

California Fish and Wildlife Strategic Vision Project
Science Homework for January 17 Discussion Topic Meeting
January 16, 2012

On January 10, 2012 the California Fish and Wildlife Strategic Vision (CFWSV) Blue Ribbon Citizen Commission (BRCC) and Stakeholder Advisory Group (SAG) met for a science discussion topic meeting. Individual BRCC and SAG members, as well as participating California Department of Fish and Game (DFG) and California Fish and Game Commission (F&GC) employees, volunteered to develop text for potential recommendations to be considered by the BRCC/SAG. This document is a compilation of the work of those volunteers over the last week and serves as the basis for the next discussion on January 17, 2012.

Potential Science Recommendations

Potential Science Recommendation #1: Transparency (in science used in decision-making) and communication (combined)

Implementation recommendations include:

Graber/McAfee Suggestions

- DFG provides reports, publications, and databases developed from its scientific work on a publicly-accessible web site (excluding sensitive information)
- Science developed and used by DFG is interpreted to students and the general public by education specialists

BRCC/SAG Potential Actions

- 8D: 18. Establish a standard procedure for data sharing (3-1)
- 8D: 23. Require that all data collected in sponsored scientific investigations be entered into BIOS or another appropriate accessible database (1-3)
- 8A: 4. Make information available in a regionally and culturally appropriate method, including written materials in geographic areas with limited Internet access (0-2)
- 8B: 19. Collaborate with the University of California and California State University systems to facilitate modification and development of university curricula to help with DFG research, monitoring and evaluation needs (1-2)

DFG Suggestions

- (Number 11, bullet 1) Develop a robust and interactive web presence that describes the extensive partnerships already underway and identifies areas where more effective partnership opportunities may exist.

Implementation Assessment

- Method: ?
- Timeline: ?

- Level of likely BRCC/SAG agreement: ?

Ties to Strategic Vision

- Goal 1: Strong Relationships with Other Agencies, Organizations and the Public: Objective 6: Share data, processes, tools, knowledge, expertise and information
- Goal 2: Highly Valued Programs and Quality Services Objective 7: Engage in broadly-informed and transparent decision-making (multiple sciences, public attitudes, traditional knowledge, etc.)

Potential Science Recommendation #2: Credibility: Decisions made by managers and policy-makers are transparently informed by credible science

Implementation recommendations include:

Graber/McAfee

- A. The science used is trustworthy using the standard protocols of the profession (peer review, publication)
- B. Where it is possible to do so, adaptive management is incorporated so that outcomes are tracked and new knowledge permits course corrections
- C. Based on the science used, the expected outcome of the decision is provided
- D. Other factors incorporated in a decision (social, political, economic) are clearly distinguished from the [natural] science and referenced.
- E. Where the body of legitimate science informing the topic is in disagreement, those uncertainties or differences of opinion are identified. Likewise, where the body of science is incomplete to support a necessary decision, standard and transparent means, such as 'expert judgment' are used to advance management.
- F. Scientific professionals in DFG are held to and protected by a DFG Science Quality Assurance and Integrity Policy

BRCC/SAG Potential Actions

- 8D: 17. Establish methods, guidelines, and policies for collecting, analyzing, archiving, and serving data and other information generated by research, monitoring, and modeling efforts of DFG personnel (3-0)
- 8D: 19. Publish guidelines for ensuring the quality, objectivity, utility and integrity of information used or disseminated by DFG (2-2)
- 8C: 16. [D]Develop Science Quality Assurance Plan to guide scientific efforts to produce timely, credible and objective results (Quality Assurance is rigorous internal and external review of study proposals, while Quality Control is rigorous administrative and peer review of completed studies) (5-2)
- 8C: 9. [D] Ensure that any science advisory panel adopts multidisciplinary approaches that include contributions from appropriate disciplines of population biology, oceanography, ecology, economics, statistics, modeling, and social sciences (3-1)

- 8C: 10. [D]Integrate the scientific method into DFG research, monitoring and evaluation of management actions (can include rigorous design and testing of null hypotheses, as well as incorporating other sources of scientific information as appropriate, such as descriptive studies, traditional ecological knowledge, strong inference, social science) (2-1)

DFG Suggestions

- (6, bullet 2) Review existing monitoring and other scientific endeavors within DFG to affirm scientific rigor and applicability to decision recommendations.

Implementation Assessment

- Method: ?
- Timeline: ?
- Level of likely BRCC/SAG agreement: ?

