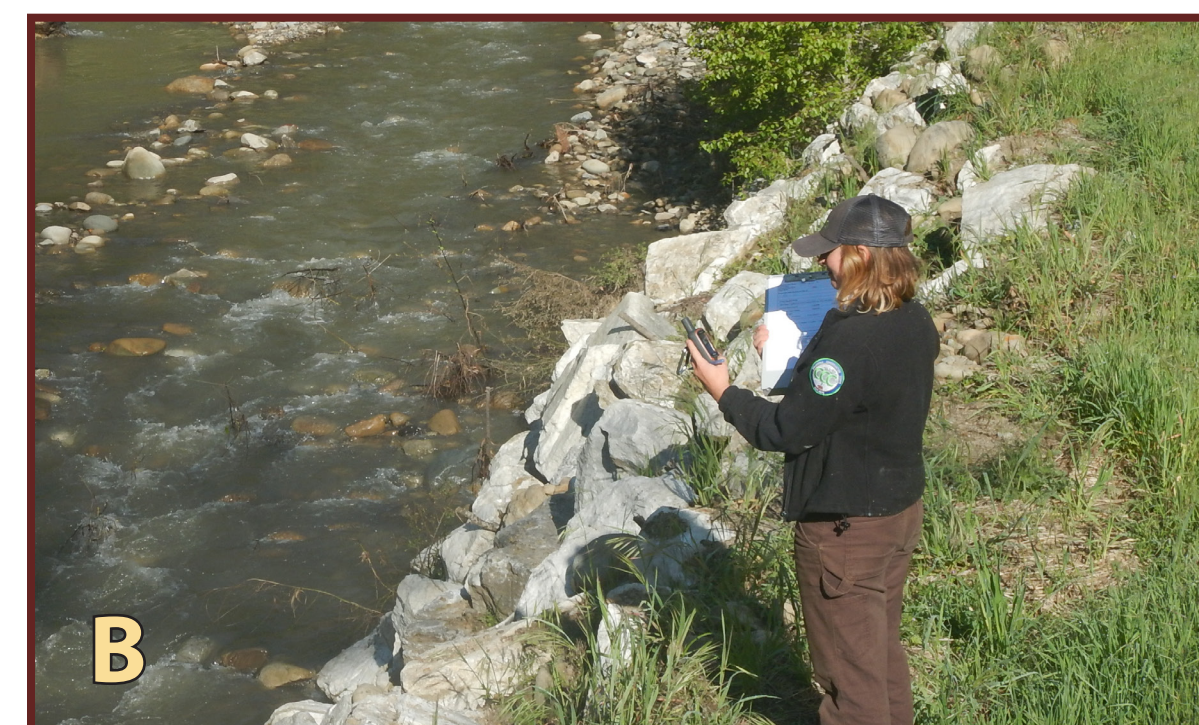
