

Attachment D: Calculations of Estimated Assessment Costs

Water Code Section 13267 Reporting Requirements

Water Code section 13267, subdivision (b) specifies that the burden to provide the required reports, including the associated costs, must bear a reasonable relationship to the need for the reports and their benefits. Draft Order No. R1-2026-0041 (draft Order) requires that property-wide rural road assessments be completed and technical reports be developed. Technical reports to be developed include property-based *Road Management and Treatment Plans*. These technical reports will describe the spatial distribution and magnitude of potential rural road-related sediment delivery features identified during the road assessment, and include a prioritized treatment plan to reduce sediment-related watershed impacts across the property. These reports are necessary to understand the impacts of sediment on salmonid habitat and municipal, domestic, and agricultural water supplies in the Gualala River Watershed, ensuring any threats to water quality from road-related discharges are properly assessed and prioritized for future treatment.

Cost of Road Assessments and Technical Reports

Landowners subject to the draft Order are required to conduct road erosion assessments of their property and submit technical reports (Road Management and Treatment Plans) to the North Coast Regional Water Quality Control Board (North Coast Water Board). The cost of each road assessment and technical report is based on a combination of field and in-office work performed by Qualified Professionals, as defined in the draft Order (Attachment C). The total hours or cost of work required for each road assessment and technical report depends on a number of property-specific details including the following:

- the total length of road to be assessed,
- proportion of maintained verses abandoned roads,
- time and difficulty to access the assessment areas,
- density of erosion features, and
- speed and efficiency of the professionals involved in conducting the on-the-ground assessments and developing the final Road Management and Treatment Plans.

The estimated cost-ranges described below are based on the use of outside, private sector contractors to provide labor and materials in connection with field assessment and reporting activities. The cost of the work required for the completion of work tasks relies on the information contained in the General Assumptions and Project References section and North Coast Water Board staff professional judgment.

General Assumptions and Project References

Six State of California-funded rural road restoration project proposals submitted between 2020 and 2026 were evaluated to assess the potential range of project costs ([Table D-1](#)). These projects are located in relatively steep, forested North Coast Region watersheds, similar in land use and physiographic nature to the Gualala River Watershed.

Table D-1: Summary of Estimated Costs for Conducting Rural Road Assessments and Technical Report Plan Development in the North Coast Region

Project #	Year proposed	Watershed	Miles to Assess	Total Cost	Cost Per Mile (\$/mile)
1	2020	South Fork Eel River	117	\$495,000	\$4,231
2	2021	South Fork Trinity River	26	\$120,000	\$4,615
3	2025	Eel River	59	\$259,000	\$4,390
4	2025	Eel River	32	\$123,500	\$3,860
5	2025	Big River	100	\$368,500	\$3,685
6 ¹	2026	Gualala River	510-670	\$2,500,000	\$3,800 - 4,800
Range of Cost Per Mile (\$/Mile)					\$3,685 – 4,800

Costs evaluated in these rural road assessment proposals include all the primary work tasks identified in the draft Order, including necessary actions to complete Road Management and Treatment Plans to a level ready to be submitted as a grant package to seek funds for later road improvements. Work tasks and assumptions included in this estimated cost range include:

- Work Task 1: Background studies including evaluation of LiDAR and/or aerial photo analysis to identify roads and access, review historical studies, work scope, etc.);
- Work Task 2: Field preparation including landowner collaboration (e.g., transportation planning,² property history) field map development, field staff training and orientation, etc.;
- Work Task 3: On-the-ground field assessments including geomorphic mapping and complete description of road-related sediment discharge sites, development of preliminary prioritized treatment prescriptions and geo-location of sites;

¹ This Gualala River Watershed road assessment proposal includes an estimated range of miles that could be assessed for the fixed budget amount.

² Transportation planning includes working directly with landowners to identify which roads are needed for year-round, or seasonal use, or which roads may no longer be needed for land management purposes. Individual roads will be evaluated for upgrading or decommissioning treatments in coordination with landowners before the on-the-ground assessment process occurs.

