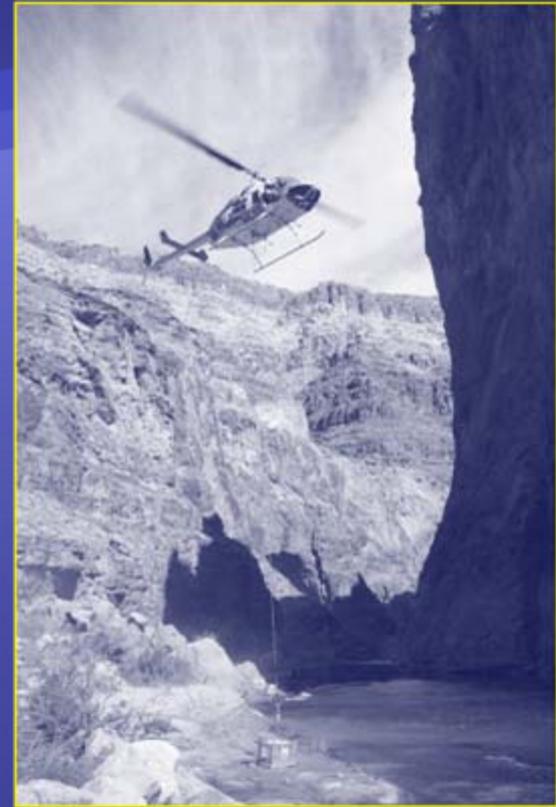


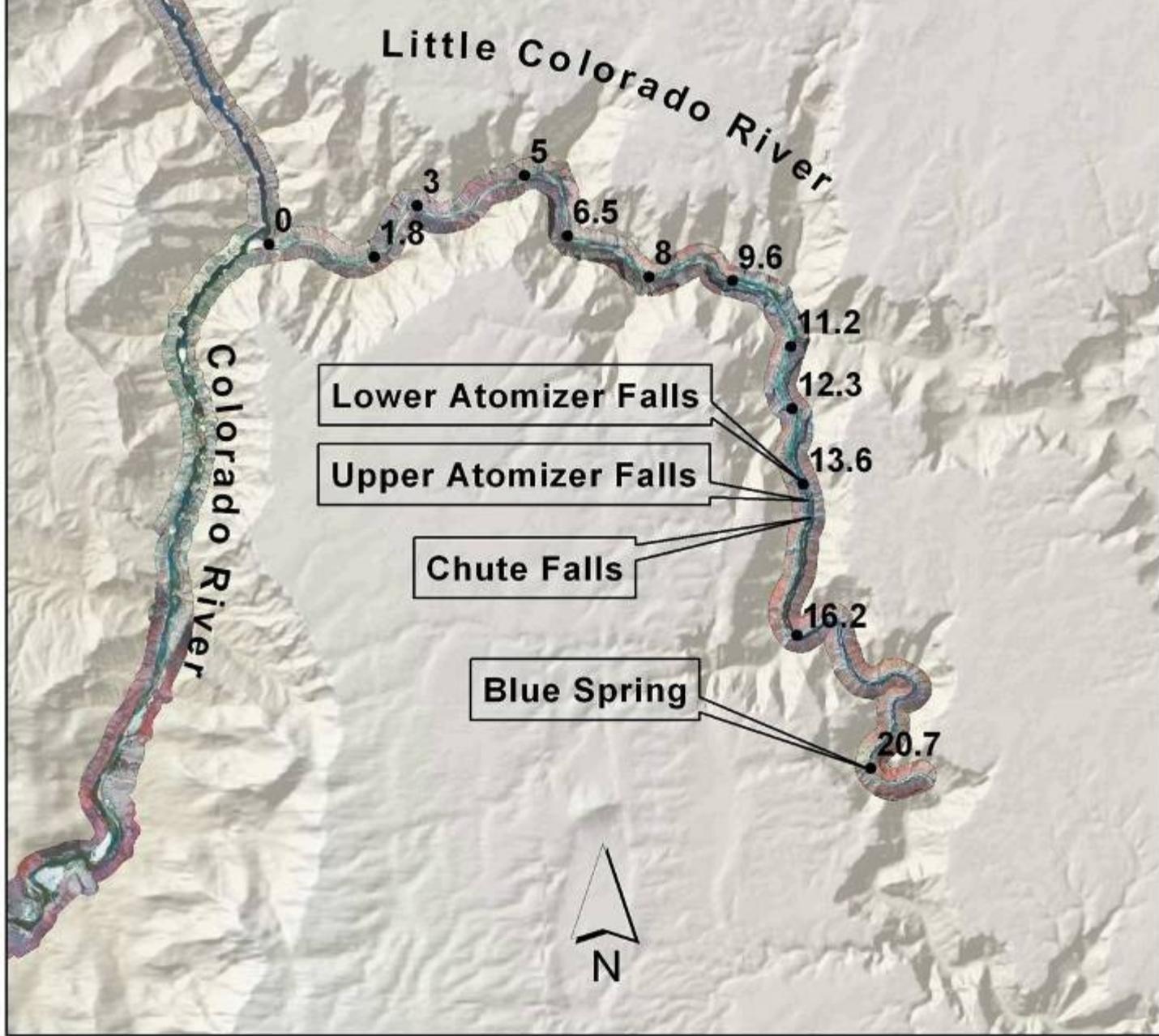
Glen Knowles
U.S. Fish and Wildlife Service
Martha Hahn and Steve Mietz
National Park Service
April 29, 2009 AMWG Meeting