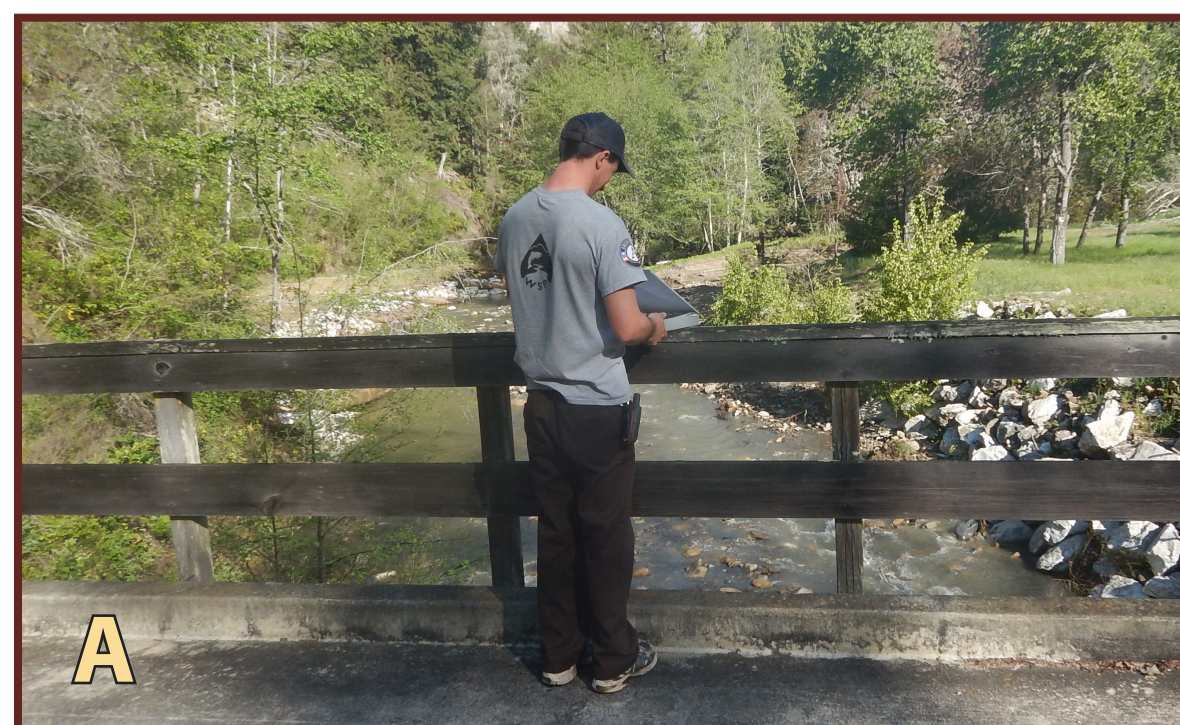
This Project