Ties to Strategic Vision

- Goal 2: Highly Valued Programs and Quality Services, Objective 7: Engage in broadly-informed and transparent decision-making (multiple sciences, public attitudes, traditional knowledge, etc.)

Potential Science Recommendation #3: Capacity (DFG has the internal capacity to produce science for its core values and mission. DFG works with external organizations/agencies on science development, where appropriate.)

Implementation recommendations include:

Graber/McAfee Suggestions

- A. DFG maintains in-house experts who are skilled at supporting, developing and cultivating scientific partnerships that allow science and data generated externally to be effectively consumed by the Department.
- B. DFG devotes capacity to encouraging 'user-driven and timely science' generation from external sources, such as universities and other relevant partners.

SAG/BRCC Potential Actions

- 8A: 21. [A] Partner with educational institutions (from elementary thru university levels) and existing environmental education programs (like the California Envirothon) (3 – 0)
- 8B: 15. [A,B]Pursue formal and informal partnership/collaboration opportunities with all levels of government agencies (federal, tribal, state, local), stakeholder groups, private landowners, etc. (10-0)
- 8B: 7. [A,B]Enhance and re-establish partnerships with organizations that have scientific capacity (such as academic institutions, other credible scientific organizations and

stakeholders, in order to expand ability to make decisions based on best readily available science) (6-0)

- 8B: 8. [A]Develop mechanisms to facilitate collaborative partnerships between DFG personnel and scientists from other state and federal agencies, academic institutions, and other appropriate third-party scientific organizations (3 -1)
- 8B: 10. [A]Promote active involvement of DFG employees in the larger scientific community (3-1)
- 8B: 9. [B]Encourage and facilitate partnerships with stakeholders (e.g., consumptive and non-consumptive resource users and citizen scientists) to participate in data collection (2-0)
- 8B: 29. [A,B]For data/ information gaps, and filling monitoring needs, establish partnerships and determine who will gather scientific information (avoid duplication of efforts) (1-1)
- 8B: 30. [E?]Reach out to the scientific community for assistance in designing management plans and conducting environmental reviews (0-2)
- 8C: 4. [A,B]To the extent possible, coordinate/integrate methods, guidelines, and policies with other scientific data collection and archiving efforts (7-0)
- 8D: 28. Provide scientific advisers to DFG and F&GC who are independent experts in economics and other social sciences, ecology and population biology (3-2)
- 8E: 21. [A]Coordinate scientific determinations with other state and federal scientific bodies (i.e. PFMC Science and Statistical Committee) (2-0)
- 8E: 1. [A- the matrix here could be a tool in A above]Identify the potential to coordinate with other agencies by developing a matrix that describes the interactive hierarchical structure of California agencies and extant offices within DFG that use guidance from science in conserving and managing California's natural resources (3-2)

DFG Suggestions

- (Number 6, bullet 3) Develop and implement a mechanism to improve the Department's scientific capability, including developing practices that ensure a rigorous science program within the Department that informs management and policy.

Implementation Assessment

- Method: ?
- Timeline: ?
- Level of likely BRCC/SAG agreement: ?

Ties to Strategic Vision

- Goal 3: An Effective Organization Objective 7: Improve and maintain credibility (scientific, decision-making, fiscal, etc.)

Other Input and Comments

Eric Loft

A) Enhance scientific collaborations with educational institutions, state/federal agencies, and tribes to identify research and scientific needs for fish and wildlife. Establish funding streams and implement research priorities through cooperative/interagency agreements, standard agreements, and grants. Reduce state administrative barriers to collaboration with other government entities and academic institutions that treat these entities simply as contractors to DFG rather than as scientific partners.

Mark Rentz

Ensure continued and improved Department and Commission interaction and coordination with the appropriate... (state and federal agencies, academia, etc.)... to share, coordinate and enhance scientific research and knowledge, and identify opportunities to leverage limited resources amongst the partnering entities.

Eric

Request DFG provide a problem analysis describing the limitations and administrative hurdles to conducting effective scientific work—(contracting issues in DFG/DGS, classification, data sharing, agreement boilerplate, DFG project leadership, hiring of field technicians, difficulty in conducting environmental research under existing bureaucracy, multi-year funding limitations, project completion, analyses/product, and dissemination of results, etc.)

Eric

Facilitate and improve partnerships with stakeholder groups, landowners, and other non-governmental entities. Improve capability (reduce obstacles) to more easily enable granting/contracting capabilities with these entities for the conduct of scientific work.