Framework for Evaluation of Proposals for Research and Scientific Activities

Worksheets and Instructions

Worksheets and instructions are provided for each of the filters in this evaluation framework. These worksheets may provide an important part of the administrative record for decisions about proposals for scientific activities inside wilderness. Before using these worksheets they should be modified to fit local circumstances and judgments, but once modified they should not be modified for individual proposals.

**Cover Sheet – Proposal for Scientific Activity**

Wilderness:

Title of proposal:

Date­­ proposal received:

Application #:

Name of person submitting this proposal:

Contact information person submitting proposal

Affiliation:

Address:

Phone number(s):

Email:

Optional topic(s) or keyword(s) to categorize proposal:

Name of agency staff evaluating this proposal:

**Final recommendation:**

**Date of final recommendation:**

Record of communication between manager and scientist:

**Initial Review Filter**

Date\_\_\_\_\_\_\_ Application # \_\_\_\_\_\_\_\_\_\_\_\_ Short Title \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Instructions: The questions included in this worksheet likely apply in most wildernesses, but local staffs should review these and delete any that aren’t applicable and add any that are. After reviewing the proposal, agency staff would check the appropriate “yes” or “no” box for each question. Any “yes” answers indicate that the proposed scientific activity may raise significant problems and need to be returned to the scientist with an explanation of the problem, or the proposal would likely require significantly more time to evaluate.

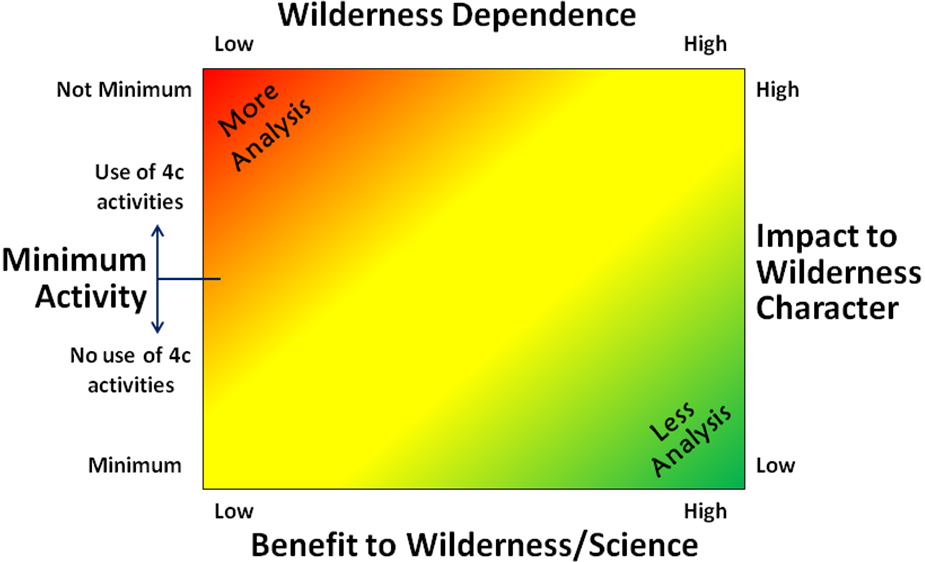
|  |  |
| --- | --- |
| **Initial Review Question** | **Yes or No** |
| 1. Does the proposal include any activities requiring a use that is legally prohibited by Section 4(c) of the Wilderness Act? | 🞎 🞎 |
| 2. Would the proposed activity degrade wilderness character even if it is legally permitted? | 🞎 🞎 |
| 3. Would the proposed activity likely be controversial with any publics? | 🞎 🞎 |
| 4. Would the proposed activity pose other legal or policy problems? | 🞎 🞎 |
| 5. Would the proposed activity interfere with management operations? | 🞎 🞎 |
| 6. Would the proposed activity pose consultation issues over listed species or cultural and heritage resources? | 🞎 🞎 |
| 7. Would the proposed activity require collecting plants or other natural resources, or the handling or removing of animals, or the introduction of plants or animals into the wilderness? | 🞎 🞎 |
| 8. Would the proposed activity pose timing or location problems, such as occurring in a sensitive area or time for particular species? | 🞎 🞎 |
| 9. Would the proposed activity pose additional impact in an area that already has an unacceptable level of cumulative impacts or is close to an unacceptable level of cumulative impacts? | 🞎 🞎 |
| 10. If the submitter has conducted work in the area before, were there any problems with completing administrative requirements (such as submitting reports, removing installations and other debris from the activity, completing curatorial and specimen documentation requirements) in a timely and professional manner? | 🞎 🞎 |
| *OTHER QUESTIONS* |  |
|  |  |
|  |  |

