

UNIT STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Coronado National Forest
301 West Congress
Tucson, AZ 85701

AS

REPLY TO: 1950 Environmental Assessment

July 21, 1980

SUBJECT: Powers Garden Dam



TO: District Ranger, Safford R.D.

Your EA is returned approved.

for *Lawrence S. Allen*
K. R. WEISSENBORN
Forest Supervisor

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ENVIRONMENTAL ANALYSIS REPORT

POWERS GARDEN DAM

Safford Ranger District
Coronado National Forest
Region 3
U.S. Forest Service
Department of Agriculture

June 1980

Prepared By: *John R. Garland* 7/8/80
John Garland, Range Staff DATE

Recommended By: *Cecil R. Sims* 7/8/80
Cecil R. Sims, District Ranger DATE

Approved By: *Kenneth R. Weissenborn* 7/22/80
for. Kenneth R. Weissenborn, Forest Supervisor DATE

ENVIRONMENTAL ANALYSIS REPORT
POWERS GARDEN DAM

I. INTRODUCTION

This environmental assessment seeks to evaluate management options and select a course of action regarding an existing rock dam in the Powers Garden area, Galiuro Mountains, Safford Ranger District.

II. AFFECTED ENVIRONMENT

Location: The principle concern is a rock masonry dam located in Section 13, T. 9S, R.19E, Salt River Principal Meridian (see general map, Appendix A, and topographic map, Appendix B). This is the specific project site; however, the area that can be considered affected by this proposal is Powers Garden "Corridor" area.

Description: The dam is located in the corridor, which is a mile and a half wide neck of National Forest Land that extends down between two arms of the Galiuro Wilderness. The corridor is within RARE II area number 3-901, which was Congressionally designated for further study for wilderness inclusion.

The dam was constructed approximately thirty years ago and is an integral part of the Powers Garden Forest Service Administrative site. The Garden, with all of its appurtenant structures, provides a work center and base of operations for Forest Service personnel, the grazing permittee, and also serves as a welcome haven for wilderness users. It has not been determined if the Powers Garden Administrative Site qualifies for inclusion in the National Register of Historic Places. Until that determination is made, the area, including the dam and water system, will be managed according to policies set forth in FS 2361.02--03.

A major feature of the Garden's usefulness lies in the presence of dependable water. The water at this site serves grazing cattle, recreationists, miners, wildlife, and the Forest Service's needs. During dry months, the only source of water is that which is stored behind the existing dam and then piped down to water troughs and a pond at the Garden (see Appendix C, Schematic drawing of Powers Garden Administrative Site).

Due to the age of the dam outlet and the magnitude of the last two years winter rains, the pipeline from the dam to the Garden has been destroyed. At present, rock and sand have filled in behind the old dam and only a small pond of surface water, 6 to 8 inches deep is stored behind the dam. This has been siphoned by the permittee to fill the pond for livestock and is only a temporary emergency measure.

The dam site was inspected by the following Forest Service personnel, Cecil Sims, Larry Allen, Pete James, Chuck Duncan, and John Garland during the week of May 12 - 16, 1980, and their concurrent conclusion was that the dam is necessary to preserve the functionalization and integrity of the Powers Garden historical and administrative site.

III. EVALUATION CRITERIA

Based upon specific management direction for the Coronado National Forest, the following criteria were selected to evaluate various alternatives for restoration of the Powers Garden Dam to a functioning capacity. The source document follows each criterion.

wilderness values of the RARE II further study areas? Source: Memorandum on policy governing "nonwilderness" allocated Roadless Areas from Rupert Cutler, Assistant Secretary of Agriculture, to Chief of the Forest Service, dated April 11, 1979.

- B. Will the alternative provide for maintenance of existing structural wildlife habitat improvements? Source: Final F.Y. 1980-85 Regional Direction, Section III C., paragraph 2, under priority direction.
- C. Will the alternative facilitate improved allotment management? Source: F.Y. 1980-85 Final Regional Direction, Section III, item D.1.3.
- D. Will the alternative protect the historical integrity of the site? Source: FSM 2361.02--3.
- E. Will the alternative maintain and perpetuate all needed buildings, dams and other facilities to an acceptable level to protect the investment? Source: F.Y. 1980-85 Final Regional Direction, Section III, Item L.2.

IV. ALTERNATIVES CONSIDERED

- 1. Do not implement any specific action to rehabilitate the Powers Garden Dam.
- *2. Drill out the old dam outlet, install a new outlet, and hook up a new pipeline.
- *3. Build an additional 2-3 feet of dam on top of the the old dam, drill out the old outlet, installing a new outlet, and hook up a new pipeline.
- 4. Install a siphon device above the present dam, and hook up a new pipeline.

*These outlets will collect water even when buried in sand and gravel.

V. EFFECTS OF IMPLEMENTATION

Alternative 1

- No monetary or manpower cost.
- High degree of likelihood of "cobbed up" temporary facilities being constructed by either recreation visitors, miners, or the grazing permittee, as all will desire water at the cabin site, corrals, etc.
- Water will probably not be available to livestock or wildlife during dry months, because water storage behind the dam is underneath surface sand and gravel.
- Several of the desired results in the evaluation criterion will not be met.

Alternative 2

- Cost - approximately \$2,000.00, 20 man days.
- This alternative will meet desired results in several of the evaluation criteria, if it could be carried off successfully.
- The old outlet was about two feet below the top of the dam, and barely had enough "fall" between it and the cabin, and produced a small trickle at the cabin.

Alternative 3

- Cost - about \$2,500.00, about 20 man days needed to construct.
- Desired results of all evaluation criteria will be met.
- Increased water delivery plus greater water storage.

Alternative 4

- Cost - about \$400.00, about four (4) man days to implement.
- Clearly the cheapest of the installment alternatives, however this constitutes only a temporary measure, as winter runoff would wash out any siphon device we can conceive of.
- Would not work in dry months because all water would be subsurface.

VI. EVALUATION OF ALTERNATIVES

The following chart is used to cross-compare each each alternative against the various evaluation criteria.

Evaluation Criterion

	A	B	C	D	E	
	Protect Wilderness Characteristics	Maintain Wildlife Habitat Improvements	Facilitate Improved Allotment Management	Protect Historical Integrity	Maintain Buildings Dams and Admin. Facilities to Acceptable Level	
1	May or may not. High potential for unauthorized construction of substandard facilities. Non-compatible	No, Highly probable that the only water in dry months would be subsurface.	No. Highly probable that during dry months all water would be subsurface	Not exactly, because historically water has been provided to corrals, cabin and pond.	NO	
2	YES - No new additions would be made to the site.	YES - Water would be delivered to desired locations.	YES - Water would be delivered to desired locations.	YES - Water would be delivered to desired locations	Probably not. Water delivery would still be at a minimal level.	
3	YES - The additional rock masonry on top of the old dam would merely be an extension of an existing wilderness compatible structure.	YES - Water would be delivered to desired locations.	YES - Water would be delivered to desired locations.	YES - Water would be delivered to desired locations.	Yes - This alternative would provide for increased delivery of water and be structurally sound.	
4	NO - This would probably wash out every winter and result in unsightly debris in that drainage.	NO - Would not be dependable in dry months.	NO - Would not be dependable in dry months.	NO - Would not be dependable in dry months.	NO - This would result in a temporary undependable "cobbed up" structure.	

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ALTERNATIVE

VII. IDENTIFICATION OF THE PREFERRED FOREST SERVICE ALTERNATIVE

Alternative 3 is recommended as the preferred alternative to implement. While costs of implementation are somewhat higher than the other alternatives, the desired results of the evaluation criteria are most thoroughly accomplished by Alternative 3.

It will provide for the most dependable water supply to the Powers Garden facilities for all uses, and should also be the most structurally sound device that could be installed.

