Sites Authority Principles and Requirements for Feasibility StudyProject Feasibility Criteria Technical Memorandum

Sites
Program Management Team

To:	Primary recipient(s)
CC:	Other recipient(s)
Date:	September 3, 2019
From:	
Quality Review by:	Reviewer
Authority Agent Review by:	Reviewer
Subject:	Sites Authority Principles and Requirements for Feasibility Study

1.0 Purpose

1.1 This document:

These Principles and Requirements are intended to provide the Authority's Feasibility Study framework for analyzing the Project and related actions involving Federal, State and Participant investments. For the purposes of this policy, "Principles" refer to the overarching concepts that the Authority seeks to achieve through policy implementation. The "Requirements" are inputs to alternative plans, programs, designs, strategies, or actions that should be incorporated into analyses for Authority investment.

1.2 Feasibility Study:

The purpose of the Authority Feasibility Study is to complete an evaluation of the technical, environmental, economic, and financial feasibility of the Project. The Feasibility Study will provide the basis for making recommendations to the Authority Board about whether the Project should be authorized for design and construction.

Commented [FLE1]: Is this the correct term

The feasibility study process may be completed in a single step or the following two steps:

1. Authority can separately determine the project is technically and financially feasible, and conditionally feasible based on draft economic, draft environmental, and other relevant studies.

2. At a later date, the Authority can determine the project is feasible based on no material changes in technical or financial feasibility and determination of economic and environmental feasibility.

1.3 Limitations:

These Principles and Requirements only apply to projects that will require ~~(a)~~ financing of capital assets - not small projects that are funded by reserves or cash. ~~This does not apply to : (b) beyond a categorical exemption and perhaps require an EIR; (c) non-~~emergency projects; ~~(d) up to the point that 1. financing has been secured, 2. Permits for operation and "key" permits for construction, 3) land and easements have been acquired; and 4) other significant factors 222).~~

Commented [FLE2]: What others, or delete 4

2.0 Principlesals

Commented [JW3]: Reclamation uses Principles, Requirements, and Guidelines.

Any reason we should deviate?

NOTE: Reclamation then use "Directives and Standards" to define how to comply.

The following Principles constitute the overarching concepts the Authority seeks to promote through investments in water resources.

2.1 Ecosystems.

Authority investments in water resources should protect and restore the functions of ecosystems and mitigate affects to ~~any unavoidable damage to~~ these natural systems. consistent with existing laws and regulations.

Commented [FLE4]: The guidelines are to get consistency between federal agencies, so I limited it to P & R. They also have a document P&R

2.2 Sustainable Economic Development.

Authority investments in water resources should encourage sustainable economic development for present and future generations through the sustainable use and management of water resources. Authority investments in sustainable economic development activities contribute to the Nation's and State's resiliency.

2.3 Beneficiary Pays

Authority will apply the beneficiary pays principle to ensure cost allocation for construction and OM&R costs are shared in proportion to the level of participants' funding and the benefits derived through the use of the project's facilities

2.4 Stakeholder Coordination

Commented [FLE5]: Kevin will provide.

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Authority will coordinate w

3.0 Requirements

Authority investments in water resources should incorporate the Requirements described below.

3.1 Best Available Science and Commensurate Level of Detail

Commented [JW6]:
Where do we attempt to define what threshold is needed for each of the 4 topic areas?

In addition, we need to include over-arching aspects (that should apply to each of the 4 topics) such as use of risk management and quality management.

Analyses to support Authority investments in the Project should utilize the best available science, data, analytical techniques, risk and uncertainty, and other fields to the extent that sufficient funding is available. The level of detail required to support Authority investments in a ~~p~~the ~~P~~roject should not be greater than needed to inform the decision making process efficiently and effectively.

Commented [FLE7]: I think the thresholds will be established in the decision making process. I don't think we can specify now.

3.2 Collaboration

The Authority should collaborate on Project related activities with other affected Federal agencies and with Tribal, regional, state, local, and non-governmental entities, as well as community groups, academia, and private land owners (stakeholders) to realize more comprehensive problem resolution and better informed decision making.

3.3 Planning Framework

Authority investments will be evaluated for their performance with respect to the Authority Project Objectives using a sound planning framework that is transparent. This framework will allow for the formulation, evaluation and comparison among potential alternative plans, and will support a sound decision making process.

The framework will include a plan formulation phase. This phase identifies planning objectives and constraints. The project objectives will describe all public and non-public benefits the proposed project is designed to provide. Alternative plans, strategies, or actions will be formulated in a systematic manner to ensure that a range of reasonable alternatives are evaluated.

Decision support process should be employed to identify the recommended plan. The decision support process should reflect agreed upon weighting of goals, objectives, and criteria. The weighting criteria should include technical, economic, and environmental metrics. The process will define the role of stakeholders in the decision process. The process should support full disclosure and promote transparency in the decision making process.

The plan formulation ~~and evaluation phase~~ will focus on giving consideration to reasonable alternative plans, and screening them down so that additional time and effort are focused on the most promising alternatives. The process will be used in screening of initial conceptual alternative plans and again in the feasibility level evaluation of alternatives.

The plan evaluation ~~phase~~ will result in the identification of the recommended alternative plan. Evaluation methods should be designed to ensure that potential investments in water resources are justified by benefits, particularly in comparison to costs associated with those investments. Planning level designs and estimated costs will be prepared for the alternative plans. Technical studies will be completed to support the planning level designs, as well as to quantify the effects of the alternatives. The technical studies will provide the necessary metrics required for alternatives assessment and comparison.

Each alternative will be analyzed against the decision support metrics, resulting in scoring relative for each alternative. Following analysis and comparison between alternatives, the Reservoir Committee and Authority Board will have the information necessary to determine the recommended plan.

~~Set the stage for being able to determine environmental (ideally of all CEQA alternatives, but definitely the proposed project) and technical feasibility (ideally of all CEQA alternatives, but definitely the proposed project)~~

Commented [FLE8]: I will get input from Ali. I tried to add related text here

~~3.6~~3.4 Risk and Uncertainty

When analyzing potential investments in the Project, areas of significant risk and uncertainty should be identified, described, and considered, and risk management measures shall also be identified. Knowledge of significant risk and uncertainty and the degree of reliability of the estimated effects will better inform decision making. Risk and uncertainty inherent in the analyses performed and potential effects on Project feasibility should be identified. Decisions should be made with knowledge of the degree of reliability and the limits of available information, recognizing that even with the best available engineering and science, a residual risk and uncertainty will always remain.

The risk assessment will serve as a management tool that improves the Project Participant's understanding of how best to develop the Project. The risk assessment will be performed for the feasibility phase of the Project and, as such, it is recognized that baseline design assumptions, uncertainties and risks may prove to be either conservative or optimistic as the Project progresses. As the Project progresses and the level of uncertainty decreases, it is the Authority's intent to update the assessment to incorporate current knowledge (i.e. a living document) that will lead to the creation and implementation of risk management plans whose progress will be monitored and reported.

~~3.6~~3.5 Cost Estimates

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All project costs will be identified and described, including construction costs, interest during construction, replacement costs, operations and maintenance costs consistent with the operations plan, and costs of real estate and mitigation for adverse environmental consequences identified in the draft environmental documentation. The costs will be based upon feasibility level designs and layouts from which quantities for materials, equipment, and labor can be estimated. Cost estimates will be an Association for the Advancement of Cost Engineering (AACE) International Estimate Class 4: Concept study or feasibility-level estimate, with adjustments reflecting the risk assessment.

3.73.6 Benefits

All proposed project benefits, consistent with the operations plan, will be described and quantified. Public benefits and non-public benefits need to shall be quantified using physical measures and, where possible, monetary measures to the extent practicable. Proposed project benefits must be displayed as expected average annual values for each year of the planning horizon. For benefits that vary according to hydrologic condition, applicants must display that variability using, for example specific water year types (such as dry and critical), or exceedance probabilities. Appropriate ways to display variability depend on the benefit category and how the physical benefit is to be monetized.

3.83.7 Cost Allocation

A benefits-based cost allocation will be conducted to determine the costs to be assigned to the project beneficiaries. Costs will be assigned to the project beneficiaries using a generally accepted industry method. The federal government's Separable Costs-Remaining Benefits method is a commonly acceptable method to do a cost allocation.

3.83.8 Constructability

The Project must be constructible with existing technology and availability of construction materials, work force, and equipment.

3.103.9 Determination of Project Feasibility

The determination of Project feasibility will depend upon the ability to meet the following components of feasibility,

3.10.13.9.1 **Technical** feasibility –

The feasibility studies must demonstrate that the project is constructible and technically feasible consistent with the operations plan, including a description of data and analytical methods, the hydrologic period, development conditions, hydrologic time step, and water balance analysis showing, for the with- and without-project condition, all flows and water supplies relevant to the benefits analysis. It will also be important to demonstrate how well the planning objectives are met; the validity of the scientific, technical, and design assumptions, and the ability to construct a project within the estimated cost and schedule.

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3.10.23.9.2 **Environmental** feasibility –

Commented [FLE9]: Need input from Ali

The feasibility studies must demonstrate that the project is environmentally feasible. The documentationapplicant needs to must describe how significant environmental issues and how they will be addressed mitigated, or indicate if the Lead Agency has or will file a Statement of Overriding Considerations. The environmental feasibility will be addressed in the draft EIR/S document.

3.10.3 Benefit Cost Analyses and Economic feasibility –

The supporting documentation must demonstrate that the expected benefits of the project equal or exceed the expected costs, considering all benefits and costs related to or caused by the project. The reliability of the estimated costs and benefits should also be addressed.

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3.10.43.9.3 Financial feasibility –

The financial analyses the applicant must demonstrate that sufficient funds will be available from public (including the funds requested in the application) and nonpublic sources to cover the construction and operation and maintenance of the project over the planning horizon. It must also show that beneficiaries of non-public benefits are allocated costs that are consistent with and do not exceed the benefits they receive. The capability and willingness of the project partner(s) to financially support the project must also be identified.

To determine the Project financial feasibility, the Authority and Participants will consider their respective capability to pay for their share of the costs to design, construct, operate, and maintain the Project in accordance with the applicable cost-share or repayment obligations. During the feasibility study phase, an assessment of financial feasibility will be performed. This analysis will account for the estimated capital costs and annual operation, maintenance, and replacement costs.

3.113.10 Other considerations

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Include property/ROW and community aspects

Include political support - Kevin should craft this

3.123.11 Feasibility Report

The completed results and findings of the feasibility study will be provided in a report submitted to the Authority's Reservoir Committee for consideration and recommendation to the Authority Board. The feasibility report will either support recommending Board authorization to implement the recommended plan or will support taking no Authority action. The feasibility report will identify known data gaps that require further investigation during the final design of the recommended plan.

3.133.12 QA/QC

The Authority's Board will require QA/QC practices to ensure that technical analyses, cost estimates, and designs are performed at the feasibility level.

4.0 Approval Process for Feasibility Reports

The following process describes the steps taken to submit a feasibility study to the Authority's Board in order to recommend project authorization:

1. Review by Authority Staff to ensure that the report and its supporting documentation comply with all Authority's Principals and Policies, Guidelines, and Requirements for Project Feasibility.
2. Review by the appropriate following committees/work groups to ensure that the report and its supporting documentation comply with all Authority's Policies, Guidelines, and Requirements for Project Feasibility.

   a. Water Facilities

   b. Etc.
3. Review by Authority's Legal Counsel to ensure that the report and its supporting documentation comply with all Authority's Principles and olicies, Guidelines, and Requirements for Project Feasibility.
4. Review by the appropriate Reservoir Committee to ensure that the report and its supporting documentation comply with all Authority's Principlesolicies, Guidelines, and Requirements for Project Feasibility.

Commented [JW10]: Please structure the process to align with WIIN by using a 2-step process

1. Authority can separately determine the project is technically and financially feasible (and likely feasible based on draft economic and environmental feasibility studies plus any overriding considerations)

2. At a later date, the Authority can determine the project is feasible based on no material changes in technical or financial feasibility and final economic and environmental studies.

Commented [JW11]: Need to start with Res. Comm determination that then flows up to Authority.

Commented [FLE12]: Done

Commented [FLE13]: Should we list all of the work groups?

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5. ~~Finalize Report. Authority staff finalizes the feasibility report~~.
6. Submit to the Authority's Board for their consideration to approve as a ~~for~~ resolution.

Commented [JW14]: Work with Kevin, but I think a Resolution should be used to formally document their decision

5.0 Change Management

Should an appropriate Committee identify a potential material change affecting the project's feasibility, the committee should recommend the Authority consider amending the project's feasibility. Ideally this should occur before completion of the preliminary design.

With 2-step determination process, need define (or refer to an existing) process. Concept is if a material change to 2 of 4 topic areas, then Res Comm & Authority should re-evaluate - up to the point that financing has been secured and permits secured. After this point,

Commented [JW15]: Arbitrary, but since all 4 are linked, I can't see why a "material" change in 1 topic area that doesn't affect another topic area as really being a material change to warrant re-evaluation.

Another option is to limit it to a material change in finance plan by 10X% of what was previously approved.

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