Explanation for all “Yes” answers (list by question number):

General Comments or Notes:

**Initial Review Filter — How Much Analysis is Needed?**

Instructions: This tool helps determine whether more or less analysis is needed to evaluate a proposal. Pick a point on each of the 4 sides of the graph based on a review of the proposal. The placement of these points is based on a quick assessment that at this stage is more art than science. Next, connect the two points that are on opposite sides of the graph with a line, yielding two lines, one that is left to right and one that is top to bottom. Where these two lines intersect should reflect the degree of analysis required. If this intersection is in the red or yellow zones, further detailed analysis is needed following the remaining worksheets included here. If this intersection is clearly in the red zone, the likelihood of the proposal being approved is small and this should be communicated to the proponent as soon as possible. If this intersection is clearly in the green zone, documenting assignment of the 4 points on this graph may, depending on local office protocols, be sufficient for evaluation of the proposal with no further analysis needed. This graphical tool is not a substitute for an agency authorization or permit because the policies and authorization process required by each agency must still be followed.



Explanation for assignment of points along each of the four sides of this tool:

**Quality of Proposal Filter**

Date\_\_\_\_\_\_\_ Application # \_\_\_\_\_\_\_\_\_\_\_\_ Short Title \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Instructions: The questions included in this worksheet likely apply in most wildernesses, but local staffs should review these and modify them as deemed appropriate. After reviewing the proposal, agency staff would check the appropriate “yes” or “no” box for each question. Any “no” answers indicate that the proposal is insufficient and may need to be immediately returned to the scientist with an explanation of the problem.

|  |  |
| --- | --- |
| **Quality of Proposal Questions** | **Yes or No** |
| 1. Is the proposed scientific activity sufficiently well designed to accomplish its stated purpose, thereby providing the intended benefits to management or science? | 🞎 🞎 |
| 2. Does the proposal describe the potential benefits of the proposed activity in terms of the Benefits Assessment described in the Impacts and Benefits Filter? | 🞎 🞎 |
| 3. Does the proposal describe the potential impacts of the proposed activity in terms of the Impacts Assessment described in the Impacts and Benefits Filter, and show how these will be minimized or mitigated? | 🞎 🞎 |
| 4. Does the proposal describe how the results and any reports will be communicated to local management staff? | 🞎 🞎 |
| *OTHER QUESTIONS* |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Explanation for all “No” answers (list by question number):

If necessary, describe action taken to ensure independent review of the proposal:

General Comments or Notes:

**Legal and Policy Filter**

Date\_\_\_\_\_\_\_ Application # \_\_\_\_\_\_\_\_\_\_\_\_ Short Title \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Instructions: The steps included in the worksheet should apply in all wildernesses, but local staff should still review these steps to make sure that they are applicable, and add any steps as appropriate for compliance purposes and for the administrative record. Several of the steps require subjective evaluation, and in such cases the rationale needs to be carefully documented, especially for proposals that might be controversial.

Step 1: Does the proposed activity include any actions or uses that are prohibited by Section 4(c) of the Wilderness Act?

If no, skip Steps 2 – 3, check this box 🞏 and go to Step 4.

If yes, go to Step 2 and describe the actions or uses:

Step 2: Are the prohibited actions or uses necessary? To answer this question, answer the following the questions:

1. Does the proposed work address an urgent or important health and safety concern?

If yes, check this box 🞏 and go to Step 4.

