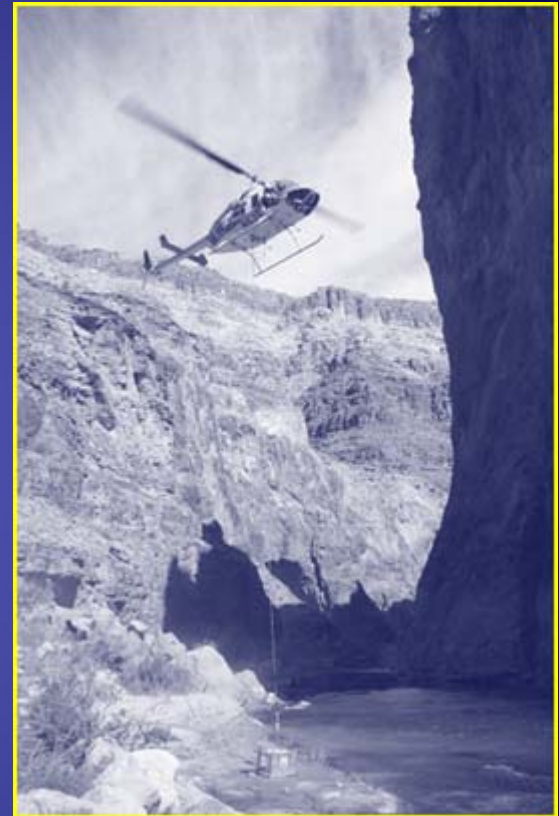


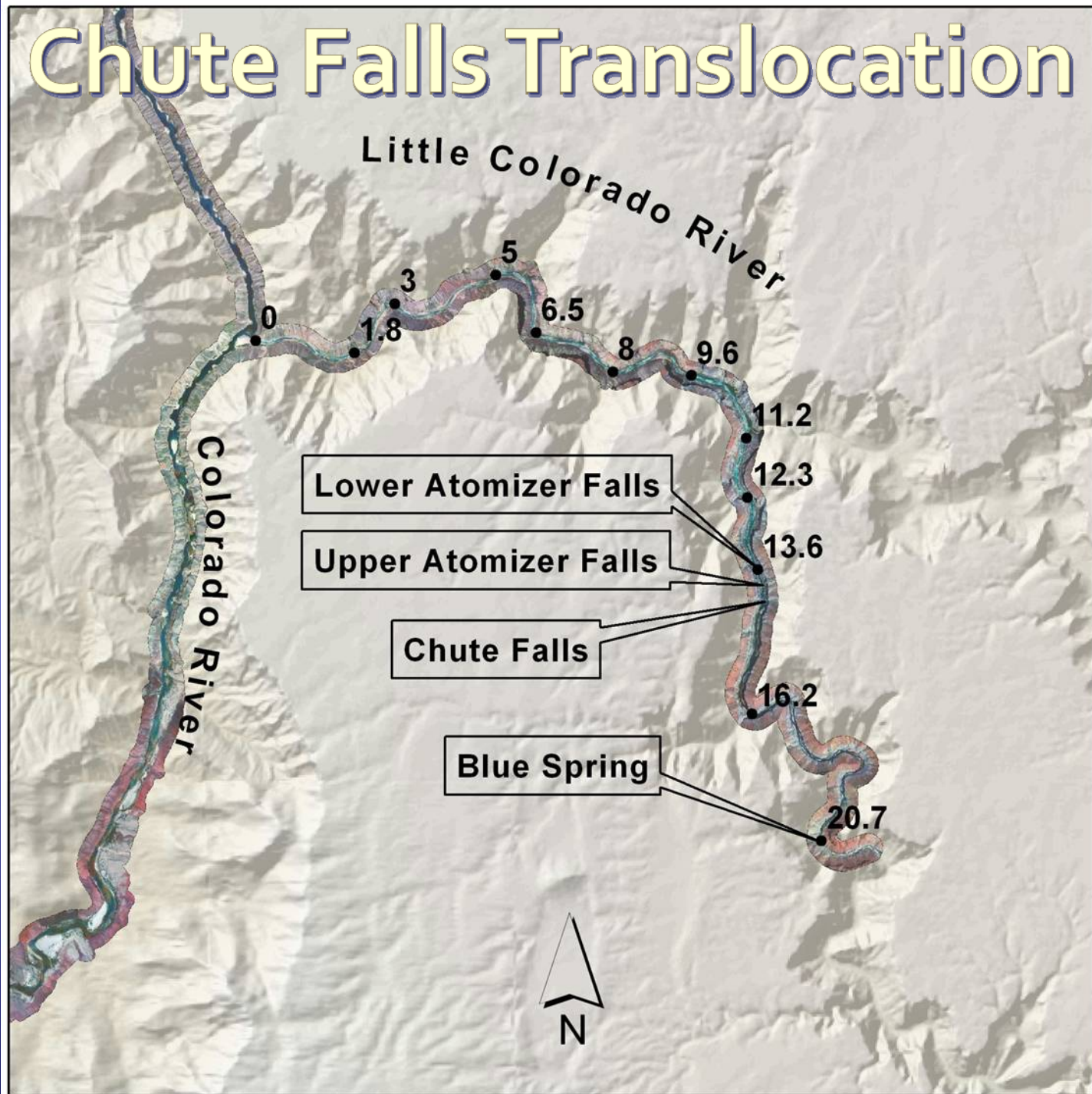
Glen Knowles and Melissa Trammell
U.S. Fish and Wildlife Service
National Park Service
September 9-10, 2008 AMWG Meeting



