

# Core monitoring

**Core Monitoring Information Need:** Core monitoring is consistent, long-term, repeated measurements using set protocols and is designed to establish status and trends in meeting specific management objectives. Core monitoring is implemented on a fixed schedule regardless of variable factors or circumstances (e.g., water year, experimental flows, temperature control, stocking strategy, non-native control, etc.) affecting target resources.

# The value of having a core monitoring plan

- Decisiveness
- Consistency
- Longevity

# Assumptions

- Development is collaborative (TWG Ad Hoc)
- Use available technology, as appropriate
- Remote sensing is integral
- Minimalist framework
- Meet the needs of stakeholders
- Assume level funding
- 40-60% of our budget
- Build for consistency
- Build for longevity (10+ years)
- Based on solid experimental design and power analysis
- Reviewed by SAB, TWG and AMWG

# Core Monitoring

- Resources to be monitored:
  - A. Sediment
  - B. Vegetation
  - C. Fish
  - D. Food base
  - E. Cultural Resources
  - F. Hydrology
  - G. Water Quality
  - H. Recreation
  - I. Threatened and endangered species

# For Each Resource....

- What do managers want to know?
- Where do they want to know it?
- How frequently do they need to know?
- What are the general methods to obtain this information?
- What is the level of accuracy needed

# Hydrology

- What: Flows (CFS) in various points in the mainstem and certain tributaries?
- Where: CRE- Lees Ferry, Sixty-mile, Grand Canyon, Diamond Creek, Paria, LCR, and selected lesser tributaries in Marble Canyon
- When: Continuous
- Methods: Selected Conventional Combined with Surrogate In Situ Monitors and USGS Gauges



# Sediment

- **What:**
  1. Is there any significant change in the trend of sand storage over time?
  2. What is the effect of natural perturbations on sediment storage?
- **Where:** Lees Ferry, Marble Canyon, below the Lower Colorado River
- **How often:** Fine sediment storage- every 2 years
- **Methods:** Sand bar area & Volume  
Mass balance sediment transport determinations