



Lower Squaw Creek Restoration Public Workshop

for

*The Friends of Squaw Creek
Truckee River Watershed Council
Sierra Nevada Conservancy*

Prepared by:

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May 15, 2008

Funding for this project has been provided by the Sierra Nevada Conservancy, an agency of the State of California

Sound Watershed Consulting

Creating Functional Water Environments

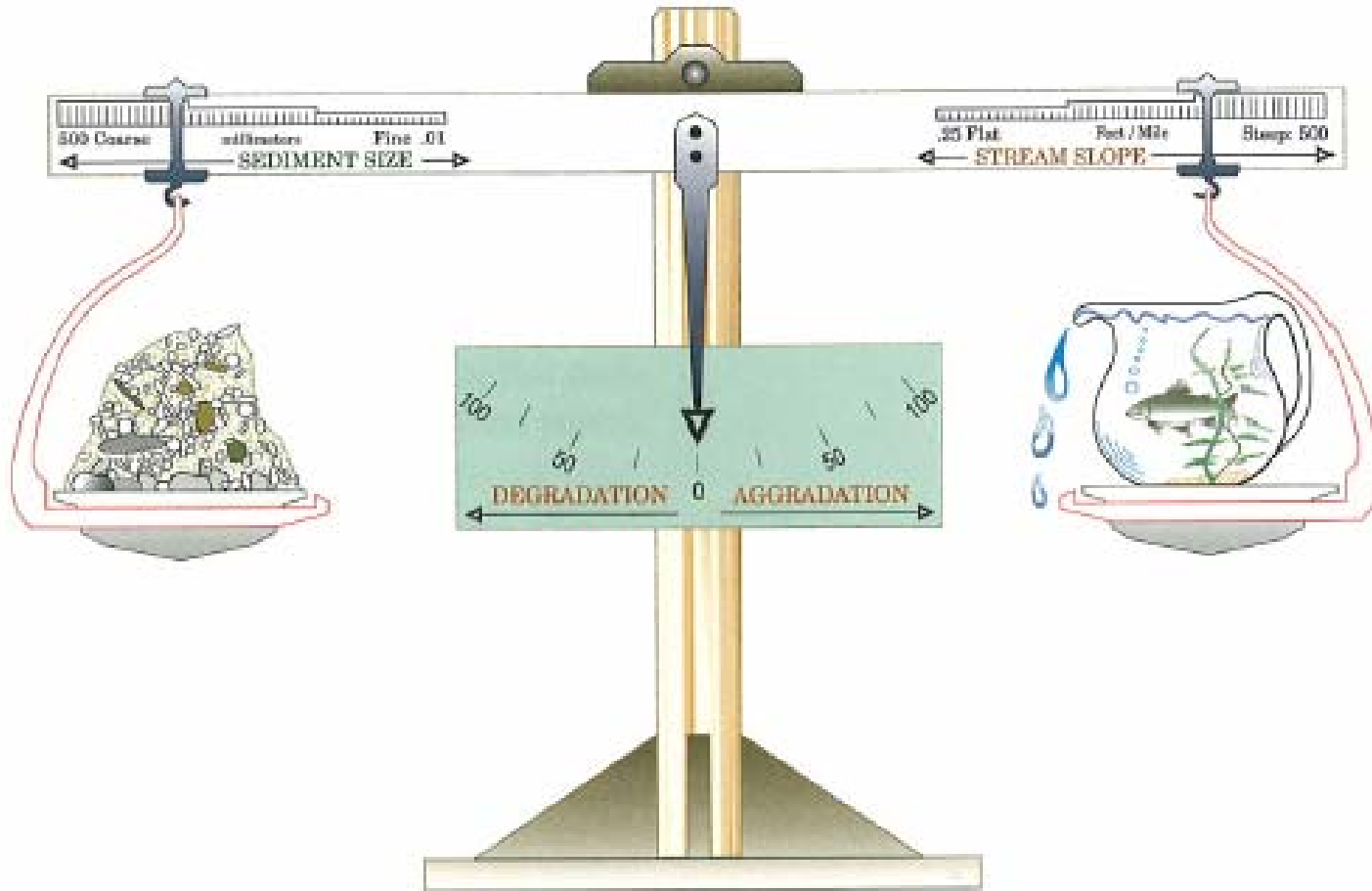


*Interpretation of Key Processes:
the Technical Basis of our Concept Plan*

May 15, 2008



Stable Channel Requirements

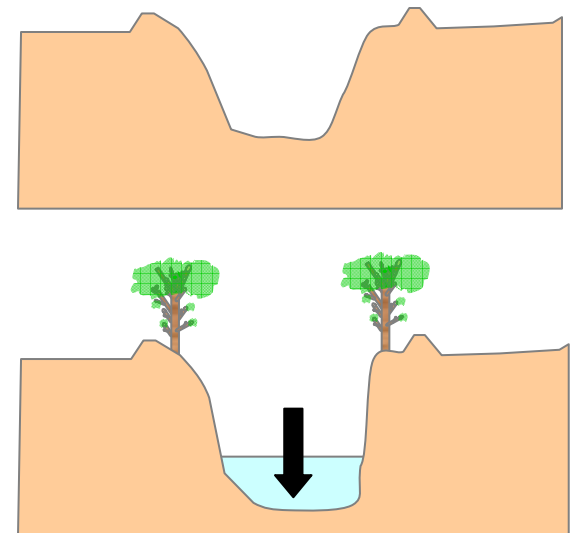


$$(\text{Sediment LOAD}) \times (\text{Sediment SIZE}) \approx (\text{Stream SLOPE}) \times (\text{Stream DISCHARGE})$$



