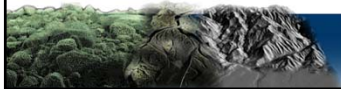
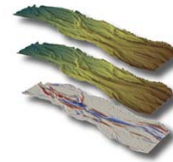

GEOMORPHIC CHANGE DETECTION (GCD): Restoration Monitoring Workshop

ICRRR Workshop

May 7-9, 2012



INSTRUCTION TEAM

- Joseph Wheaton
- Philip Bailey
- Sara Bangen
- Susannah Erwin
- Nicole Czarnomski
- Kenny DeMeurichy



Course Coordinator

- Enid Kelly

<http://gcdworkshop.joewheaton.org/syllabus/instructor>



BY END OF WORKSHOP

You should understand:

1. GCD techniques and how they are applied to restoration monitoring
2. How to account for unreliability uncertainties in DEMs
3. How to interpret DoDs

GCD \neq Glenn Canyon Dam
GCD = Geomorphic
Change Detection



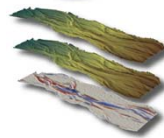
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DoD \neq



DoD = DEM of Difference =



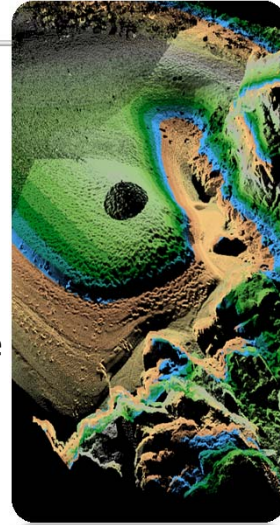
WORKSHOP LEARNING OUTCOMES

- A comprehensive overview of the theory underpinning geomorphic change detection
- Instill background necessary to design effective repeat topographic monitoring campaigns and distinguish geomorphic changes from noise (with particular focus on restoration applications)
- Methods for interpreting and segregating morphological sediment budgets quantitatively in terms of both geomorphic processes and changes in physical habitat
- Hands-on instruction on use of the [GCD software](#) through group-led and self-paced exercises
- An opportunity to interact with experts on geomorphic monitoring and the software developers of GCD to help you make better use of your own data



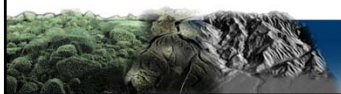
WORKSHOP CAVEATS

- Emphasis is on Concepts & Application.. Not the Tools
 - Assume you know enough GIS to be dangerous
 - Assume you knew/know how to build DEMs but could use a refresher
 - Arc is buggy & expensive; Our software is Free (i.e. it also has bugs!); EXPECT CRASHES
 - Lots of way to do GCD... not advocating any single approach



MEALS & LOGISTICS

- Given that we plan to overload you...
- We're taking care of some meals
 - Coffee & Snacks - Quadside
 - Lunch Tomorrow (fill out card and give to Enid)
 - Dinner Tonight @ 7:00 at Elements
- Anything (within reason)... ask



WORKSHOP BIG PICTURE PLAN

- A. DAY 1 – All About Distinguishing Signal From Noise
- B. Day 2 – Interpreting the Signal & Cool Applications (Field Trip too)
- C. Day 3- Hands-On with your own data



- Attempt not to have any lecture longer than 30 minutes...
- Intersperse Lectures with Discussions & Hand-On Exercises



WORKSHOP PLAN

- Outline... Website

A Plan.. Not a Contract

WHERE HAVE WE APPLIED THIS?

- River Feshie, Scotland
- River Rees, New Zealand
- Bridge Creek, Oregon
- Asotin Creek, Washington
- Logan River, UT
- Sulphur Creek, California
- Mokelumne River, California
- Yuba River, California
- Highland Water, England
- Provo River, Utah



- Grand Canyon, Arizona
- Yampa River, Colorado
- Trinity River, California
- Lemhi River, Idaho
- Salmon Falls Landslide, Idaho



WHERE WE'LL TAKE YOU IN WORKSHOP