HUMPBACK CHUB TRANSLOCATION



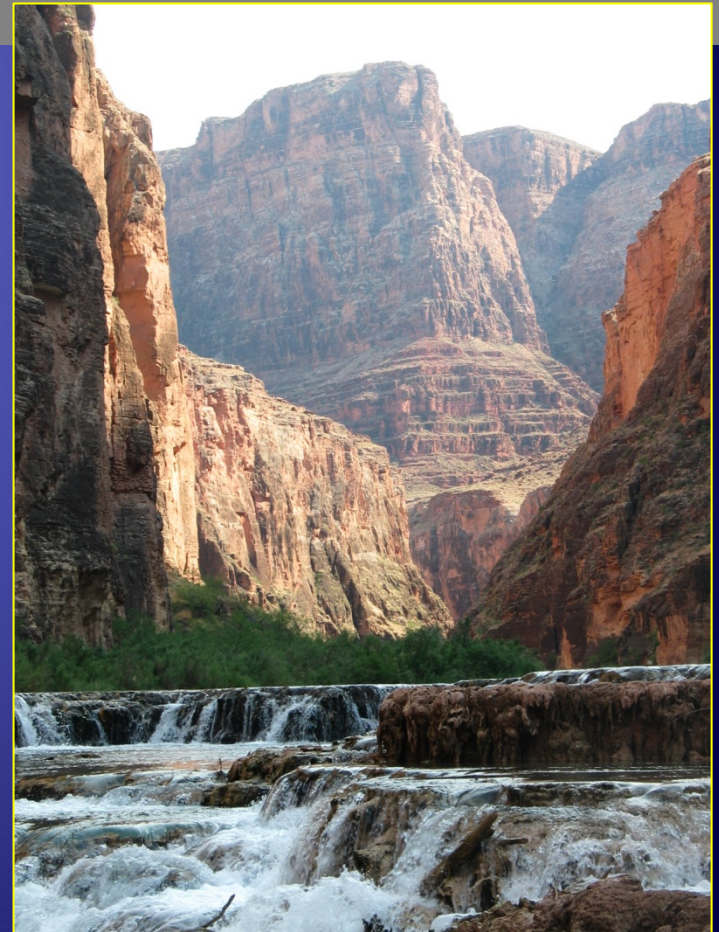
Chute Falls Translocation



Chute Falls Translocation

2003-2005

- ◆ Conservation Measure of 2002 BO
- ◆ Translocated 1,167 juvenile humpback chub 50-120 mm TL (2003=300, 2004=300; 2005=567)
- ◆ Marked with elastomer tags
- ◆ Reduced mortality of young chubs
- ◆ Increased abundance of HBC
- ◆ Better understanding of life history



Chute Falls Translocation

2003-2005

- ◆ Fastest growth rates ever recorded 6-10.4 mm/month; 2yr old fish >200mm
- ◆ Spawning indicated by presence of fish in breeding condition and fry
- ◆ Movement of marked wild fish from below the falls
- ◆ Increased demographic range by 4km
- ◆ Numbers in adult population now likely 5-10%



