

FLIP CHART

Vision
Mission
Goals
Objectives
Develop IN's & MA's

FLIP CHART 1

send comments to Mary or Randy

Goal 1: Protect or improve the aquatic foodbase so that it will support viable populations of species at higher trophic levels.

- verify current and target levels in goal 1
- Purpose - may need to include hunting (ducks) - other than fish-shoreline reptiles, insects, and everything else
- implicit assumptions may be stated - rather than expanding MO to cover all resources (if taking care of our resources will take care of others)

FLIP CHART 2

MO1
relationship of this to env. Principles - 4-6

MO2 - no comments

MO3

- is managing for cladophora what we really want to do?
- production is a critical measure of nutrients - ties in w/flow rates
- why aquatic macrophytes aren't included?

MO4

- examine the numbers
- some of these comment apply to more than one MO

FLIP CHART 3

MO10

- further discussion on trust fishery limited to above Paria River - historically to Davis Dam
- managing for trout below Paria - how does it conflict with native fish?
- is it a conflict above the Paria?
- purpose - as far as native/non-native above Paria, should be integrated with GCCA fish

- management plan
- division of Paria related to endangered fish recovery - separation has proven effective

FLIP CHART 4

MO 7-10

- add aquatic macrophytes to element?

MO1

- add desired species and substitute "appropriate" for "higher" - there may be undesirable species or upper limit of level
- are there species of algae we don't want to increase biomass productivity and 'composition

FLIP CHART 5

MO 11-14

- benthic invertebrates downstream of Paria - is this place descriptive specific enough?
- address BIN issues - also all small group comments
- would we manage drift separately from benthic invertebrates or is this a monitoring need?

MO15

- maintain satisfactory CRE function for the benefit of target resources

FLIP CHART 6

MO15 -

Do MO's adequately depict the downstream increasing heterotrophic nature of the river

MO 15-16

- need distribution attribute for drift?

Goal 2. Maintain or attain viable populations of existing native fish and remove jeopardy from humpback chub and razorback sucker.

MO17

- LCR and +/- 3 miles
- Use updated numbers as we can
- if numbers to remove jeopardy are published (this summer) use them.

FLIP CHART 7

MO's 17-28, 26 & 27

MO's should be consistent with recovery plans for listed fish

MO17

ACTION - presentation by Matt at next TWG meeting on recovery plans for listed fish

significance of size indications

put confidence intervals in population estimates - current level

MO18, 19, 20, 22, 23, 24, 25,

- for MO's re: humpback chub in mainstem, not for removal of jeopardy - add to purpose "maintain or attain viable populations"

FLIP CHART 8

MO21

- doesn't relate to operation of GCD - may not be in AMP.
- it does relate to the operation of GCD

MO19 - should it be maintained or increased like MO's 17-20?

-MO 19-20 - do these lead to removal of jeopardy (purpose)?

- purpose - indicate they are part of removal of jeopardy

MO22-23

- should these be for adults only or all life stages?
- can 22 and 23 be combined?
- refer to different groups of fish so they should be kept separate

FLIP CHART 9

- Goal 1 MO's are for goal 2
- should goals be limited to 2-3 resources?
- Which are for natural processes, which are for the benefit of something else

MO24

- why was spawning selected as the index as opposed to reproduction or recruitment?
- is monitoring spawning a smart objective? May have a good spawn only 1/5 years.

MO26 - 27

- should place be below Paria? May conflict with MO's under Goal 4?

FLIP CHART 10

- MO 26 & 27 - action should be "determine"
- for 4 endangered fish - recovery goals may conflict with GLCA Fish Management Plan - resolution needed
- should MO be "reduce non-native population? (combined)
- predator removal strategy for upper basin may be help with IN
- the action should be "reduce" not determine
- the action should be "minimize"

FLIP CHART 11

MO's28

- consider moving to Goal 3
- we're not limited by GCPA to dam operations
- MO's which relate directly to GCD operations need to be identified

MO29-31

- use maintain v. maintain or increase
- attribute should be "populations" instead of abundance
- whole reach?

