

DRAFT BASINWIDE MONITORING, RESEARCH, EVALUATION, REPORTING AND DATA ACCESS FRAMEWORK

A. Primary Strategies¹_[11]

- 1) This Program is primarily habitat-based, depending on actions in the basin intended to protect or improve habitat characteristics as the means to achieve Program goals. The Program also relies on artificial production as a key tool. It is therefore critical that the effectiveness of habitat actions for improving habitat and population characteristics, as well as the effects and effectiveness of artificial production, are evaluated at the appropriate and efficient scale.
- 2) The Program has not focused as much on evaluation and reporting, especially at the sub-regional and regional scale. However, it is critical for the Program's progress to learn from the implementation of evaluation and reporting by incorporating this information into an adaptive management process. Thus, it is critical that data collected through the Program be evaluated and reported in a timely manner to inform decisions, Program amendments and implementation, assessing and communicating on Program priorities, reporting needs and overall progress.

B. Evaluation, Reporting and Data Access

Evaluation and reporting on data collected at a broad scale synthesis, such as basin-wide or Program-level, has not been a strong Program focus in past years. _[12]Strengthening this focus _[13]will increase the data's usefulness to the Program. It is equally important to ensure that this valuable data resource receives the attention needed for its proper management to ensure its integrity and to maximize its impact by facilitating sharing. _[14]More detailed guidance for properly managing data, and for effectively contributing to Program progress assessments and implementation improvements is provided below. _[15]

1) Evaluation

i. Specific Strategy

All monitoring and research conducted through the Program must clearly outline the details for evaluating these data at the appropriate scale. This information must be included in the project proposals and/or identify relevant documents that contain this information, such as umbrella programs and regional strategies. To ensure the evaluation contributes to a Program priority and adequately informs on Program progress, those gathering and analyzing these data must clearly state in the relevant proposals _[16] and other documents how these findings will be made available in an efficient and timely manner to effectively inform the Council needs, including reporting needs and adaptive management process that are described under the Reporting Section (B.2).

ii. Guiding Principles

¹Based on draft MERR Plan (version November 2011), Council RME-AP Review Category Decision memo, and 2009 Program;

Program funded research and monitoring information must be evaluated by those gathering and analyzing these data at the relevant scale to inform on Program priorities and progress, and to facilitate adaptive management. |

[17]

When feasible, federal, state, and tribal agencies gathering monitoring and research information should collaborate to facilitate broad scale evaluation of their combined data. |

[18]

Data collected through the Program should contribute to as many of the reporting forums described below as feasible.

2) Reporting

i. *Specific Strategy*

Information derived from monitoring and research activities must be provided by those gathering and analyzing the data (e.g., project proponent) at the appropriate scale of synthesis, in an easily accessible and understandable format,^[19] to inform the Council, the ISRP, and the region.

ii. *Guiding Principles*

~~The Program emphasizes the need for improving r~~Reporting ~~of that synthesizesd~~ data ~~in a manner that should~~ contributes to ~~understanding~~ Program progress and informing the Program's adaptive management and implementation efforts.

~~To address this need, the Program identifies four groups of~~These -synthesis, (a) through (d) ~~below, that~~ occur at various scales to inform the Council on emerging information, Program implementation, ~~Program and~~ progress, and on the ~~effect and~~ effectiveness of Program actions. ~~These four~~ groups include reports already ~~being~~ produced by the ISRP and project sponsors,., encouraging a broader application of project sponsor initiated symposia, formalizing reports requested by the Council since 2009, and new reports that will synthesize information needed at a ~~regional and sub-regional~~appropriate^[110] scale to assess the Program. ^[111]