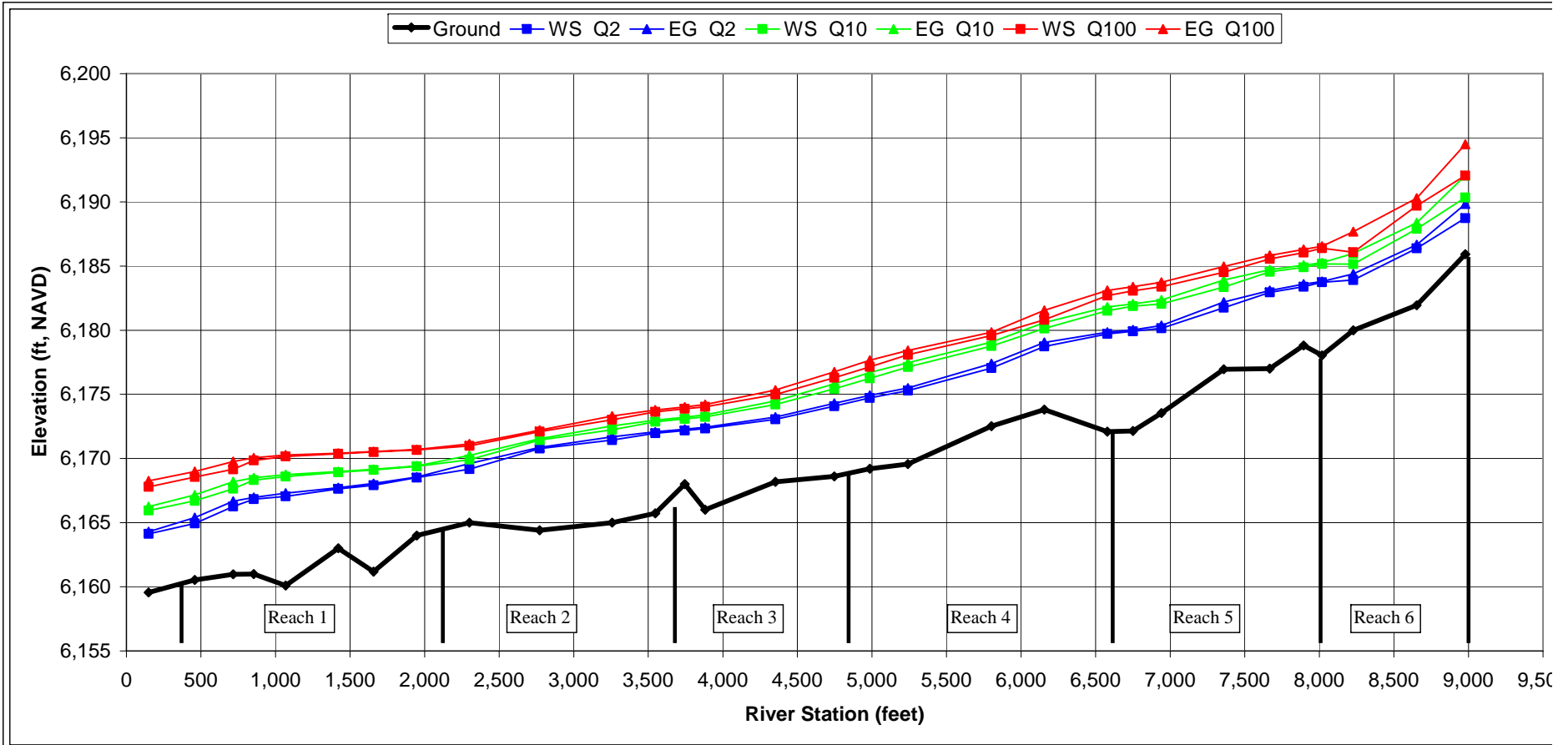
Current Dysfunctional Processes

- Bedload Sediment Supply
- Flooding & Floodplain connectivity
- Maintenance of Flood Channels
- Wetland & Ponds
- Riparian Structure & Composition
- Channel Incision





