

# Humpback Chub Ad Hoc Group Update



TWG Meeting, Phoenix, Arizona  
January 24, 2006

# History – March 2005 AMWG Humpback Chub Motion

## First Motion - Implementation

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**Motion:** The AMWG directs the creation of a humpback chub implementation plan Ad Hoc Group. This Ad Hoc Group will:

1. Determine which actions identified in the humpback chub comprehensive plan can be accomplished under the AMP.
2. Explore the various options for completing actions that do not fall under the authorities of the AMP.

# AMWG Humpback Chub Ad Hoc Group Progress on the First Motion

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## ■ Humpback chub project implementation:



- Sam Spiller and Nikolai Ramsey will co-chair the AMWG Humpback chub Implementation Ad Hoc Group.
- The HBCIMP (with assistance from Randy Seaholm) will review the new draft Humpback Chub Comprehensive Plan.
- The HBCIMP will create a report of in/out regarding the plan projects.
- HBCIMP will work to identify funding sources for these projects.

# History – March 2005 AMWG Humpback Chub Motion

## Second Motion – Humpback Chub Comprehensive Plan

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**Motion:** The AMWG directs the TWG to further develop the humpback chub comprehensive plan, as follows:

1. **Describe linkages, sequences, and feedback loops among projects.**
2. **Identify priorities and a timeline for completion of each action within the comprehensive plan.**
3. **Spell out specific steps and criteria for any actions that would be needed if a crisis occurs (e.g., severe population decline).**
4. Continue to include active participation by GCMRC staff and any additional expertise.
5. Incorporate comments from the Science Advisors. The TWG will include a response to comments document in their final draft.

# Humpback Chub Comprehensive Plan – Projects

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## Ex Situ Projects (Genetics/Propagation Related Projects)

1. Genetic Study
2. Willow Beach Genetics
3. Genetics Management Plan
4. Feasibility Assessment of Augmentation
5. Humpback Chub Hatchery Evaluation



# Humpback Chub Comprehensive Plan – Projects

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## In Situ Projects (Improve Conditions for Humpback Chub)

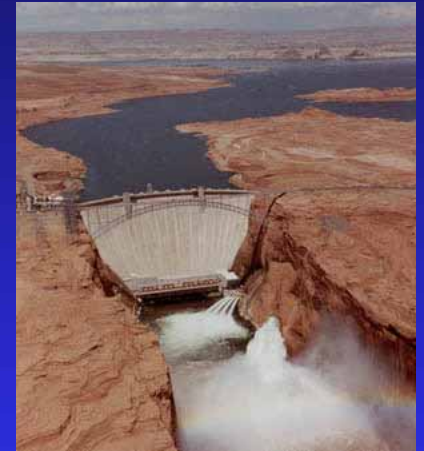
6. Dam Ops

7. TCD

8. Sediment Augmentation

9. Improve Rearing Habitats

10. Tributary Nonnative Removal



# Humpback Chub Comprehensive Plan – Projects

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## In Situ Projects (Improve Conditions for Humpback Chub)

11. Mainstem Nonnative Removal
12. Warm Water Nonnative Removal
13. Effects of Science and Recreation
14. Diseases and Parasites
15. Translocations to Other Tributaries
16. Translocations above Chute Falls





# Humpback Chub Comprehensive Plan – Projects

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## Monitoring Projects

17. Monitoring above Chute Falls
18. Little Colorado River Monitoring
19. LCR Water Quality
20. Downstream Fish Monitoring
21. Diamond Down Monitoring
22. Concurrent Estimates





# Humpback Chub Comprehensive Plan – Projects

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## Planning Projects

- 23. LCR Watershed Management Plan
- 24. LCR Emergency Hasmat Plan
- 25. LCR Pollution Control Plan
- 26. Invasive Species Management Plan
- 27. Nonnative Stocking Procedures
- 28. AMP Outreach



