

EVALUATING STREAM CORRIDOR RESTORATION ALTERNATIVES

USING A MULTI-CRITERIAL DECISION MODEL

By

Willibald G. Kerschbaumsteiner

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Major Professor: George H. Belt, D.F.

Professor of Forest Resources, Emeritus

ABSTRACT

Stream corridor restoration is of growing concern in the United States and worldwide due to the increasing use of freshwater resources and the extensive degradation of stream corridors and wetlands. Hence, there is a real need for stream-corridor restoration projects and techniques for formulating and evaluation alternative restoration strategies.

The paper presents a straightforward decision model for stream corridor restoration that employs a goal-based methodology and a multi-criteria technique, utility analysis, as aids in decision making. Utility analysis allows consideration of ecological, socioeconomic, and recreational goals, without monetary valuation, using a subjective weighting system. The Rosgen Stream Classification system is used for estimating changes in stream condition from the current condition to the desired future, or restored condition. The importance of the decision model as an aid to, rather than a replacement for, professional judgment, is highlighted. The decision model is particularly suited for applications where a readily explainable technique is required but time, funding or professional expertise are limited. A case study of stream corridor restoration in Northern Idaho, USA is included for clarity.

Study Site:

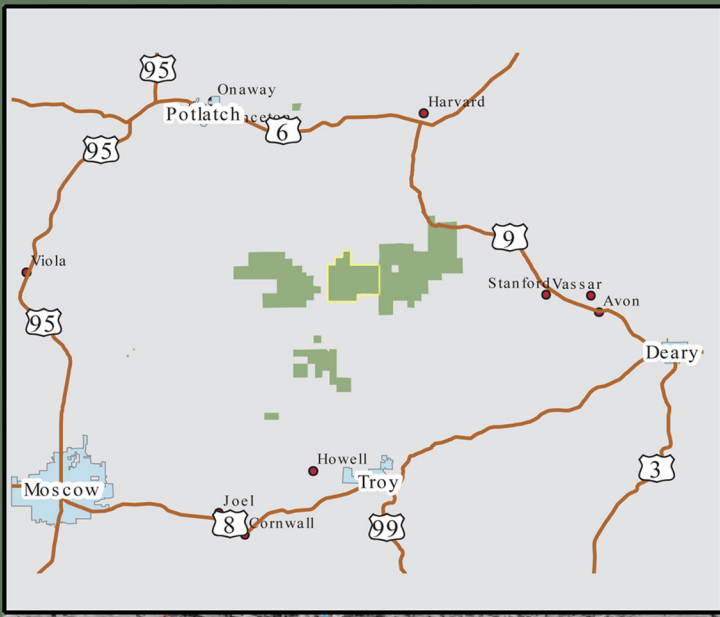
The study was conducted in the East Hatter Creek drainage of Northern Idaho, on a one mile stretch of the creek where the stream channel is in poor condition, degraded from cattle movement.