Wilderness values will not be compromised because the dam was already there and being used, and a small extension of an existing facility which does not change the functional capacity of the original facility does not constitute an intrusion to the wilderness resource. On the contrary, all wilderness users, especially recreationists, have expressed concern for the maintenance of Powers Garden in the current condition, and have come to depend on the availability of water there.

Other wilderness values such as: wildlife, aesthetics, and natural vegetation shall benefit by having dependable water in that area all year round. Several deer, small mammals, and various species of birds rely on the Powers Pond as their only source of water for about twenty square miles.

Aesthetic values will be maintained, since a higher quality improvement will be reinstalled, precluding the possibility of wilderness users constructing substandard devices instead.

Natural vegetation will benefit throughout the Rattlesnake Canyon area if water is provided for grazing livestock, since it is a tool effecting their management.

The U. S. Forest Service will be able to redeem their managerial responsibilities in a higher quality manner if dependable water is provided, and this will affect all wilderness uses.

Over ninety percent of all work in the wilderness area is accomplished on horseback, this includes: compliance checks on the various uses made in the area, project work such as trail maintenance, and fire management. Without water at Powers Garden, these managerial activities would be extremely difficult, if not impossible, to accomplish for a large portion of each year.

Overall, wilderness recreation, wildlife habitat, mining exploration, range management, and Forest Service administration of the area depends on available water, and will benefit greatly from this project.

VIII. MANAGEMENT REQUIREMENTS, CONSTRAINTS AND MITIGATION MEASURES

1. All construction will be of rock/masonry type, to produce a visually acceptable structure.
2. No new ground disturbance will take place; therefore, no cultural resources clearance will be necessary.

The new pipeline will be buried in the streambed or old pipeline route whenever possible to keep it out of sight.

3. No additional spur lines or new troughs will be hooked up, only those previously in place and that of the cabin will be used.

IX. CONSULTATION WITH OTHERS

The permittee, Mike Isley, has expressed interest that a project of this type would be undertaken; several wilderness registration cards and Powers Garden Log Book entry have been surveyed and all conclude that the Cabin facility with running water is an acceptable and welcome characteristic of the Galiuro Wilderness and contiguous study area.

Walt Friauf, Safford R.D. Facilities Manager, Cecil Sims, District Ranger, Larry Allen, Forest Range and Wildlife Staff, and various others have reviewed the site and find this proposal acceptable.

X. DECISION NOTICE AND FINDING OF NO SIGNIFICANT EFFECT

An environmental assessment that discusses proposed rehabilitation of an existing rock dam at Powers Garden Administrative site, Galiuro Mountains, Graham County, Arizona, is available for public review in the Coronado Forest Supervisor's Office, Tucson, Arizona.

Based on the analysis and evaluation described in the environmental assessment, it is my decision to adopt Alternative 3, to be implemented on the described National Forest Lands. It best meets management direction for that particular area, and optimally serves the public interest there.