Number	Project Name	Type	Category	2006			2007			2008			2009			2010		
1	Genetic study	E	R															
2	Willow Beach genetics	E	R															
3	Genetics management plan	E	R															
4	Feasibility assessment of augmentation	E	P															
5	Humpback Chub hatchery evaluation	E	P															
6	Dam ops	I	P															
7	TCD	I	R															
8	Sediment augmentation	I	R															
9	Improve rearing habitats	I	P															
10	Tributary nonnative removal	I	R															
11	Mainstem nonnative removal	I	R															
12	Warm water nonnative removal	I	R															
13	Effects of science and recreation	I	Ma/P															
14	Diseases and parasites	I	R															
15	Translocations to other tributaries	I	Ma															
16	Translocations above Chute Falls	I	Mo															
17	Monitoring above Chute Falls	M	R/Mo															
18	Little Colorado River Monitoring	M	Mo															
19	LCR Water Quality	M	Mo															
20	Downstream Fish Monitoring	M	Mo															
21	Diamond down monitoring	M	R															
22	Concurrent estimates	M	Mo															
23	LCR Watershed management plan	P	R															
24	LCR emergency hasmat plan	P	P															
25	LCR Pollution control plan	P	P															
26	Invasive species management plan	P	P															
27	Nonnative stocking procedures	P	P															
28	AMP Outreach	P	R															