FLIP CHART 12

Goal 2 - goals 5& 6 relate to Goal 2 - these should be objectives under other goals.

MO26-27

- should MO's for 26 & 27 be split into separate non-native species
- 24-25 attribute should be recruiting
- 22&23 condition add MO w/ "health" to address disease and parasite issues?
- May be necessary but not sufficient to remove jeopardy.

FLIP CHART 13

32-33- should be consistent with recovery plan.

- 32-35 - they are mO's that are may be outside of the AMP, outside of effects/in guidance impacts of operations of GCD
- 32-35 outside of Guidance Document (Loveless)
- outside of ROD to restore species
- are within scope of the problem and guidance document
- disagree with last three comments (32-34 are within the scoping program and Guidance Document)
- Mary will send out BIN Issues

Principle 6 - purpose - this is a fundamental nature of that issue

MO33

- should be more narrow description of problem below Paria.
- is the concern about hybrids between HBC and bonytail

FLIP CHART 14

MO34

- concern with hybridization with HBC

32-33-34

- place downstream of Paria
- above Paria includes native and non-native

MO32

- concern about introduction of predator in trout fishery

MO35

- is this presumptuous? Question as to whether they abundant as they ever were
- species is now extinct - "restoring" is not correct if extinct, w/b residence is function
- should be an IN, not an MO

FLIP CHART 15

- **Goal 4. Maintain a wild reproducing population of rainbow trout above Lees Ferry, to the extent practicable and consistent with the maintenance of viable populations of native fish.**
- Should be above the Paria river
- should "health" be "condition"

MO26 - conflicting with maintaining trout (MO36)

should break out reamnd - may not be a conflict

IN - evil method by which current and attribute are derived

38 - Goals - 36-38 could be one MO with multiple attributes - element, place, levels are the same

change from health to condition to refer to purpose and attributes

FLIP CHART 16

MO39 - change attribute from "spawning" to "recruitment"

Goal 5. Establish water temperature, quality, and flow dynamics to achieve GCDAMP ecosystem Goals.

MO40 - combine with MO41 - multiple attributes

MO40-41 - for water temperature in Lake Powell

MO41 - expand the language in the purpose to reflect range and variability.;

Does this include variability?

42 - a lot of attributes - will MO'st important ones be identified? Should there be an IN to ID those?

Purpose - unclear. What does standard mean?

May not have any control over scrutiny - phosphorus

42 - should include Lake Powell or need an additional MO

add that Navajo Nation uses water from the dam down to the LCR for drinking water
outside impacts will be pro ... and perhaps outside AMP - we will look at watershed activities
and impacts.

Others use drinking water from all of Colorado River

may fall outside of AMP

43 - purpose is for resource and ecosystem

element could be water - attribute is hydrology/ , power/

flow dynamics is attribute

FLOW CHART 18

MO44 -46 - these are management actions

Purpose – will this be defined more clearly – specific resources with flows attached to those
resources?

46 - Attribute should be experimental flows, and Purpose should be not just specifically for
native fish but to move within the RNV.

Purpose should also include meeting the conditions of the Biological Opinion

Likes it the way it is written

MO43 - keep it the way it is

MO 46 – Drop this as an MO. You're not maintaining it, you are conducting it. It doesn't meet
the definition.

FLIP CHART 19

45 - all flow dynamics could be listed as one MO

Goal 12: Preserve, protect, manage, and treat cultural resources for the inspiration and benefit of past, present, and future generations.

MO 79 – Register-eligible property is that deemed appropriate through the State Historic
Preservation Officer and Tribal Historic Preservation Officer (THPO) to be on the National
Register of Historic Places – those these won't be sent to the Keeper of the Register (there will
be no formal nomination).

80: "Other cultural resources:" other tribal concerns, aren't Register-eligible.

These could be same as traditional cultural resources - can use the same type of description on
element but in 82 we are talking about access by tribes. The key element here is access.