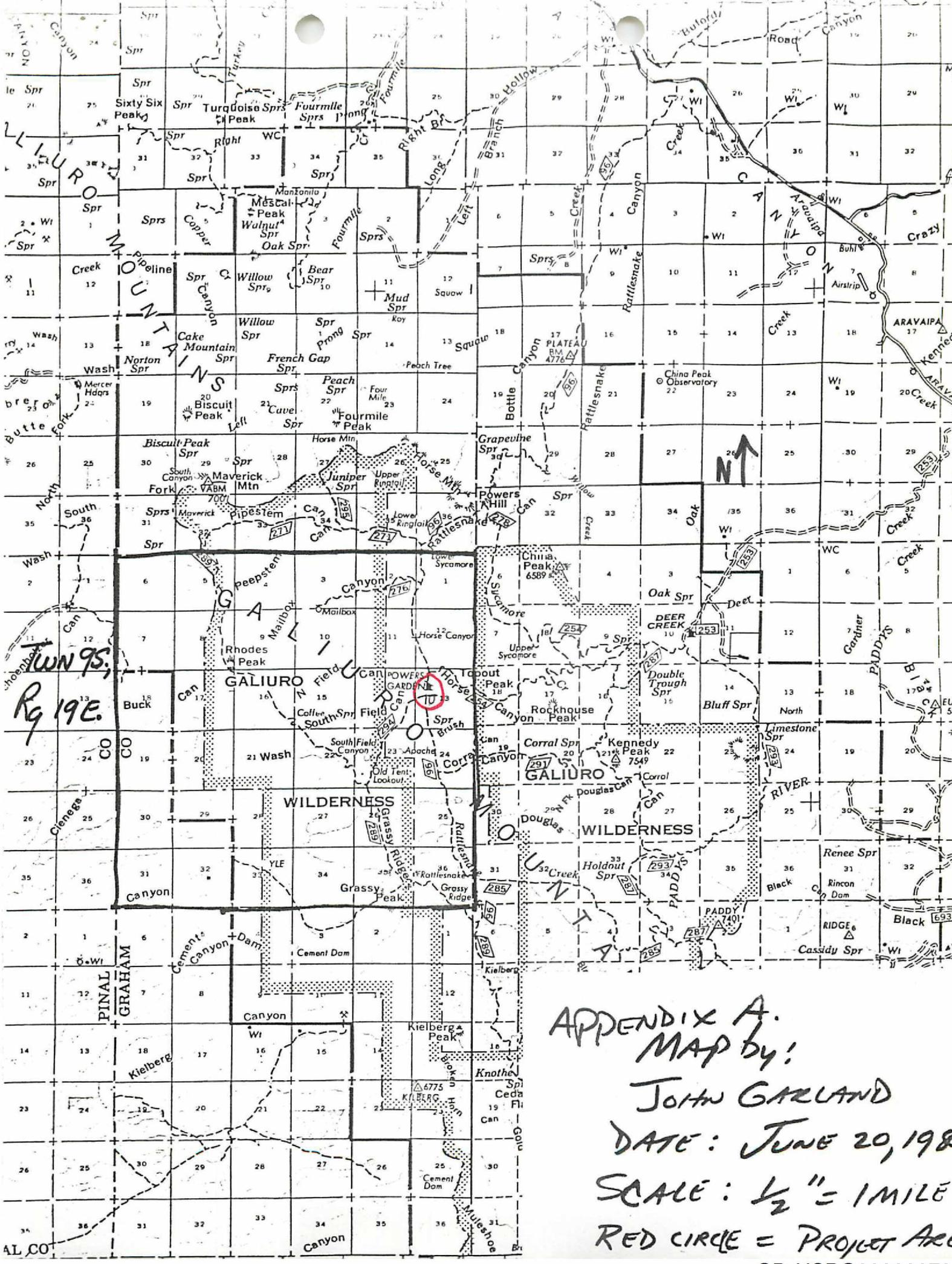
I have determined through the environmental analysis that this is not a major Federal action that would significantly affect the quality of the human environment; therefore, an environmental impact statement is not needed.

Project implementation will take place no sooner than ten (10) days from the date of this decision.

KENNETH WEISSENBORN
Forest Supervisor

XI. APPENDICES

- Appendix A: General location map with township and range location.
- Appendix B: Topography Map (7 1/2 Minute USGS QUAD) of the Powers Garden - Rattlesnake Canyon Area.
- Appendix C: Schematic Drawing of Powers Garden Administrative Site, showing details of Project.



TWP 9S;
Rg 19E.

APPENDIX A.
MAP by:
JOHN GARLAND
DATE: JUNE 20, 1980
SCALE: 1/2" = 1 MILE
RED CIRCLE = PROJECT AREA

MAP BY: JOHN GARLAND
 DATE: JUNE 20, 1980
 SCALE: 1:24,000
 HHH = PIPELINE
 D = EXISTING DAM
 RED CIRCLE = PROJECT AREA

APPENDIX B