- (a) Reports Summarizing Best Available Knowledge and Technology for the Program
Science-Policy Exchanges (Exchanges) inform Council decisions by providing an opportunity for Council members to receive transparent and technically sound evaluations of emerging science. ~~These~~ Exchanges also serve to communicate persistent needs, summarize recent research and monitoring findings, and ~~to~~ engage the region in discussions about implications for policy decisions^[112]. ~~The Council(?) may use a diversity of formats for these~~ Exchanges formats may include symposia, workshops, panel discussions, and ISAB presentations. The Council will request Exchanges as needed. As appropriate, Council staff will synthesize information from these Exchanges into policy statements for Council consideration. ^[113]

The Council will request the ISAB and ISRP to produce *A Report on the Status of Monitoring and Research Tools and Methods* as needed. This report will consist of a review of current and emerging tools and methods and evaluation of how these can be

used to improve monitoring and research implemented under the Program. The Council will collaborate with the region and managers to define these reviews. The ISAB and ISRP may also be requested to produce other reports as required.^[114]

(b) Reporting on Program Implementation

Monitoring and Research Strategies and Synthesis (Strategies) will provide a basinwide context for how Program^[115] funded research and monitoring activities fit together and are coordinated with non-Program funded activities. The Strategies will provide a comprehensive description of current research and monitoring approaches implemented for the basin's fish, wildlife and habitat. Guidance for developing these Strategies will include Program management questions, indicators, biological objectives, and Program guidance for research and monitoring. Council staff will facilitate the process to develop these Strategies with those conducting this work, including project sponsors and federal, state and tribal managers, for a given fish, wildlife, habitat, and geographic areas as needed. The authors of these strategies will update these as needed to remain current, or as requested by the Council. Strategies will complement existing subbasin plans and provide context for project implemented work. Current Strategy examples include the 2010 regional Anadromous Salmonid Monitoring Strategy ([ASMS](#)) and the comprehensive [ocean synthesis report](#).

^[116]

Monitoring and research project sponsors submit *Annual Progress Reports* electronically to Bonneville, adhering to the Council's and Bonneville's report guidelines. Annual reports should contain information that: states clear objectives, describes scientific methods and statistical analyses, summarizes accomplishments of projects over time including any results and interim findings, states the main conclusions, describes the benefits to fish and wildlife, identifies milestones and end dates, and provides a link to any publications resulting from the work.^[117] For research projects, sponsors also will clearly state past and current sets of hypotheses tested and related findings, and identify how the project addresses research uncertainties described in the Council's Program and Research Plan. Research project sponsors will also compile and report to Bonneville all relevant information and results within six months of completing a significant phase of a research project or at any time Bonneville requests. The Council will work with the ISRP and Bonneville to update periodically project reporting metrics, protocols, and templates to enhance the accessibility and usefulness of annual and final reports produced by project sponsors.

The ISRP produces *Project Review* and *Program Retrospective* reports on a regular basis. Program Section VIII, Implementation Provisions, ~~provides a description~~ describes of these reports. *Program Retrospective* reports ~~should leverage the~~ information from project sponsor's *Annual Progress Reports*, ~~(described above) as well as~~ *Symposia*, and *Provincial Reports* (described below), ~~and focusing their assessments~~ on a subset of critical Program elements each year. The Council will work with the ISRP to identify information that generally would be needed to inform the ISRP's ~~assessment retrospective(?)~~. Bonneville and project sponsors will collaboratively assess how this information can be obtained from *Annual Progress Reports* or what modifications need to be made to capture this information in an easily accessible,

standardized, format in the *Annual Progress Reports*. Similarly, Council and ISRP will suggest information to be addressed in *Symposia* and *Provincial Reports* to inform this ISRP assessment. Alternative means for obtaining more specific information that may be best met through a specific request to Bonneville or Project Sponsors will be assessed by the ISRP and Council when needed, including whether the information required would best be obtained by a Council requested synthesis that would be produced through collaborative efforts among individual project sponsors, sub-regional projects, or a regional project.