Hydraulic Model



Notes
Source

figure X
Lower Squaw Conceptual Restoration Plan

Channel Bed and Hydraulic Profile

PWA Ref 1797





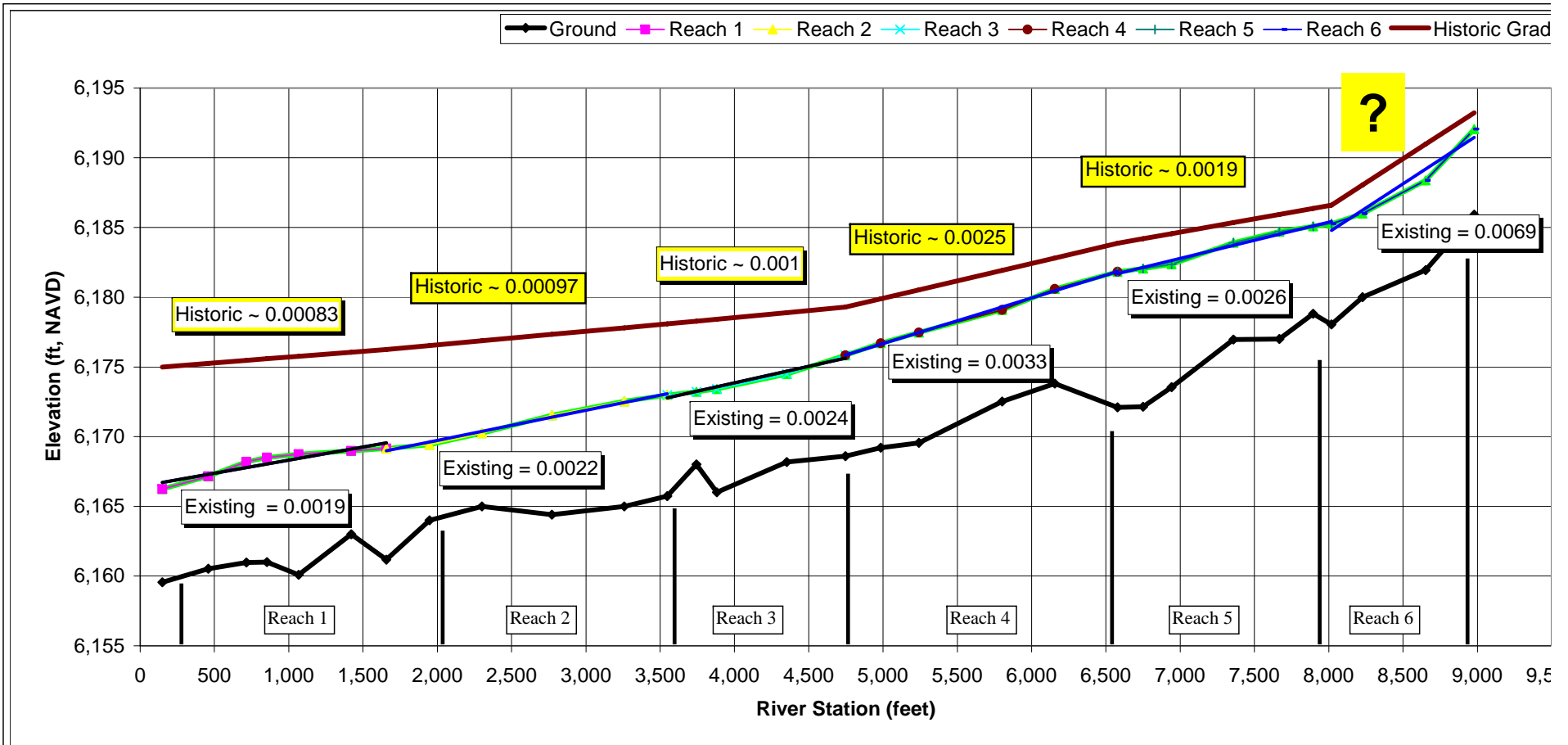