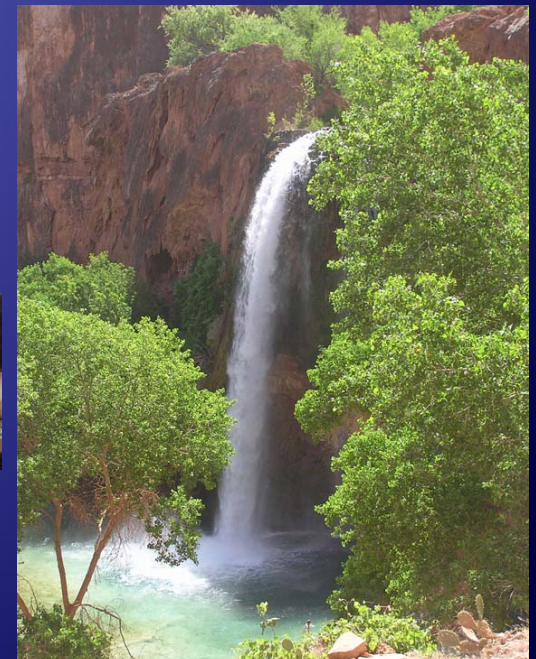
Chute Falls Translocation 2008

- ◆ Conservation Measure of 2008 BO
- ◆ 299 Juvenile humpback chub translocated 17-21 July 2008
- ◆ All PIT tagged
- ◆ Mean size 117 mm TL
- ◆ Translocation also planned for 2009
- ◆ 2010-12 will be dependent on monitoring results
 - ◆ Approximate natural population size and age distribution
 - ◆ Maintain population at a minimum of 200 individuals



Tributary Translocation History

- ◆ Tributaries assessed and selected for translocation
 - ◆ Valdez et al. 2000; SWCA and Grand Canyon Wildlands 2007)
- ◆ Shinumo Creek
 - ◆ Barrier to main channel
 - ◆ No interagency issues
 - ◆ Good temperatures and Acceptable base flow
- ◆ Havasu Creek
 - ◆ Similar to LCR in temperature and base flow
 - ◆ Few nonnative fishes
 - ◆ Barrier to main channel
 - ◆ Havasupai Tribe
- ◆ Bright Angel Creek
 - ◆ Good base flow
 - ◆ Accessible
 - ◆ Cool temperatures
 - ◆ Nonnative fishes/sportfish



2008 Shinumo translocation

- ◆ NPS Project Lead
- ◆ Cooperative Effort
 - ◆ among NPS, BOR, FWS, AGFD, GC Wildlands Council, volunteers
- ◆ 200 fish collected in July
 - ◆ Held for treatment at Bubbling Ponds Fish Research Center
 - ◆ To eliminate Asian tapeworm and Lerneia parasites
- ◆ Additional 100 to be captured Sept 20-Sept 25th
- ◆ HBC smaller than expected (43-73mmTL)
 - ◆ Most too small to PIT tag
- ◆ HBC will be held overwinter to grow to PIT taggable size (70 mmTL)
- ◆ Translocation to Shinumo scheduled for Spring 2009
 - ◆ NPS helicopter will deliver HBC
 - ◆ Preceded by nonnative removal pre-treatment
- ◆ Monitoring schedule
 - ◆ Fall 2009
 - ◆ Spring 2010
- ◆ 3-year plan
 - ◆ Evaluation of initial results
 - ◆ Additional fish in out years



Translocation Future

- ◆ Conservation Measure in 2008 BO
 - ◆ *Humpback Chub Translocation – In coordination with other Department of the Interior (DOI) AMP participants and through the AMP, Reclamation will assist NPS and the AMP in funding and implementation of translocation of humpback chub into tributaries of the Colorado River in Marble and Grand canyons.*
 - ◆ Translocation Plan
 - ◆ BOR/NPS
- ◆ Havasu Creek
 - ◆ Discussions ongoing with FWS, NPS, AGFD, Havasupai Tribe
- ◆ Bright Angel Creek
 - ◆ Nonnative fishes





A Big THANKS

- ◆ To all the cooperators who have helped make this project happen
- ◆ FWS – Pam Sponholtz and crew
- ◆ AGFD – Bill Persons and David Ward
- ◆ BOR – Dennis Kubly and Dave Speas
- ◆ NPS – Norm Henderson, Steve Mietz, Jan Balsam, Martha Hahn
- ◆ WILDLANDS COUNCIL – Larry Stevens, Kelly Burke, Emily Omana
- ◆ Bill Leibfried

HBC at Bubbling Ponds



Photo courtesy of David Ward, AGFD