Figure 4: East Hatter Creek stream bank degraded by cattle use

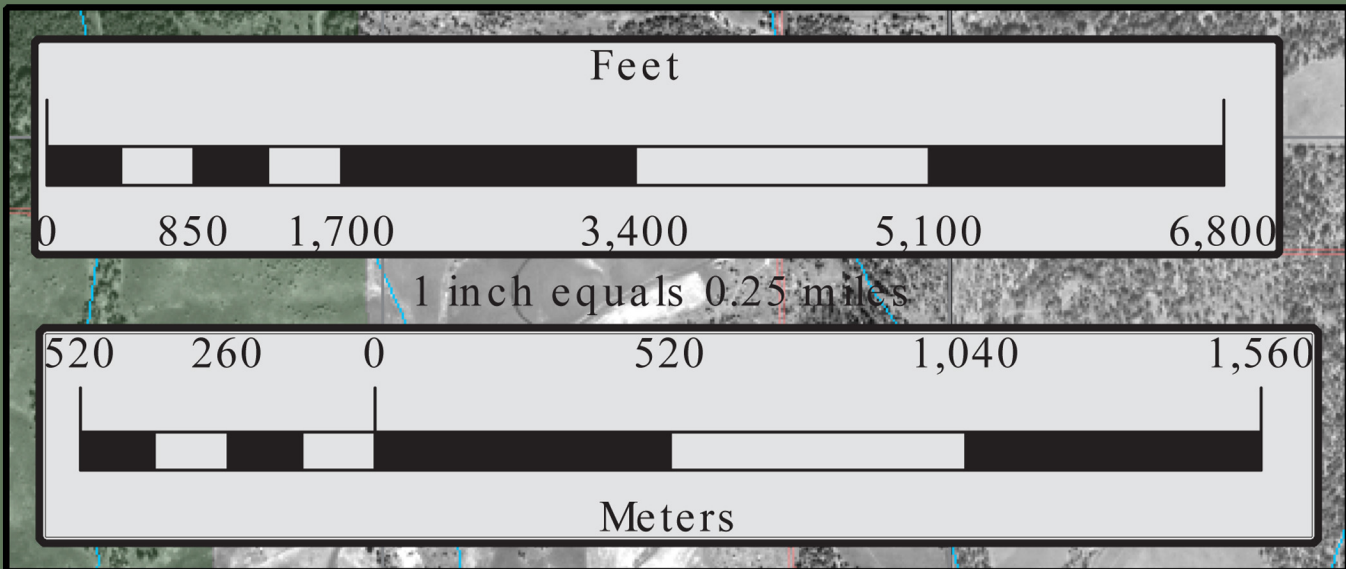
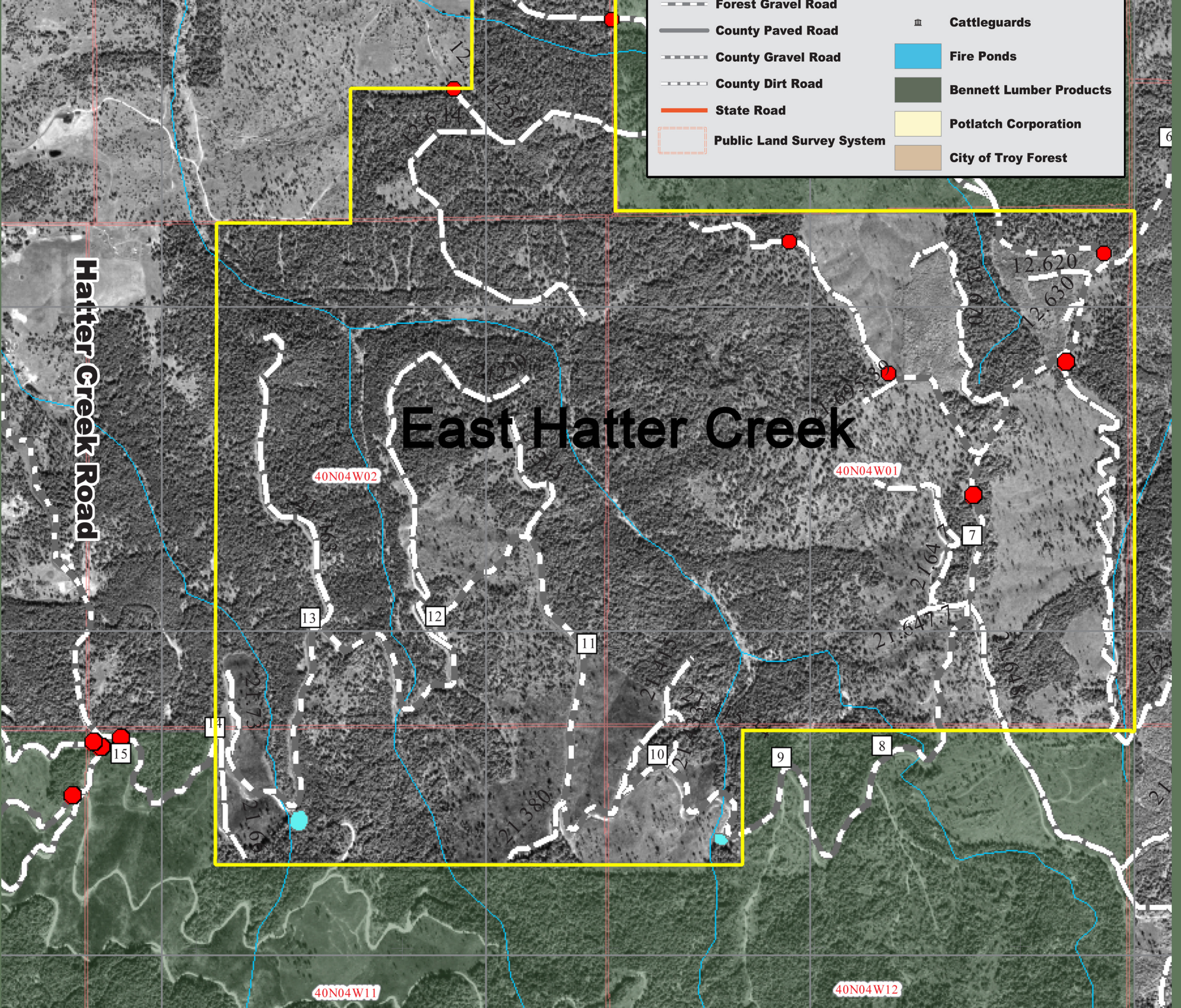


Figure 5: East Hatter Creek stream crossing showing sediment accumulation



UI Experimental Forest Administrative Map 2004

- | | |
|---------------------------|-------------------------|
| Running Surface Water | Forest Gates |
| Railroad Grade | CB Mile Markers |
| Forest Gravel Road | Cattleguards |
| County Paved Road | Fire Ponds |
| County Gravel Road | Bennett Lumber Products |
| County Dirt Road | Pottlatch Corporation |
| State Road | City of Troy Forest |
| Public Land Survey System | |



East Hatter Creek



Location of Complete Research:

Author & Title: [Kerschbaumsteiner, Willibald G.
Evaluating Stream Corridor Restoration Alternatives
Using Multi-Criteria Decision Model](#)

University of Idaho Library:

Call Number- [Not found in Library's data base.](#)

College of Natural Resources:

Department- [Forest Resources](#)

Other Sources: