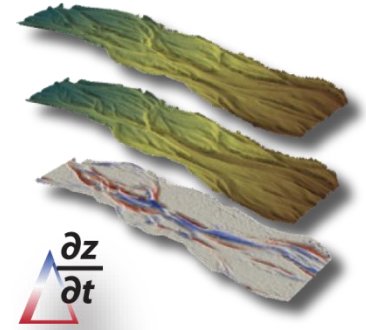


GEOMORPHIC CHANGE DETECTION

O. WORKSHOP SYNTHESIS



WORKSHOP PLAN ... (MORNING)



A. Introductions



B. Applications of Change Detection



C. Review of Topographic Surveys & Data



D. Review of Building DEMs



E. Essential Best Practices to Support GCD



F. Traditional Approaches to Change Detection










G. Change Detection in GCD



H. Thresholding Alternatives

A Plan.. Not a Contract

WORKSHOP PLAN ... (AFTERNOON)

- 
- I. Approaches to Estimating Error
- 
- J. Spatially Variable Error Modelling
- 
- K. Spatially Variable – Into to Fuzzy Error Modelling
- 
- L. GCD Budget Segregation
- 
- M. Interpreting Outputs of GCD
- 
- N. Self Paced Change Detection Exercise
- 
- O. Recap & Synthesis**



WE CAN NOW TURN THE HOSE OFF



MAIN TAKE HOMES

- With error modeling, start simple, see if its good enough, and invest more effort only as needed
- Budget Segregation Extremely Flexible Way of Getting More Out of GCD
- Be Adaptable when Designing & Implementing Monitoring Campaigns... Hybrid A Reality
- 10% of Effort is Analysis – 90% is Data Preparation (e.g. Grid Concurrency; Building Surfaces; Removing Systematic Bias)
- Leave time for interpretation & combine multiple lines of evidence!



ARE WE THERE YET?

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

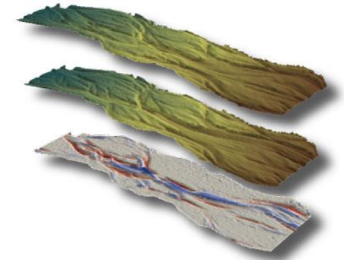
GCD \neq Glenn Canyon Dam
GCD = Geomorphic
Change Detection



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