HUMPBACK CHUB TRANSLOCATION AND REFUGE DEVELOPMENT

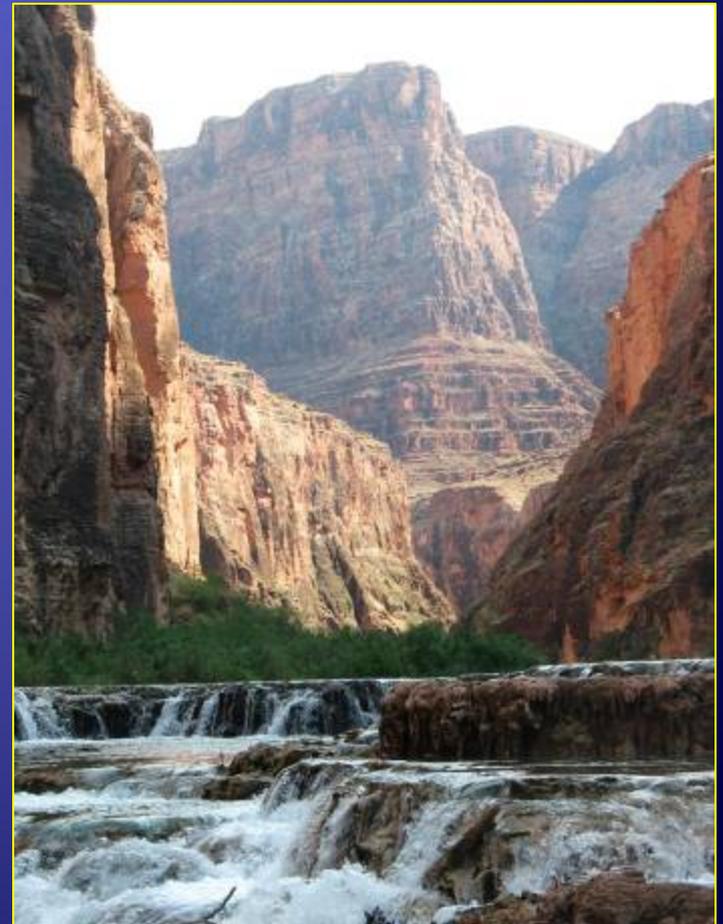


Chute Falls Translocation



Chute Falls Translocation 2003-2008

- Conservation Measure of 2002 BO
- Translocated 1,466 juvenile humpback chub 50-120 mm TL (2003=300, 2004=300; 2005=567; 2008=299)
- Marked with elastomer tags, PIT tags in 2008
- Reduced mortality of young chubs
- Increased abundance of HBC
- Better understanding of life history



Chute Falls Translocation Results

- ◆ Fastest growth rates ever recorded in humpback chub, 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 2008-2012

- ◆ Conservation Measure of 2008 BO
- ◆ 299 Juvenile humpback chub translocated 17-21 July 2008
- ◆ All PIT tagged
- ◆ Mean size 117 mm TL
- ◆ Translocation of 300 humpback chub also planned for July 2009
- ◆ 2010-12 will be dependent on monitoring results
 - ◆ Approximate natural population size and age distribution
 - ◆ Maintain population at a minimum of 200 individuals



Humpback Chub Refuge Development

- ◆ Conservation Measure from 2008 BO.
- ◆ FWS goal is to create two refuge populations of 1,000 fish each, based on geneticist recommendations.
- ◆ 586 juvenile humpback chub currently at Dexter National Fish Hatchery and Technology Center; 300 will be used for translocation and 286 will remain for use as a refuge.
- ◆ Goal is to collect additional humpback chub from the Little Colorado River in 2009 to augment the Dexter NFH refuge population and for translocations to above Chute Falls and to Shinumo Creek.