FLIP CHART 20

treat - broad category of preservation actions documentation to installing a check dam.

PEP will review MO's for changes

Goal 12 Details - w/ - also SES tribal concerns are different from federal law
goal 12 - removing "with the river"
MO's may be outside AMP and outside ...
Goal - add'l within the area of potential effects as defined in the NPA
incongruity in "place" - there is was mainstem on goal 5

FLIP CHART 21

do not limit goal to "area of potential effect" only for national register eligible resources
79 - is Place the "area of potential effect"
Metric - how many sites in area of potential effect are eligible? Current level – BOR may be re-evaluating eligibility and TCPs. Register integrity is defined.
80 - Definition of cultural values - how is this measured and quantified? (Each tribe ascribes these to resources – requires participation by tribes.)
Some is related to operations, some may be outside the AMP

FLIP CHART 22

MO81 - doesn't appear to be a MO "future resource condition?"
Is it measurable?
Put it under goal 13?
If unable to preserve under ID #79, must consult as in MO 81- that's why it's placed here.
consultation may not be cultural
make consult the action
MO82 attribute should be "physical access"
What is the metric?
MO 80 - purpose should be
purpose is ...

FLIP CHART 23

consider moving #77 to goal 12
83 - looks like an IN, not an MO
77 - What is zero impact?
77 – In the past 5-6 years, greatest is from hikers, river runners, and anglers. Zero impact could be achieved through education, or close areas if necessary.
Purpose – should cite section 110, not Section 100
Impacts not only due to recreational - from monitoring, as well.
Is zero impact achievable?

FLIP CHART 24

Goal 11: maintain or increase power and energy generation within the framework of the GCDAMP ecosystem goals.

78 - goal should include socio-economic values with power being one of several MO's
group decided it isn't a goal in an of itself
attribute should be the flexibility to generate power
element should be power, action to maintain or increase, attribute should be flexibility
could use and for metric (same as recreation)
Goal 11 is confusing - GCPA indicates power will be reduced, not increased.
Within ROD, want to maintain or increase
power doesn't have same value at all times - current generation levels?
Should be a goal broader than power. Where will non-use values be?

Goal 13: Maintain a high quality monitoring, research, and adaptive management program

84 - should be a goal
Not comfortable with this - the language needs to be refined, the target should be full integration
of these values into the AMP, and part of the State of the Canyon report

FLIP CHART 25

86 - attribute: strike "scientific" in order to incorporate other values (spiritual, etc.)
85 - Where does power come in? Add "Power" to the Attribute. Should be monitored by
GCMRC.
What are the metrics?
Action - add "and maintain"
85 - is in line with the program, prefer it to MO 86.
87 action - add "and maintain" to the action
Action should be "attain and maintain"
88- The proposed goal to enhance tribal participation should be included with this as an MO
Action should be "attain and maintain"

FLIP CHART 27

Define "full tribal participation"
Target is an IN, determined between each tribe and Reclamation
Purpose should be "GCPA requirement for consultation." Remove word "intent" and add after
AMP, "to fulfill the Federal Government's trust responsibility."
81 - also addresses consultation, may be consolidated with MO 88
81 - address only cultural resources
88 - provides funding to be fully engaged

FLIP CHART 28

88 - For the purpose - other Acts and Executive Orders address consultation and should be
acknowledged.

No need to cite all laws

concerns about fish and overall ecosystem throughout CRE - must deal with Executive Orders and individual federal policy

consultation and participation should be separate

GCPA required for consultation not limited to AMP

88/86 - Element = monitoring and research activities

current level = current level of understanding of CRE

target level = to level of responsible stewardship of CRE

FLIP CHART 29

Goal 6

Goal doesn't make sense: fine sediment storage is ephemeral in main channel.

Prefer "supply" to "storage." Storage is for the sides, supply indicates a constant source of sediment into the system.