(c) Reporting on Program Progress

Symposia can be an important element of the Program's regional coordination, ~~as observed from the benefits gained from existing symposia.~~ They provide a forum for interactive learning and exchanges among sponsors ~~and other managers working on similar issues in the same subbasin(s) or on the same fish, wildlife, habitat, and actions.~~ These ~~y~~ also ~~serve to~~ inform the ISRP and Council by providing regular progress updates and that in turn may inform ISRP *Project Review* and *Program Retrospective* reports. The Program aims to optimize the benefits gained by providing suggestions to improve addressing the information needs of the Council and ISRP and to encourage a more evenly distributed application of *Symposia* for the Program across the Basin^[118]. The Council, ~~with the assistance of the~~ and ISRP, will ~~develop~~ provide guidelines ~~that will to~~ convey issues of interests ~~that~~ sponsors should consider to ensure ~~these~~ issues are adequately ~~and comprehensively~~ covered. ~~Ideally, Symposia will occur approximately every 2 years.~~ *Symposia* will may be convened by sponsors, ~~and interested~~ managers, ~~or by~~ Bonneville, and or the Council.

Provincial Status Reports will describe the status and trends of a Province's limiting factors, focal fish and wildlife, and their habitat at the highest appropriate scale, ~~such as the population, ESU, subbasin or above scale.~~ The Council will work with the ISRP and ISAB to provide guidelines to ensure that topics of interests are adequately and comprehensively addressed. The Council will work with ~~federal, state, agencies~~ -and ~~tribal~~ agencies in the province to produce the Report by coalescing information from for within^[119] each ecological province², on a rotating basis. The *Provincial Status Report* will build upon the information compiled from ~~past Annual Reports, Synthesis, and Symposia, described above,~~ and through an organized provincial-level symposium. These reports will serve as an important element of the Program's regional coordination by understanding what is being addressed, enhancing collaboration, and informing on Program progress. ~~These r~~ Reports will also facilitate ISRP review recommendations for improvements of the Program in their *Program Retrospective Report*.

The Council will produce a *High level Indicators (HLI)*³ report to Congress, State Governors, and the public, at least every 2 years. The HLI report will to convey and track the ~~current~~ status of Program implementation, ~~assess~~ progress in achieving Program

² By combining the Columbia Gorge and Estuary Provinces, the entire Columbia River Basin will be reported upon each decade.

³ The Council adopted two lists of indicators, High Level Indicators and Fish and Wildlife Program Indicators, during October 2009. Available <http://www.nwcouncil.org/fw/program/hli/Default.htm> (January 2010).

vision, and ~~to~~ depict the status and trends of the Basin's fish, wildlife, and habitat. ~~to Congress, governors, and the public. The Council will use, as relevant^[120], the information provided by all reports described in this section in addition to other available information to inform the HLI report.~~ The Council will work with Bonneville and managers to ensure HLI and supporting Fish and Wildlife Program Indicators are compiled and ^{reported^[121]} as needed. The HLI's and associated Program management questions are dynamic and will evolve with Council reporting needs, ISAB guidance, manager input, and available information.

(d) Reporting on Effectiveness and Effects of Program Actions

Every two years, Bonneville will produce a *Report on the Effectiveness and Effects of Actions* on a rotating subset of actions. This report to the Council will assess the status of evidence for the effectiveness of each action-category⁴ implemented under the Program in altering physical habitat characteristics, as well as evaluating whether a category of action or a suite of different actions result in life-stage, life-cycle, or watershed changes. This assessment will be conducted either through a an independent project tasked with this purpose, a synthesis of published literature, and synthesis of existing project findings, or by conducting retrospective effectiveness monitoring of implemented actions.⁷ ~~findings from an independent project tasked with this purpose, or a combination^[122] of the above. One or more category of actions may be addressed per report.~~ As the effectiveness of categories of actions are documented the Council may seek science review and may recommend changes in the investment of effectiveness monitoring efforts for an action based on the preponderance of evidence criterion, described below in the Monitoring Section.