Explain the health and safety concern:

If no, check this box 🞏 and go to Step 2.B.

1. Can the prohibited actions or uses be conducted only inside the wilderness?

If yes, check this box 🞏 and go to Step 2.D.

Explain why the prohibited action or use can by conducted only inside the wilderness:

If no, check this box 🞏 and go to Step 2.C.

Explain why the prohibited action or use can by conducted outside the wilderness:

1. If the prohibited actions or uses can be conducted outside the wilderness, will the benefits to wilderness stewardship (i.e., preserving wilderness character) or to science be reduced?

If yes, check this box 🞏 and go to Step 2.D.

Explain how the benefits will be reduced:

If no, check this box 🞏 and deny the proposed work.

Explain how the benefits of the prohibited actions or uses will not benefit wilderness stewardship or science:

**Legal and Policy Filter (continued)**

1. Are there any legislated exceptions that allow the actions or uses that would normally be prohibited?

If yes, check this box 🞏 and go to Step 2.E.

Describe the legislated exception that would allow the normally prohibited action or use:

If no, check this box 🞏 and still go to Step 2.E.

1. Will the proposed actions or uses help preserve wilderness character?

If yes, check this box 🞏 and go to the Impacts and Benefits Filter.

Explain how the actions or uses will help preserve wilderness character:

If no, check this box 🞏 and go to Step 3.

Explain how the actions or uses will not help preserve wilderness character:

Step 3: Return the proposal with an explanation of why it is being returned. If a revised proposal is submitted, it should include an explanation of changes from the previous proposal. Begin at Step 1 of this Legal and Policy Filter with the revised proposal.

Step 4: Is there a restriction in law, policy, or management plan that would prevent the actions or uses, or limit where or when they could be used?

If yes, check this box 🞏 and go to Step 3.

Explanation of the restrictions in law, policy, or management plan:

If no, check this box 🞏 and go to the Impacts and Benefits Filter.

**Impacts and Benefits Filter — Benefits Assessment Worksheet**

Instructions: There are two worksheets, one for the benefits assessment and one for the impacts assessment. Once the worksheets are completed, the benefits and impacts decision table is used to determine a provisional decision. Based on the outcome of this decision, the proposal is either returned for revision or is evaluated for its contribution to cumulative impacts. After this cumulative impacts assessment, a final recommendation about the proposal is given to the decision maker.

The benefits and impacts assessment worksheets require substantive staff review and *must* be modified from what is shown here to be relevant to the local wilderness. To use these worksheets, local staff:

1. Prepare the worksheets
   * + - 1. Review the category descriptions (bold text at the left of each row in both worksheets) and modify them as appropriate for their local setting, but in most cases the ones offered here should fit most wildernesses.
         2. Review the text descriptions for each level of impact or benefit that are under the numerical scores, and modify them to fit local needs. For the benefits assessment worksheet, the text descriptions are written generally and would likely be applicable in most wildernesses. For the impacts assessment worksheet, the text descriptions strongly reflect conditions within the Yosemite Wilderness and *must* be modified to fit the context of the individual wilderness.
         3. For the benefits assessment worksheet only, develop weighting factors that reflect local perceptions about the relative importance for each category (rows in the worksheet). The sum of all 11 weighting factors should equal 10 so that when the scores are multiplied by the weighting factors and summed, the maximum total assessment score cannot be greater than 100. These weights should be developed once to fit local needs and not modified for individual proposals.
         4. Develop the cut-offs for low, medium, and high total benefits and impacts assessment scores. These cut-offs will be used to broadly categorize the benefits and impacts; these cut-offs should be developed once and not modified for individual proposals.
2. Conduct the assessments
   * + - 1. Reading across each row, circle the appropriate statement for the level of benefit or impact.
         2. From the circled statement, read up the column to derive the numerical score.
         3. Record this number for the row under the column titled “Score”
         4. For the benefits assessment, multiply this score with the weighting factor to derive the row total.
         5. Add all the individual row totals to derive the total assessments score.
         6. Based on the cut-offs that were identified earlier, assign the overall assessment of low, medium, or high.