(whole goal) (47 - "below PAC" - storage starts lower level of PPC - cfs ... 5-8 cfs storage at mainstem of ...

goal - fish habitat is created below the water within the eddies

purpose - not related to goal or to other ecosystem goals (fish)

FLIP CHART 30

47,48, 49 - define sediment - not just "fine" - should be GOAL on coarse sediment - important ecosystem (cladophora, fish)

group felt it wasn't able to be manipulated like FINS.

Possible of manipulating coarse easier with higher flows

48 - fine - 2 mm ??

49 - how will it be measured? - every year - source except for sediment on channel bed

52 - why is abundance repeated? One MO, multiple attributes (typo - cross off "abundance and") more specificity in purpose - more on linked effects (e.g. Sediment and flow)

FLIP CHART 31

provide linkages - put # of MO that this links to

53 purpose: camping beaches, cultural sites, rip and fish maintenance.

53-55- purpose: add "retention" as well as "storage"

goal 6 - "maintain a sustainable is redundant

retention is implied in "sustainable"

ACTION ITEM : Bill Persons will draft language for MO's and turn into ad hoc group

coarse grain sediment addressed with rapids

can add spawning MO'S' to fish goals

could (Get from flip chart)

Goal 7: Maintain or attain viable populations of Kanab ambersnail.

56 - Don't think the footnote is appropriate. First sentence - viability will not be measured - things in 2nd sentence will be measured.

There is a 98-99 draft report on the population estimates assumption is debatable
spell out attributes as MO's

57 - action should be maintain

goal – The expert panel said it's possible in a natural regime for a species to “blank out.” The goal should be to prevent man-caused extinction, not prop up a population that could go extinct anyway.

FLIP CHART 32

57 - BO doesn't call for 3 populations.

Place should be one site

all 3 populations are protected if they survive- at least one would survive is the hope, at least one in light of panel - how will MO's change? How language --- if panel recommends

58) There should be an MO on the 9-mile population (non-use) (different subspecies) in case the taxon turns out to be unique.

Should the goal be rewritten to specify the Vaseys Paradise population only?

FLIP CHART 33

Vasey's Paradise is not listed.

Panel thought taxonomy should be worked out before any major changes were made in treatment of species

There is an existing process for these changes to occur (working out the taxonomy) - will take time.

Use the term “oxyloma haydeni” instead of “Kanab ambersnail”

Goal 8: Amend the goal “... protect the presence of SWWF in a manner consistent with riparian ecosystem goals.

MO's 59 & 61 – MO 61 incorporates MO's 59 and 60 in it – 59 and 60 are finer levels of detail.

Goal 8: These birds are migratory so their presence is not protected. We can't control their presence – they can leave any time. Protect/Increase the habitat they would favor.

FLIP CHART 34

Goal 8: Amend the goal “... flycatcher and its critical habitat in a manner ...”

USFWS protects bird and its habitat

Protecting the habitat may conflict with current BHBF schedule

Protect habitat - are we shifting? Could say same of number of trout or HBC – they could leave, too. (Concern about potential change.)

Make “habitat” an Attribute, the Action would be “protect.”

USFWS has never protected one without the other

Migratory avians are different a consideration – they can be exterminated by actions taken elsewhere.

MO 60: Don't know what's limiting the species - presumptuous for us to think we can decrease bird parasitism, etc. by manipulating habitat (may be something in Costa Rica, e.g.)

Definitions should include habitat to include nesting, feeding, and rearing habitat

Goal 2, for the fish MO's, we targeted non natives. Should the Element be the brown-headed cowbird?

Is there evidence that brood parasitism is a greater problem than nest predation?

Do dam operations impact on brood parasitism?

61 – Why is Place different? Should be CRE.

For Current Level, urge confidence intervals, not a point in time. (The numbers change at different times.)

FLIP CHART 35

61 - maybe Target Level should be recovery goals(draft plan this spring)

Goal 9: Protect or improve the biotic riparian and spring communities.

62-64 Need an MO to maintain OHWZ vegetation? Would take flows of 100,000 cfs to maintain.

63- Why are springs not in Element for distribution? Or abundance?