3) Data Access

i. *Specific Strategy*

Monitoring and research data are an important underlying component for assessing Program progress. Proper data management and effective data sharing, in an agreed-upon format, is necessary to inform decisions and to improve the Program and its implementation.

ii. *Guiding Principles*

Bonneville ratepayers fund the Program. Use of ratepayer monies requires that all data and information be made easily accessible to the public in a timely manner, in an electronic format, and containing all relevant supporting material. If complex analysis is required to make the data usable, then the methodologies applied must be documented and made publically available.

The Program requires that data be managed following best data management practices that are clearly documented. Furthermore, the Program requires electronically sharing information among those who can contribute to providing broad-scale results for Program assessment, such as Program HLI's and biological objectives, and for answering broad-

⁴ Action-category refers to groups of identical actions implemented under the Program, such as hatchery releases, riparian plantings, invasive species removal, and in-stream large wood-debris additions.

scale management questions such as status of fish, wildlife, and habitat. [123] To ensure appropriate data management and to facilitate sharing, the Program requires:

- Documentation of protocols – For outside data users to assess if or how datasets are compatible for combination, protocols used in collecting and analyzing the data need to be described and associated with the dataset.
- Application of data management best practices and standards — To ensure data integrity, project proponents must describe data management best practices and standards they are following, from field data entry to populating databases and archiving. These are evolving within the region. Project sponsors should consult data professionals, such as data coordinators and stewards, and engage in regional forums addressing these needs. [124]
- Use of a data coordinator and steward — the Program promotes the use of a data coordinator and data stewards who will ensure data and metadata persistence as well as participation in regional and sub-regional data-sharing efforts. Federal, state and tribal agencies must explore sharing data coordinators and stewards for efficiency and cost-effectiveness.
- Include appropriate metadata with all datasets — To properly convey the content, quality, and context of the collected data, metadata must be developed by those that gather and analyze the data and be associated with the relevant dataset. Different levels of details and specificity may be needed for the metadata associated with monitoring and research data. As a starting point, national standards should be consulted, such as the Content Standard for Digital Geospatial Metadata by the Federal Geographic Data Committee, as well as regional standards for monitoring and research data as these are developed.
- Development of processes for regional data sharing needs — The Program supports efficient efforts to improve data sharing that will support Program progress assessment and reporting. Federal, state, and tribal managers should assist in developing and implementing agreed-upon regional and sub-regional data exchange networks for informing broad scale needs, spatial data maps to identify where data is collected, and databases that support data sharing. These exchange networks, maps, and databases should allow incorporation of both Program and non-Program funded data. Reliance on web-services to facilitate these exchanges is desirable.
- Development of tools for information sharing — The Program encourages development of online tools and regional guidance that facilitates data sharing. These may include regional data sharing standards, standardized data exchange templates that inform content to be shared within a network exchange, and interactive database or maps that identifies what data is being collected where in the Basin. Federal, state, and tribal managers should optimize the use of and participate as appropriate in the development of these tools that will inform Program priorities, progress, and implementation.

The Council and Bonneville will ensure data will be made available in a timely manner, ideally as close to real-time as feasible, or no later than 1 year after collection.

The Program allows shared databases to use access-permission-levels such as providing access to raw data to managers and researchers and access to derived data to general audiences. The latter is allowable as derived information is generally of more use and interest to the public. However, requests to access raw data from the public must be addressed by those that gather and analyze the data^[126].

C. Monitoring and Research

The Program has invested in numerous monitoring^[127] and research activities over the past decades, with most monitoring efforts being focused at the project scale and research efforts not necessarily focused on short-term Program needs^[128]. To address broader information needs, such as assessing Program progress and improving implementation, monitoring efforts^[129] should focus at sub-regional and regional scales. Additionally, researchers should closely tailor efforts to inform decisions and develop innovative tools within a reasonable amount of time. Both of these activities can also benefit from additional guidance to improve efficiencies and cost-effectiveness^[130].