**Impacts and Benefits Filter — Benefits Assessment Worksheet**

Date\_\_\_\_\_\_\_ Application # \_\_\_\_\_\_\_\_\_\_\_\_ Short Title \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

| **Benefit Category** | **Numerical Score of Benefit (0 = no benefit, 10 = high benefit)** | | | | | | **Score** | **Weighting Factor** | **Row Total** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **0** | **2** | **4** | **6** | **8** | **10** |
| **Benefits to Stewardship:** | | | | | | | | | |
| **Would the results address an *urgent* stewardship issue?** | Not urgent | Not urgent now but might be in the future | Urgent now but threat or issue appears to be static or decreasing | Urgent now and threat or issue likely to continue at its current state | Urgent now and threat or issue likely to accelerate | Present crisis that may be at the point of irreversibility |  |  |  |
| **Would the results address an *important* stewardship issue?** | Not important | Not important but might be in the future | Important but occurs over a relatively small area or timeframe | Important and occurs over a relatively large area or long timeframe | Important, affecting one or more key biophysical or social aspects over a large area or long timeframe; potential concern for human health/safety | Important, affecting irreversible changes to key biophysical or social aspects over a large area or long timeframe; major concern for human health/safety |  |  |  |
| **Would the results be applicable *immediately* to stewardship?** | Basic research that does not appear to be applicable to a current stewardship issue | Basic research that has slight apparent applicability to a current stewardship issue | Basic research that has moderate apparent applicability to a current stewardship issue | Applied research that has slight to moderate apparent applicability to a current stewardship issue | Applied research that has moderate to high apparent applicability to a current stewardship issue | Research is specifically designed to answer a current stewardship issue |  |  |  |
| **Would the results likely be applicable to *future* stewardship issues?** | Basic research that is highly unlikely to be applicable in the future | Basic research that is unlikely to be applicable in the future | Research that is unlikely to be applicable in the future except as a baseline to assess future change | Research is moderately likely to be applicable in the future | Research is likely to be applicable in the future | Research is highly likely to be applicable in the future |  |  |  |
| **Would the results allow *effective action* on a stewardship issue?** | Managers would likely not be able to take any actions that affect the issue | Managers could affect the issue only by trying to influence broad societal changes | Managers could take effective action only by changing management priorities | Managers could take effective action only with significant costs to other wilderness values | Managers could take effective action with minimal cost to other wilderness values | Managers could easily and immediately take effective action with no cost to other wilderness values |  |  |  |
| **Would the results improve stewardship of this *local wilderness*?** | Results are not applicable to the wilderness in which the research is conducted | Results are slightly applicable to the wilderness in which the research is conducted | Results are slightly to moderately applicable to the wilderness in which the research is conducted | Results are moderately applicable to the wilderness in which the research is conducted | Results are highly applicable to the wilderness in which the research is conducted | Results are specifically applicable to the wilderness in which the research is conducted |  |  |  |
| **Benefits to Science:** | | | | | | | | | |
| **How broad *geographically* will the results benefit science?** | Results benefit science in only a small geographic area or portion of the wilderness | Result benefit science in the whole wilderness | Results benefit science in the whole region | Results benefit science in the whole country | Results benefit science in similar bioregions globally | Results benefit science across the entire planet |  |  |  |
| **How far over *time* will the results benefit science?** | Results provide a short term benefit | Results provide a short to moderate term benefit | Results provide a moderate term benefit | Results provide a moderate to long term benefit | Results provide a long term benefit | Results provide a permanent benefit |  |  |  |
| **How many different *people* or types of people will benefit from the results?** | Results benefit only a few scientists and managers | Results benefit only visitors, scientists, or mangers in the specific wilderness | Results benefit visitors, scientists, and managers in any wilderness | Results benefit local visitors, residents, scientists, and managers | Results benefit regional visitors, residents, scientists, and managers | Results benefit people nationally or globally |  |  |  |
| **How *important* is the activity to the scientific field of study?** | Similar research has been conducted many times before and attempts to answer relatively trivial questions | Similar research has been conducted many times before and attempts to answer relatively minor questions | Research expands slightly on previous work and attempts to answer relatively minor questions | Research expands significantly on previous work and attempts to answer major questions | Research is groundbreaking or precedent setting for the field and attempts to answer major questions | Research is groundbreaking or precedent setting for the field and attempts to answer fundamental questions |  |  |  |
| **What is the *breadth* of scientific inquiry?** | Research is conducted on a single, minor component of the ecosystem or social system with little affect on other components | Research is conducted on a single component of the ecosystem or social system with little affect on other systems | Research is conducted on a single process of the ecosystem or social system that affects a moderate number of other components | Research is conducted on a single process of the ecosystem or social system that affects many components | Research is conducted on many ecosystem or social processes and components | Research is conducted on ecosystem or social processes and components comprehensively |  |  |  |