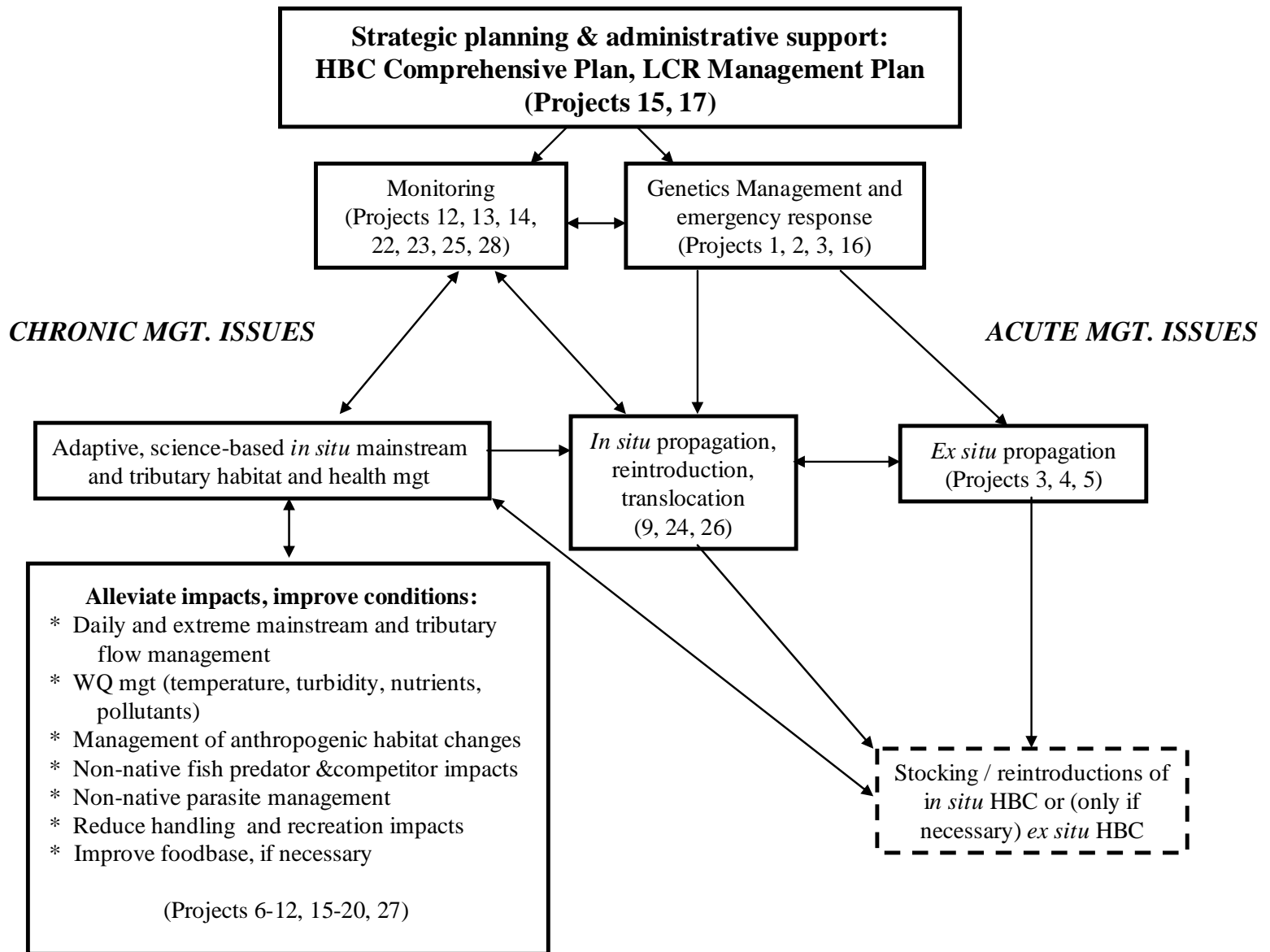


Fig. 1: Linked elements of conservation planning for HBC in Grand Canyon.

# HBCCP Project Ranking Exercise - Criteria

<b>Criteria</b>	<b>Definition</b>
Benefit	Benefit to the species, 5 is greatest benefit
Cost	Economic cost, 5 is least expensive
Confidence	How likely the project will be effective, 5 is highest confidence
Learning	How likely a project is to answer science questions, 5 is high likelihood
Timeframe	How quickly will the species benefit, 5 is shortest timeframe
LTEP	LTEP suitability; 1=yes, 0=no; note that by
Need	How urgently a project is needed (i.e. chronic vs. acute management need), 0=chronic, 1=acute

# HBCCP Project Ranking Exercise - Results

## **LTEP Projects (by vote)**

Dam ops

TCD

Tributary nonnative removal

Mainstem nonnative removal

Diseases and parasites

Warm water nonnative removal

## **Need (emergency actions, by vote)**

Genetics management plan

TCD

Mainstem nonnative removal

Little Colorado River Monitoring

Warm water nonnative removal

<b>Rank</b>	<b>Project Name</b>	<b>Score</b>	<b>Average</b>	<b>Variance</b>
1	Genetics management plan	86.5	4.2	1.2
2	Little Colorado River Monitoring	86.0	4.2	0.9
3	Downstream Fish Monitoring	80.9	3.9	0.9
4	Translocations above Chute Falls	80.9	3.9	1.1
5	Refugium and captive breeding plan	80.5	3.9	1.6
6	Monitoring above Chute Falls	80.0	3.9	1.0
7	Translocation plan	76.7	3.7	1.4
8	Warm water nonnative removal	75.3	3.7	1.1
9	LCR Water Quality	74.4	3.6	1.2
10	Mainstem nonnative removal	72.6	3.5	1.7
11	Diseases and parasites	72.6	3.6	1.2
12	Translocations to other tributaries	72.6	3.5	1.0
13	TCD	70.7	3.4	2.4
14	Dam ops	70.2	3.4	1.5
15	Effects of science and recreation	70.2	3.4	1.4
16	Tributary nonnative removal	68.4	3.3	1.4
17	Invasive species management plan	68.4	3.3	1.5
18	Diamond down monitoring	67.0	3.3	1.3
19	Improve rearing habitats	65.1	3.2	1.4
20	LCR emergency hasmat plan	64.7	3.1	1.3
21	Nonnative stocking procedures	64.2	3.1	1.4
22	LCR Pollution control plan	60.5	2.9	1.1
23	LCR Watershed management plan	60.0	2.9	1.5
24	Concurrent estimates	52.1	2.6	2.3