In its infancy as an assessment tool, RipRAM has not yet been put to use in an applied context. We piloted the use of this methodology to characterize riparian condition in four watersheds in Santa Cruz and Monterey counties in an effort to aid regulators and land managers in their prioritization and allocation of resources.

Methods

Site Selection and Assessment

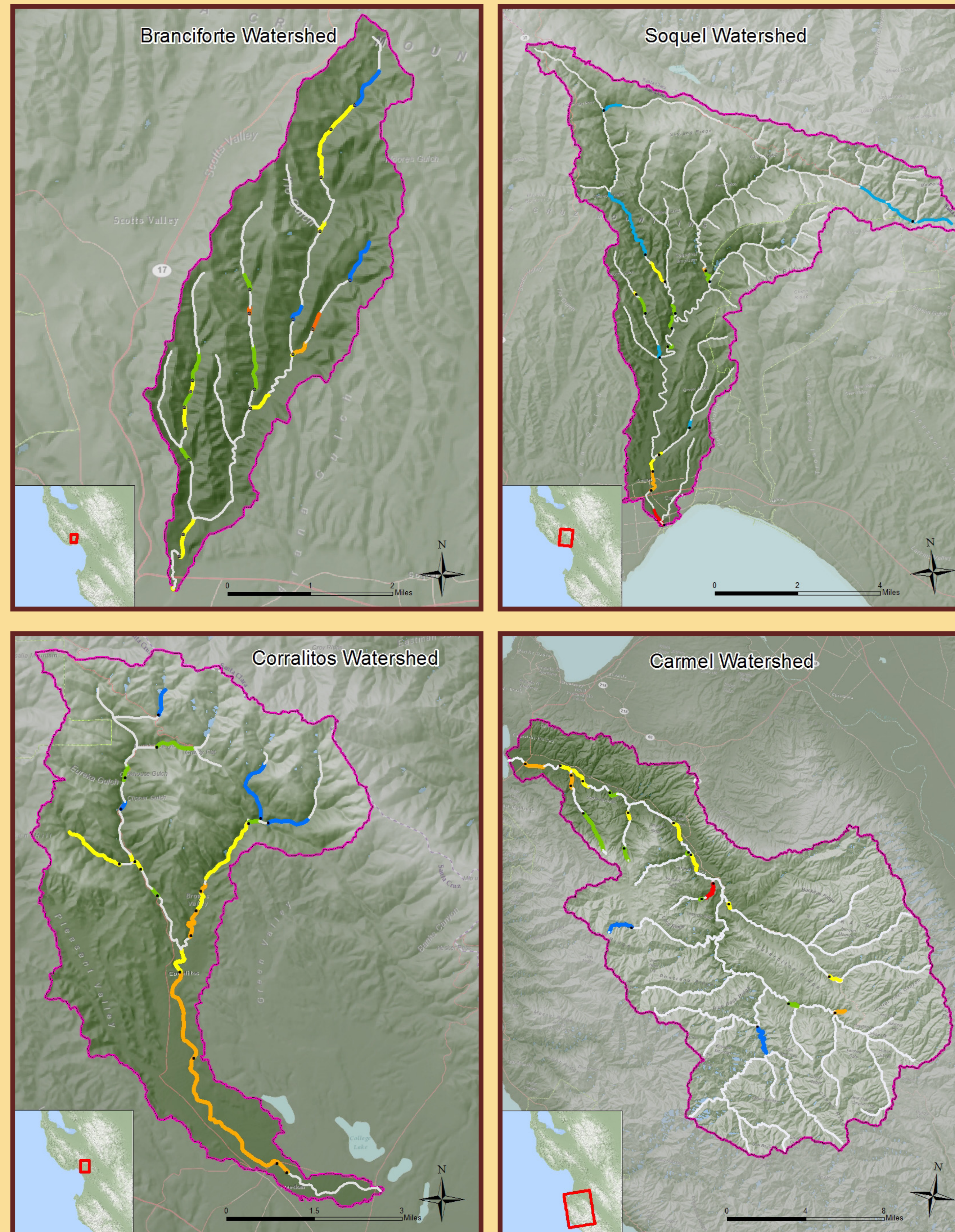
- Four watersheds were assessed: Branciforte, Soquel, Corralitos, and Carmel.
- 20 sites were selected from each watershed based on accessibility and ability to represent riparian quality in the entire watershed.
- At each site, the riparian condition was assessed by at least two trained practitioners using the RipRAM protocol.
- Assessments took between 30-60 minutes to conduct.



A) Using RipRAM, it is possible to assess sites from stream crossings. B) A field manual, datasheet, and GPS are the only tools needed to conduct RipRAM assessments.

Projecting Condition Upstream

An effort was made to determine how far the RipRAM score for a particular assessment area continued upstream. Practitioners traveled upstream via roadways and noted any differences in land use, hydrologic regime or density of invasive plant species that would significantly change the RipRAM score. If no roadway was available, locations of score change were estimated using Google Earth and ArcGIS. These score projection points allowed us to create maps characterizing the riparian quality for a large portion of the four watersheds.