**Total Benefits Assessment Score =**

**Benefits Assessment (Low, Medium, High) =**

**Impacts and Benefits Filter — Impacts Assessment Worksheet**

Date\_\_\_\_\_\_\_ Application # \_\_\_\_\_\_\_\_\_\_\_\_ Short Title \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Impact Category** | **Numerical Score of Impact (0 = negligible Impact, 10 = high Impact)** | | | | | | | **Score** |
| **0** | **1** | **2** | **3** | **5** | **10** | **+** |
| **Untrammeled Quality** | | | | | | | | |
| **Manipulation** | None |  | Slight |  | Moderate |  | Large |  |
| **Risk of Unintended Effects** | None | Slight |  |  | Moderate |  | Large |  |
| **Disturbance** | None |  | Small |  | Moderate |  | Large |  |
| **Natural Quality** | | | | | | | | |
| **Collection Scarring:**  **Unobtrusive** | None | Small amt, short dur | Mod amt, short dur  Sml amt, mod dur | Lrg amt, short dur  Mod amt, mod dur  Sml amt, long dur | Lrg amt, mod dur  Mod amt, long dur | Lrg amt, long duration |  |  |
| **Collection Scarring:**  **Obtrusive** | None |  | Sml amt, short dur | Mod amt, short dur  Sml amt, mod dur | Lrg amt, short dur  Mod amt, mod dur  Sml amt, long dur | Lrg amt, mod dur  Mod amt, long dur | Lrg amt, long duration |  |
| **Collection Scarring:**  **Very Obtrusive** | None |  |  | Sml amt, short dur | Mod amt, short dur  Sml amt, mod dur | Lrg amt, short dur  Mod amt, mod dur  Sml amt, long dur | Lrg amt, mod duration  Mod or Large amt, long dur |  |
| **Collection:**  **Amount and Rarity** | None | Any amount, common | Sml amt, uncommon | Mod amt, uncommon | Lrg amt, uncommon  Sml amt, of concern | Mod amt, of concern  Sml amt, rare | Lrg amt, of concern  Med or large amount, rare |  |
| **Undeveloped Quality** | | | | | | | | |
| **Transport** | Human only | 1-12 stock days | 13-60 stock days | 61-90 stock days  1-10 wheeled days | 91-150 stock days  10-15 wheeled days | 151-300 stock days  16-30 wheeled days  1 motorized use | +1 each addtl 30 stock days  +1 each addtl 3 wheel days  +10 each addtl motor use |  |
| **Equipment** | None | Any amount of unobtrusive use | Any amount of less obtrusive use | 1-10 days of ob use | 11-30 days ob use  1 day very ob use | 30+ days ob use  2 days very ob use | +5 each day very ob use |  |
| **Installations:**  **Barely Discernable** | None | 1-50, short duration | 1-40, mod duration  1-20, long duration | 51-150, short dur  41-60, mod dur  21-30, long dur | 151-250, short dur  61-100, mod dur  31-50, long dur | 251-500, short dur  101-200, mod dur  51-100, long dur | +1 each addtl 50 short dur  +1 each addtl 20 mod dur  +1 each addtl 10 long dur |  |
| **Installations:**  **Unobtrusive** | None |  |  | 1-10, short duration | 11-50, short dur  1-10, med dur | 51-100, short dur  11-50, mod dur  1-10, long dur | +1 each addtl 10 short dur  +1 each addtl 5 mod dur  +1 each addtl long dur |  |
| **Installations:**  **Obtrusive** | None |  |  | 1-3, short duration | 4-5, short dur  1-3, mod dur  1, long dur | 6-10, short dur  4-5, mod dur  2-3, long dur | +1 each addtl short dur  +2 each addtl mod dur  +3 each addtl long dur |  |
| **Installations:**  **Very Obtrusive** | None |  |  |  |  | 1 short dur | +10 each addtl short dur  +20 each addtl mod dur  +30 each addtl long dur |  |
| **Solitude or Primitive and Unconfined Quality** | | | | | | | | |
| **Group Size** |  | 1-8 | 8-15 | 16+ (over limit) |  |  |  |  |
| **Person-Days/ Season** |  | 1-50 | 51-150 | 151+ |  |  |  |  |
| **Visitor Surveys** | None | Non-Wilderness | Less obtrusive | More obtrusive |  |  |  |  |
| **Surveillance** | None | Less obtrusive | Mod obtrusive |  |  | Very obtrusive |  |  |