Channel Sinuosity & Grade



- Functional Increase in grade of 227%



Channel Sinuosity & Grade



Notes
based on HEC-RAS Q10 Energy Grade

figure X
Lower Squaw Conceptual Restoration Plan

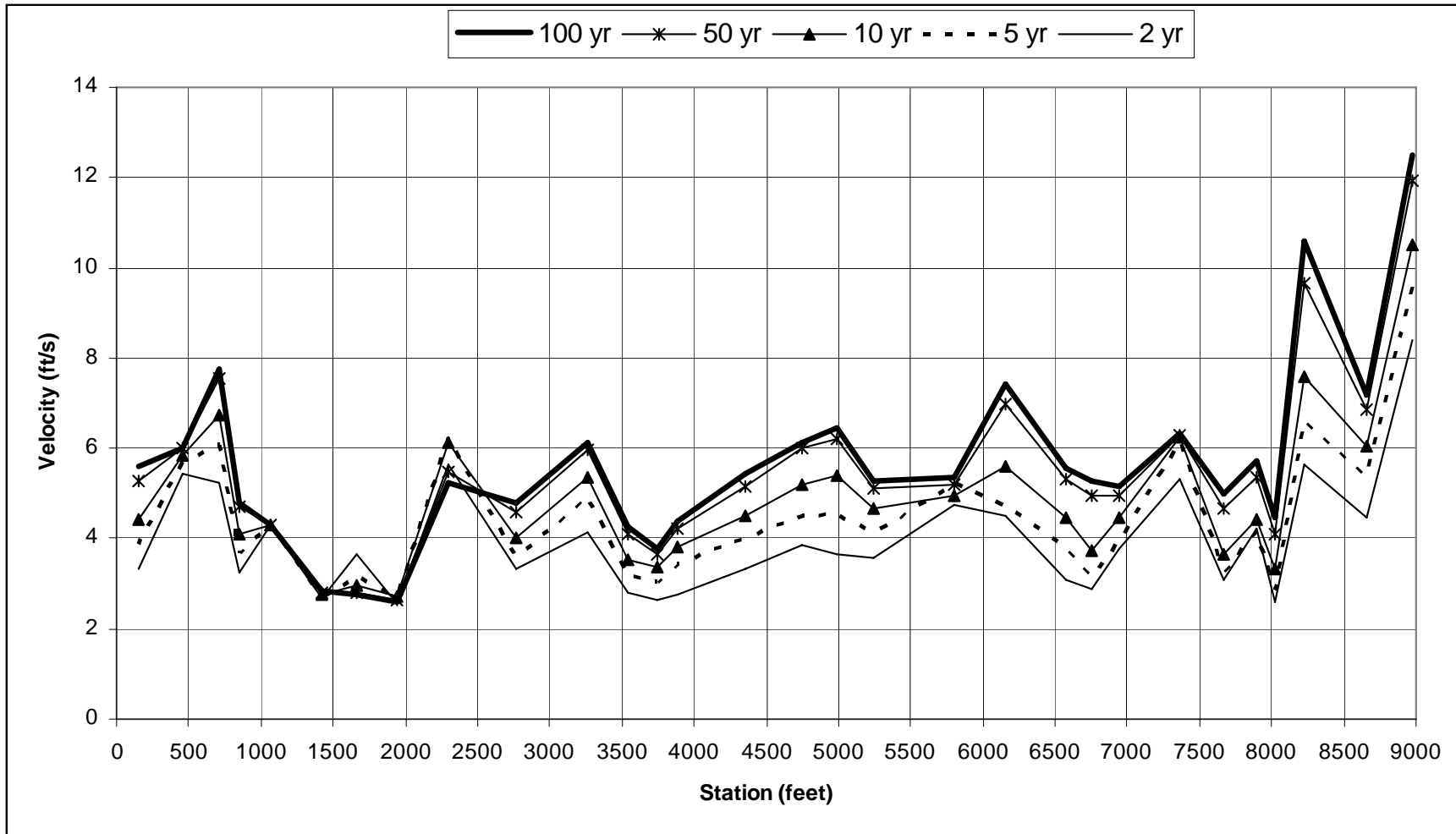
Channel Bed and Hydraulic Profile

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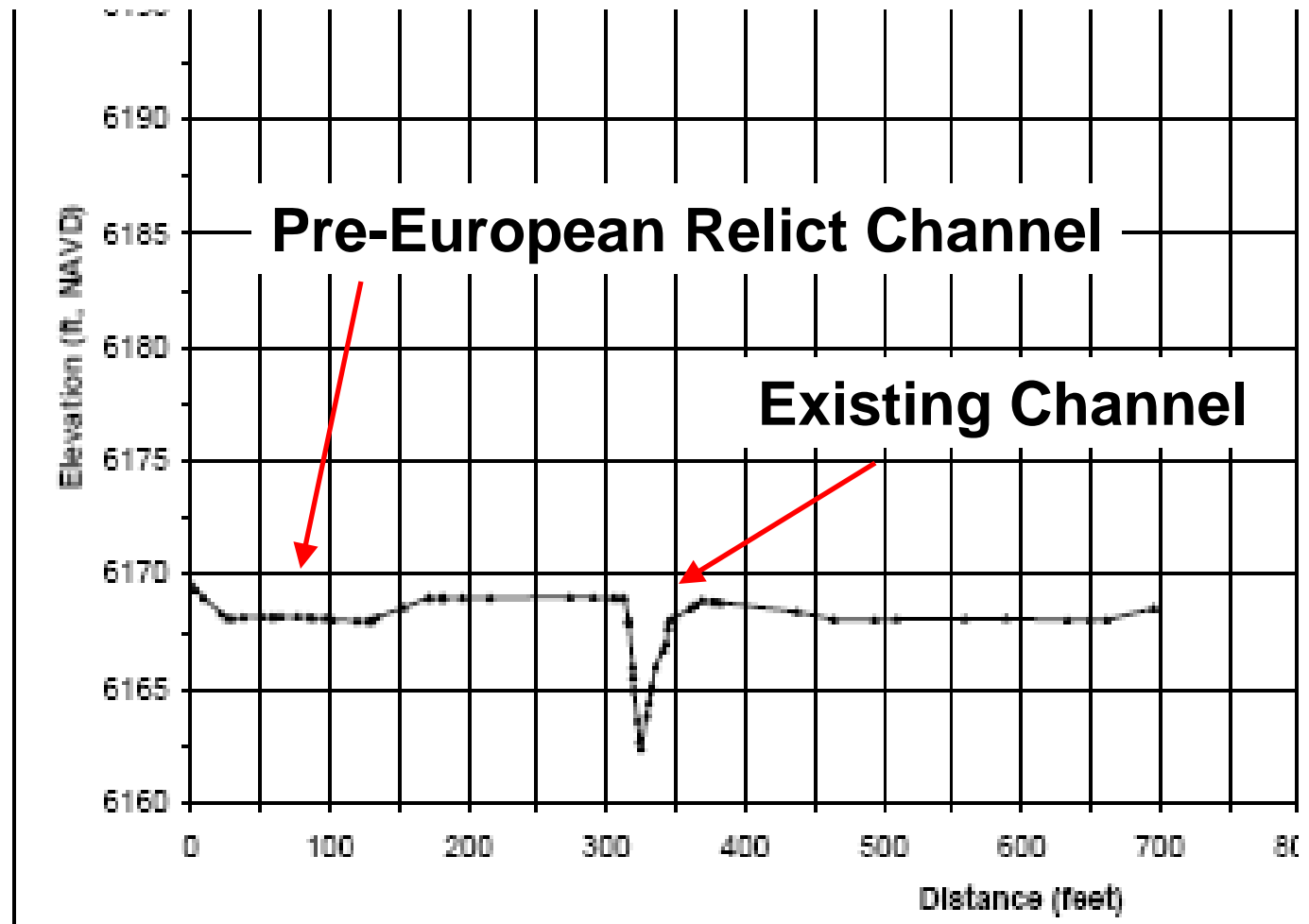


Hydraulic Model





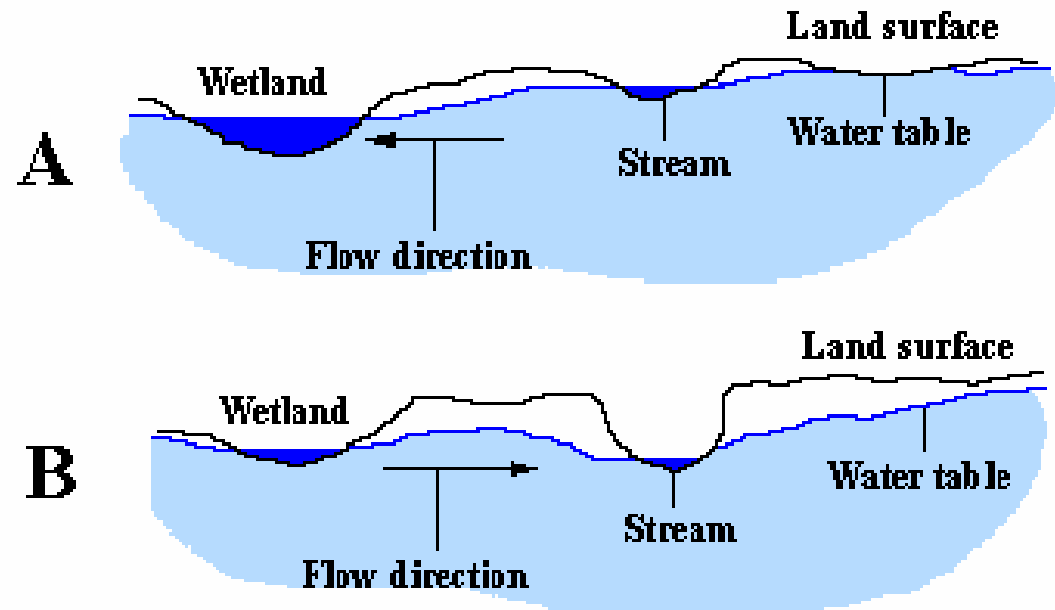
Valley Cross Section





Floodplain Storage

- Use floodplain to store water for summertime water supply to creek





Bedload Sediment Supply

- Trapezoidal Channel





Geomorphic Evolution