Can you protect marsh and OHWZ at same time?

Can you protect NHWZ at same time as marsh and OHWZ?

Time element could held - on a decadal scale, could protect all

Sand beach - conflict with recreational MO's

66 – Can combine with 63. Attribute abundance and distribution.

FLIP CHART 36

66 - The elements seem vague. Is this deliberate? What species?

66: Element should be culturally important native species.

62, 63, 65, 66 - Protecting the abundance and distribution of springs – MO's 62 and 63 are inconsistent with 65 & 66 (Debra Bills will e-mail comments)

66: Element may be culturally important species that are non-native.

67: More parenthetical comment to definitions. Element should be noxious or invasive non-native species.

67-68 does NNS apply to flora and fauna?

67-68 - Is this outside AMP? Should be NPS – (particularly flora)

68 - combine attribute with 67

FLIP CHART 37

68 – should be a statement on tamarisk

Maybe there should be a full list of species
In the goal, "biotic" means natural (native) or existing.

Goal 10: Maintain or improve the quality of unique recreation experiences for users of the Colorado River ecosystem, within the framework of GCDAMP ecosystem goals.

Why add the word "unique?" Might be redundant – unique setting.

69 - should be physical access

According to Behan, recreational goals should be set by NPS. Small group tried to be consistent with NPS management plans, didn't agree with all aspects of it.

Disagree that the AMP should be same as NPS - rather ecosystem comes first. Target should be consistent with ecosystem goals (concern about target)

In the Purpose, "sports people" should be more inclusive. Use visitors or people.

FLIP CHART 38

69 Purpose should be "safe access to river and attraction sites for visitors."

Purpose should read "River management practices should maintain ... (existing wording)."

What is metric for "safe access?" IN?

of camping sites is an aspect of access

69-70 - Are levels of referring to # of people? Needs to be clearer: trails, boat launches, other access points should be not less than today.

FLIP CHART 39

69 - Should be clear that it's access by land to/from river

70 - why only Glen Canyon? (76 is GRCA) can these be combined?

Target levels should be consistent with capability of the ecosystem

71 – may be a conflict with riparian vegetation - MO# 62-63-64.

71-74 – Should Target levels be IN?

72 - 74 Distribution of camping beaches - are we able to do anything about this?

78 - how do we affect access in Lake Mead?

FLIP CHART 40

How do we change navigability in the mainstem?

We can change navigability in the mainstem through flows.

76 - relation of 76 to 70 - distinction between GPCA and GLCA – recreation and wild – should be combined

What does non-visitor refer to?

69, 70, 76 - This is outside the AMP. Dam operations won't affect this.

If you run flows at 8000 cfs or 100,000 cfs, this will affect the wilderness experience

Revise targets so they relate to dam operations and not to NPS management plans

76 - There is a distinction between GPCA and GCLA 0 recreation and wilderness. MO's 76 and

70 should stay as they are.

77 – Change Place to CRE, MO and MA - promote and enhance or emphasize responsible recreational education on cultural sites and issues.

Goal 14 - Build a broad, effective outreach program.

89 - Attribute should be “inform the public;” Purpose: “to obtain broad public support for the program.:

Place could be very broad - world wide

Purpose “to inform the public”. It’s their choice whether to support or not.

Where is the ad hoc group on this?

The goal should be to educate and inform the public, and the MO to build an outreach program.

Is the program only for public or also to interact with other adaptive management programs?

Flip Chart 41

Goal 15 - Broaden the funding base to achieve GCAMP Goals and Objectives

Goal - MO’s throughout should be defined that need outside funding (what are we broadening the funding base for?).

Goal - might want change “base” to “sources”

90 - broad enough to include private non-profits? (for money or in-kind services)

Should action be “attain”

92 - Current Level should be “obtain from literature.”

93 - switch Element and Attribute

94 - Element should be power and Attribute should be revenue

Action should be “maintain or increase”

94 - Place is CRE, attribute is AMP, and Purpose is to enhance management of the CRE