Council recommendations on monitoring and research activities and related evaluation and reporting will be guided by the risk and uncertainty associated with an action^[131]. The risk-uncertainty matrix depicts how riskier and less certain actions or topics will be subject to more intensive monitoring and research efforts than less risky and more certain actions or topics (Figure 1).

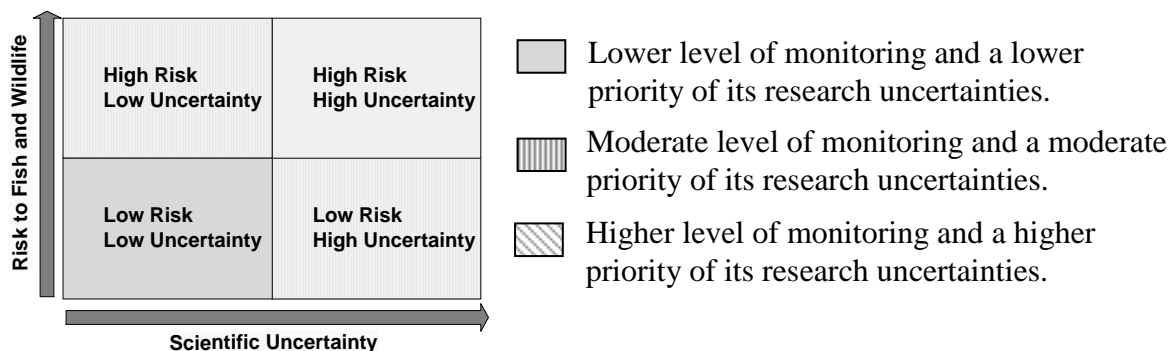


Figure 1: Risk-uncertainty matrix guiding monitoring effort and research prioritization.

The certainty associated with an action will also indicate the appropriate levels of monitoring and research implemented through the Program. This certainty level will be assessed by Council based on the following criteria: (1) whether existing information for guiding a decision is thoroughly established, (2) generally accepted, (3) has good peer-reviewed empirical evidence in its favor, (4) has strong weight of evidence in support even if not fully conclusive, and (5) is not misleading or demonstrably wrong. Information needed to inform the Council’s assessment will be provided in the sponsor’s proposal for the proposed monitoring and research activities. The information provided in the sponsor’s proposal will be verified through the ISRP project proposal review process. The Council refers to a certainty level that is adequate to inform

decisions as meeting the preponderance of evidence criterion^[H32]. Scientific review of actions can require a higher level of certainty.

Investigation of research uncertainties and innovative tools will focus on areas critical to informing decisions and improving Program progress and its implementation that can be achieved within a reasonable amount of time.

1) Monitoring

i. *Specific strategies*

All projects must provide required implementation monitoring data.

Status and trend monitoring and effectiveness monitoring should occur at the highest scale feasible, such as the population, sub-regional, and regional scale.

Monitoring should inform Program priorities, performance, and the Program's assumed relationship between habitat actions and improvements in fish populations.

The monitoring approach to apply, such as collecting data from multiple independent projects, multiple collaborative projects or by an independent sub-regional project, should be informed by considering the cost-effectiveness of the various approaches and by which approach can most efficiently obtain the required data to inform the assessment needs.^[I33]

ii. *Guiding Principles*

The Program intends that all actions have the appropriate level of monitoring. The appropriate level should be assessed by considering the risk and uncertainty (figure 1)^[I34] associated with an action in making this determination.

All monitoring activities funded by the Program that assesses actions, fish, wildlife, and habitat will be consistent with the Program guidance. This consistency will be described by project sponsors in their project proposal and annual reports.

Monitoring implemented through the Program will fit within one or more of the below monitoring⁵ types. Monitoring should be conducted at the relevant scale (*e.g.* regional) and use an efficient approach (*e.g.* collaboratively)^[I35]. Monitoring data should contribute to informing Program priorities, reporting needs, and assessing Program implementation and progress.