- Work Task 4: Data entry including stream crossing volumetrics and data form compilation;
- Work Task 5: Data analysis including culvert sizing calculations, map generation and database/spreadsheet analysis;
- Work Task 6: Final Road Management and Treatment Plan report preparation including required materials, excavation and future erosion volumes, heavy equipment and labor requirements, and conceptual-level prioritized treatment recommendations; and
- Assumption 1: Potential Class 1 fish barrier sites will be identified in the assessment. However, these sites would require additional engineering beyond the scope of the road assessment described above to implement site-specific fish passage remediation.

Road Assessment and Technical Report Plan Preparation Estimated Cost Summary

Based on the information shown in [Table D-1](#), the estimated costs to complete an ownership-wide rural road erosion assessment and associated Road Management and Treatment Plan could be expected to range from approximately \$3,600 - \$4,800/mile. These estimates are based on project sizes ranging from 26 to 670 total road miles assessed, being completed by a private professional licensed consultant. Because technical report plan development and crew mobilization are built into the unit costs, the costs for completing road assessments and the associated Road Management and Treatment Plans for projects at the lower end of the size ranges would likely be at the higher end of the cost range. Essentially, overall project cost-effectiveness increases with the size of the project. Individual landowners or commercial landowners with staff resources and technical knowledge, experience and/or licensing³ could likely complete the required road assessments and Road Management and Treatment Plans at a significantly reduced cost, compared to hiring a professional private consultant. However, a cost analysis has not been completed to compare these alternatives.

For landowners subject to this draft Order, estimated total costs for a range of landowner size classes are shown in [Table D-2](#) below. These size classes represent the majority of landowners subject to the draft Order. For size classes outside or in-between those shown, costs can be extrapolated from the data table.

Funding and Support Available to Applicable Landowners

Applicable Landowners listed in Attachment A of this draft Order are eligible for contract-funded Assessment support at no cost to the landowner. Applicable Landowners who wish to receive this support should contact North Coast Water Board staff at RB1-Gualala@waterboards.ca.gov by **March 1, 2027**.

³ Technical knowledge, licensing and experience requirements for the draft Order are described in Attachment C of this draft Order: Definitions and Acronyms.

Additional information about potential grants and funding opportunities that may be available to landowners is described in the Staff Report for the Gualala River TMDL Action Plan.⁴ Grants and funding can vary widely in focus, funding amounts, and eligibility requirements. For assistance, contact North Coast Water Board staff at RB1-Gualala@waterboards.ca.gov.

Table D-2: Estimated Costs by Size Class for Conducting Rural Road Assessments and Technical Report Plan Development.

Landowner Assessment Size Class (Road Miles)	Cost Range (\$/Mile)	Total Road Assessment and Technical Reporting Plan Cost Range (\$)
2	\$3,600 - \$4,800	\$7,200 - \$9,600
5	\$3,600 - \$4,800	\$18,000 - \$24,000
10	\$3,600 - \$4,800	\$36,000 - \$48,000
25	\$3,600 - \$4,800	\$90,000 - \$120,000
50	\$3,600 - \$4,800	\$180,000 - \$240,000
100 ⁵	\$3,600 - \$4,800	\$360,000 - \$480,000
250 ⁵	\$3,600 - \$4,800	\$900,000 - \$1,200,000
400 ⁵	\$3,600 - \$4,800	\$1,440,000 - \$1,920,000

⁴ See section 4.4: [Sources of Funding and Assistance Organizations](https://www.waterboards.ca.gov/northcoast/board_info/board_meetings/02_2026/pdf/6/6-gualala-staff-rprt.pdf) (https://www.waterboards.ca.gov/northcoast/board_info/board_meetings/02_2026/pdf/6/6-gualala-staff-rprt.pdf).

⁵ Landowners with over 100 miles of road are likely to have completed road assessments and implemented road erosion improvement activities to meet existing regulatory requirements across portions of their ownerships. Once approved by the North Coast Water Board through the process described in Required Actions A.2 and D.3 of the draft Order, previously completed assessments and/or treatments would reduce the total road mileage required to be assessed by the landowner(s) under this draft Order.