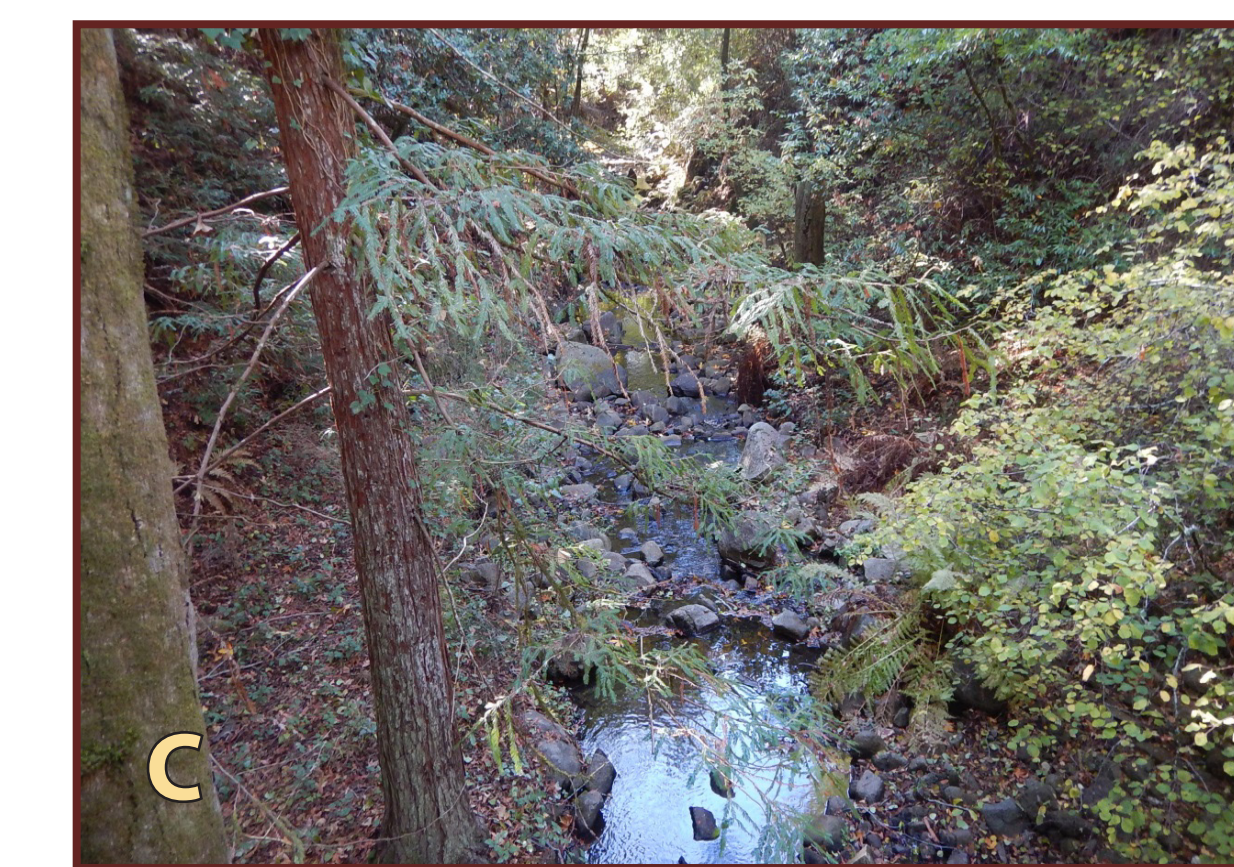


RipRAM Score — Not Assessed — 1 - 39 — 40 - 59 — 60 - 79 — 80 - 89 — 90 - 100

Results

Throughout the four watersheds, there were four sites with scores in the 0-39 range. All had residential development adjacent to the stream edge. Additionally, the majority of the top scoring sites (10 out of the 15 sites that scored above 90) were the highest elevation locations assessed in their respective watersheds and had virtually no streamside development. This suggests that land use immediately around the stream plays an important role in determining riparian condition when employing RipRAM.

These maps provide land managers and regulators with systematic data to describe riparian condition that make it easy to identify both streams in need of restoration as well as those that are worth protecting.



A) Soquel Creek mouth, score = 24. B) An unnamed creek in Carmel, score = 15. C) Branciforte Creek, score = 98. D) An unnamed creek in Corralitos, score = 93.

Acknowledgements

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Future of RipRAM

- Correlate number of sites used in an assessment to the size of the watershed to ensure a more complete characterization.
- Develop a GIS based algorithm to accurately project riparian condition upstream. Calibrate this method using field based projections of condition.
- Continue to characterize more watersheds in the Central Coast, increasing coverage in the region. Incorporate this region-wide data into the Central Coast Regional Water Quality Control Board's online public database.
- Work with the Central Coast Regional Water Quality Control Board to develop specific uses for RipRAM that will support public policy.