- (a) Implementation and Compliance Monitoring —assesses if actions were implemented according to appropriate design requirements and standards, was fully described and documented, and when relevant, whether it achieved its assumed functional lifespan. The spatial scale is narrowly focused on the action that is being assessed.

⁵ Where appropriate, definitions of the monitoring types are copied from the glossary of monitoringmethods.org

This level of monitoring may be best performed at the project scale by the individual project sponsors. An independent party may also be tasked to collect and report this type of information.

- (b) Status and Trend Monitoring — provides estimates of fish, wildlife, and habitat status over time. Status and trend data may inform the effectiveness assessments described below¹³⁶. This monitoring can occur at different spatial scales. Assessing the effectiveness of actions and Program progress is better informed at a larger scale to provide a basinwide and ecological context. At a smaller scale, status and trend data can assess unique types of actions and projects. Status and trend assessment should occur at the highest scale feasible in an efficient and cost-effective manner.

Program priorities related to regional and sub-regional (*e.g.*, populations) status and trend of fish, wildlife, and habitat should involve collaboration among federal, state and tribal agencies that collect data that can contribute to this assessment. For efficiency and cost-effectiveness, a group of sponsors may have an independent party perform this monitoring or an independent project may be tasked to perform this work.¹³⁷

- (c) Effectiveness Monitoring — determines if Program funded actions achieve a given outcome, *i.e.* are they effective. Effectiveness can be assessed by determining cause-and-effect or be informed by correlated relationships between fish, wildlife, habitat, and actions. Assessing the effectiveness of actions is addressed at multiple scales reflecting the question being asked. Determining whether a unique and localized action results in the desired physical change may best be addressed at the project scale. Assessing the effectiveness of an action-category⁶ in altering physical habitat characteristics and for evaluating whether a category of action or a suite of different actions result in life-stage, life cycle, or watershed changes may be best addressed by an independent project implemented at the regional or sub-regional scale. Alternatively, regional or sub-regional collaboration among project sponsors, with or without an independent party, may also contribute to action-category effectiveness assessments. Effectiveness of actions should be assessed at the highest scale feasible in an efficient and cost-effective¹³⁸ manner.

To inform Program priorities and assess Program performance and action effectiveness, the Program Council recommends¹³⁹ a collaborative approach for status and trend assessment and effectiveness monitoring. This monitoring approach relies on compatible or standardized protocols and methods to facilitate data sharing. This approach is especially relevant for assessing habitat action effectiveness and for monitoring the effectiveness and effects of artificial production⁷, both critical components for the Program's success⁷, that involve a diversity of entities, including state and tribal and federal agencies.

⁶ Action-category refers to groups of identical actions implemented under the Program, such as hatchery releases, riparian plantings, invasive species removal, and in-stream large wood debris additions.

⁷ Council's Final Decision on the Review of Research, Monitoring and Evaluation and Artificial Production available: http://www.nwecouncil.org/fw/budget/2010/rmeap/2011_06decision.pdf

To facilitate assessing Program performance, including changes in fish, wildlife, and habitat status and action effectiveness, the Council, in collaboration with state and tribal fish and wildlife managers, federal agencies, and other experts, will identify unenhanced, representative sites^[140] across the basin to be maintained as reference (*i.e.* control) sites.

Findings from sub-regional and regional projects and collaborative efforts may inform individual project monitoring needs related to regional and sub-regional status and trends, as well as action effectiveness. When sponsors use these findings to adaptively manage a project they will need to describe for the Council and the ISRP how this will be accomplished in their project proposals and annual reports.

Periodically, the Council will adopt or update relevant monitoring and evaluation methods and protocols⁸ for the Program that are identified through regional processes and reviewed by the ISAB and ISRP for their scientific merit⁹.