**Total Impacts Assessment Score =**

**Impacts Assessment (Low, Medium, High) =**

**Impacts and Benefits Filter — Explanation of Assessment Scores**

**Explanation of Benefits Assessment Scores**

Benefits to Stewardship:

Benefits to Science:

**Explanation of Impacts Assessment Scores**

Impacts to the Untrammeled Quality:

Impacts to the Natural Quality:

Impacts to the Undeveloped Quality:

Impacts to the Solitude or Primitive and Unconfined Quality:

**Impacts and Benefits Filter — Benefits and Impacts Decision Table**

Date\_\_\_\_\_\_\_ Application # \_\_\_\_\_\_\_\_\_\_\_\_ Short Title \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Instructions: The benefits and impacts decision table is used to weigh the expected benefits against the impacts of the scientific activity. Before it can be used, local staff *must* prepare the table by assigning “Provisional Approval,” “Provisional Denial,” and “Uncertain” to each of the cells of the table. These assignments are fundamentally subjective, reflecting discussion and consensus among local staff. These assignments should be developed once and not modified for individual proposals.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | BENEFITS | | |
| **Low** | **Medium** | **High** |
| **IMPACTS** | **Low** |  |  |  |
| **Medium** |  |  |  |
| **High** |  |  |  |

In the prepared Benefits and Impacts Decision Table (see instructions), circle the intersection between the assigned benefits and impacts assessments.

If “Provisional Denial,” check this box 🞏 and return the proposal to the scientist for revision with an explanation of why it is being returned.

Explanation of why the proposal was provisionally denied:

If “Provisional Approval,” check this box 🞏 and go to the Cumulative Impacts Assessment.

Explanation of why the proposal was provisionally accepted:

If “Uncertain,” check this box 🞏 and discuss concerns with other management staff (as needed) and the scientist to determine if the benefits and impacts were properly assessed, re-assess the proposal if needed, then go to the Cumulative Impacts Assessment.

Explanation of why there was uncertainty about whether to deny or accept the proposal:

**Impacts and Benefits Filter — Cumulative Impacts Assessment**

Date\_\_\_\_\_\_\_ Application # \_\_\_\_\_\_\_\_\_\_\_\_ Short Title \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Instructions: Local staffs need to identify the types of cumulative impacts that are relevant to the wilderness and determine how the proposed scientific activity would be evaluated for its potential contribution to these impacts.

Are the additional impacts of the proposed scientific activity acceptable when viewed in the context of all the other impacts in the wilderness?

If yes, check this box 🞏 and the proposed activity is recommended for approval.

Explanation of why the cumulative impacts are acceptable:

If no, check this box 🞏 and return the proposal to the scientist for revision with an explanation of why it is being returned.

Explanation of why the cumulative impacts are not acceptable: