ISAP Draft Evaluation of AMP v5

MRRIC Omaha/LaVista, NE

August 8 and 9, 2016

MRRIC Charge to ISAP and Response

- 12 Compound Questions

- Draft ISAP report delivered July 25
- SAM-ISAP discussion of response Aug 8
- MRRIC plenary presentation/discussion Aug 9
- Written comments due to ISAP Aug 19

- ISAP final report due Sept 2

Q1 – Are objectives, monitoring protocols, decision thresholds, and specific management actions clearly identified and defined?

- Objectives are identified but the AMP recognizes the likely need to revisit specific objectives or sub-objectives, and describes a governance process by which this may happen
- Protocols developed for the birds; demonstrated for the sturgeon, but will need to be expanded as management actions are identified through the framework
- Thresholds (triggers) for bird actions are identified; implementing the sturgeon framework will produce threshold values for the fish
- Management actions for the birds are identified; management actions for the fish will emerge through framework investigations

Q2 – Is the monitoring approach sufficient to detect ambiguous signals?

- Monitoring sections improved from previous versions, but much work remains
- Work still needed to make a clear connection between metrics and decision criteria
- Monitoring for Intake and propagation actions need close coordination with other agencies
- Population monitoring needs to be closely tied to actions, metrics, and decision criteria

Q3a – How will additional data and analyses be evaluated and incorporated?

- The existing data collection program (Chapter 6 in particular) well describes, at varying levels of detail, how modeling, monitoring, and assessment approaches will be developed, implemented, and used by the management team for decision-making
- AMP also presents a process for assessment of new external information prior to incorporation into the program (Section 2.5)

Q3b – Is the proposed system suitable to range of scales and user requirements?

- The Information Technology Management team (Section 6.4) is developing a data management strategy for inclusion in the next version of the AMP
- Not yet possible to assess system suitability to the spatial and temporal scales needed, or to the range of anticipated users, but these issues are well laid out in the AMP
- Many details of the system such as user interfaces are still to be determined; ISAP recommends early design, prototyping, and user-testing of system components

Q4 – Demonstrated continued use of best available science?

Further activities to be informed by best science are to some degree still in development, will involve real-time decisions, and will be 'adapted' along with management; these include:

- Monitoring schemes (both programmatic and project-specific)
- Research agendas (focusing particularly in moving through the sequential levels of the Pallid Sturgeon Framework)
- Formal (institutional) efforts to evaluate and adjust management actions and program process elements
- These necessary AM attributes are adequately addressed in the draft plan

Q5 – Will the monitoring program enable models to be developed for the pallid sturgeon CEMs similar to those for birds?

- It is unlikely that well-articulated relationships between habitat attributes and pallid sturgeon performance will be available in the near future
- Decision criteria are not always parallel with metrics and hypotheses outlined in IRC monitoring
- AMP has not clearly articulated or considered the synergistic conservation actions

Q6 – Use of monitoring results to inform adaptive management, absent Level 1 and 2 understanding

- AMP v5
  - Emphasizes the need to develop Level 1 and 2 understanding to provide causal relationships that can refine Level 3 actions
- *Appendix C*
  - Provides detailed descriptions of Level 1 and 2 studies that underpin Level 3 management actions for Big Questions for pallid sturgeon
  - Presents metrics, timelines, contingencies, and decision criteria

Q6 – Continued

- *Appendix D*
  - Explores refinement of current population trends monitoring to directly support pallid sturgeon AM
  - Addresses required statistical power (i.e., data quality, sufficiency) in detail
- *Appendix E*
  - Describes monitoring plans for IRCs for age-0 pallid sturgeon
  - Monitoring plans to be developed for other pallid Level 3 actions

Q7 - Does AMP describe scaling of Level 3 actions to Level 4?

- Propagation has been successful; questions remain about stocking rates, ages, genetics, locations
- Yellowstone Intake - COE should coordinate monitoring with Bureau of Reclamation
- IRC "sites" are not yet adequately defined spatially; Appendix E provides statistical details, but does not currently provide response functions that relate management actions to population response
- Spawning habitat - AMP does a reasonably good job of outlining the required Level 1 & 2 studies that will be required to characterize high-quality spawning habitat

Q8 – Does AMP describe program adjustments to new information?

- AMP recognizes that program components (e.g., governance elements) may need to be modified in light of new information
- Chapter 2 describes adjusting objectives, targets, and decision criteria, and identifies who will make such decisions
- Appendix A (although not yet complete) will provide additional details on the possible need to adjust other programmatic elements

Q9 – Does AMP identify and describe the expertise and skills essential to the design, implementation, and evaluation of management actions?

- AMP presents an organizational structure suitable for species management within an adaptive framework
- The EA and AMP teams contain experts in the critical areas needed to provide the scientific foundation for species management
- Technical Team has good coverage but could benefit from additional emphasis on geospatial analyses to provide a landscape perspective

Q10 – Addressing incompatibilities in time scales and discontinuities in AM

- Monitoring results and new information enters the AM Science Update process on scales mainly defined by:
  - Fall Science Meeting (October/November)
  - Annual Adaptive Management Workshop (February)
  - Draft Work Plan (April/May)
- Environmental and demographic processes operate continuously with certain critical periods
- Formal and time-consuming process for introducing “new information” into AM process

Q10 – Continued

The draft AMP does:

- Discuss the need to more timely and efficiently incorporate monitoring results and new information into the AM governance process
- Address the need to set priorities among competing projects during periods of insufficient funding
- Outline a process for allocating limited resources towards meeting species objectives
- Push the discussion of operating under limited resources as far as possible

Q11 – Meeting species needs while minimizing impacts to HCs

- AMP focuses most attention on meeting the species needs, acknowledges goal of sustaining other authorized purposes, and awaits HC input into next draft
- Chapter 5 presents a further development of HydroViz that potentially can compare real-time flows and stages to historic and expected flows and to impacts on HCs
- Chapter 5 also offers principles and guidelines as well as some examples of HC metrics for quantitative minimization of projected impacts or a consequences-and-tradeoffs assessment
- The AMP awaits results of economic modeling to determine which HC metrics to use in evaluating and minimizing impacts to HCs while meeting species needs

Q12 – How do management actions for the birds and sturgeon mesh with the recovery plans?

- For the pallid sturgeon, the AMP is parallel with the most recent recovery plan
- How MRRP management strategies for the piping plover correspond with the newly released Draft Recovery Plan for the piping plover is not evident or discussed in the current AMP

Closing Remarks

- AMP is a comprehensive treatment of the science and governance necessary to design and implement adaptive management for the listed species
- Supported by structured effects analyses, the AMP provides a model approach to melding species management with river operations
- Best available science supports the draft plan, but key causal relationships remain to be characterized
- Continued commitment to using best science in AMP implementation and assessment is crucial