2) Research

i. *Specific Strategy*

Investigations of uncertainties in scientific knowledge and best available technologies provide insight and tools that can enhance the Program's success. The Program prioritizes research of topics or the development of innovative tools where, **within a reasonable amount of time and at a reasonable cost**, results^[141] will likely better inform decisions.

ii. *Guiding Principles*

All research projects funded through the Program must align with Program guidance and be consistent with the Council's Columbia River Basin Research Plan¹⁰ (Research Plan). In the case of innovative tools, they should improve the efficiency and cost-effectiveness of Program implemented actions and monitoring.

The Council will periodically update its Research Plan and, ~~as needed~~, suggest a sequence for addressing research uncertainties. The Council will consult with federal, state, and tribal agencies in this review.

The Council will consider the risks and uncertainties associated with different research ~~uncertainty~~ topics to determine whether a research project reflects a lower, moderate, or higher priority level^[142] (see Figure 1). The Council's assessment will be informed by the argument provided in the sponsor's proposal. This argument should address the risks and uncertainties associated with this research topic and explain the topic's relevance to the Program. The Council will also consider the ISRP review of the proposal and the

8 Protocols are defined as a detailed plan that explains how data are to be collected, managed, analyzed, and reported, and is a key component of quality assurance for natural resource monitoring programs (Oakley et al. 2003; consult www.monitoringmethods.org for more details).

9 The Council has adopted the Northwest Environmental Data Network's Best Practices for Reporting Location and Time Related Data, Pacific Northwest Aquatic Monitoring Partnership's (PNAMP) Methods for Collection and Analysis of Benthic Macroinvertebrate Assemblages in Wadeable Streams of the Pacific Northwest, and PNAMP's Salmonid Field Protocol Handbook.

10 The latest version of the Columbia River Basin Research Plan is available <http://www.nwcouncil.org/library/2006/2006-3.htm>

argument, along with public comments submitted on the proposal, and the sequencing proposed in the Research Plan. The Council's assessments of this information will inform the Council's recommendations and will ensure that research with the greatest benefit to the Program is addressed first.

To facilitate communicating the importance of research funded through the Program, the Council recommends that Bonneville should work with the Council and managers to identify, organize, and track all research projects as part of an overall research effort. When projects include research, monitoring and evaluation elements, the research components should be tracked as part of the overall research efforts.

D. Overarching Guidance¹¹

The Council needs monitoring and research information to inform decisions, assess Program performance, and facilitate reporting on Program progress at relevant scales. The Program's priorities are described through its management questions, goals, biological objectives, high level indicators, and research needs. These priorities guide the implementation of a comprehensive, integrated, efficient, and cost-effective approach to monitoring, research, evaluation, and reporting for fish and wildlife in the Columbia River Basin.

The Council, Bonneville, regional collaborative efforts, and project sponsors will employ a transparent structured decision process¹² when prioritizing^[H43]. The Council views prioritization as essential to maximize available resources for implementing monitoring, research, evaluation, and reporting efforts and Program actions. Prioritization needs to occur at all scales, from basinwide to individual projects¹³.^[H44]

The Council recognizes ~~in the Program~~ that numerous federal, state, and tribal agencies conduct and coordinate research, monitoring, evaluation, and reporting from these efforts ~~that~~ can serve to meet a diversity of needs. It is important to continue the collaboration and partnerships that ~~developed between these entities. The Council encourages~~ result in efficiencies and increased understanding that may come from these partnerships.

~~As conducted in the past and described in the Program, all monitoring and research funded under the Program will undergo science review and meet statutory standards.~~^[H45]

¹¹ **NOTE:** Who is responsible to ensure sharing, coordination, collaboration, evaluation, reporting etc is done may need to be made explicit if this guidance is supported by the region for inclusion in the 2014 program.

¹² Implementation of a structured decision process (see ISRP documents 2011-25 and 2008-4; ISAB document 2003-2) provides transparency of the assumptions and information used to refine priorities.

¹³ Projects are those funded through the Program and assigned a project number. Projects may have multiple subcomponents and actions.