FINDING OF NO SIGNIFICANT IMPACT

Tropic Ditch Replacement Project

Bryce Canyon National Park

Background

The area known as Bryce Canyon National Park was set aside as a national monument in 1923 to protect the fascinating geologic structures known as hoodoos and other natural and cultural resources. The Tropic Ditch flows through Water Canyon within Bryce Canyon National Park in Garfield County, Utah. This historic ditch was built in the early 1890's by local farmers to channel water from the East Fork of the Sevier River across the Paunsaugunt Plateau to the Tropic Valley. The Tropic and East Fork Irrigation Company (Company), the owners of the Tropic Ditch, have recognized that the current irrigation system is experiencing high losses of water to seepage. This, in turn, has caused high amounts of salt to enter the Paria River and eventually the Colorado River. An estimated 1060 acre-feet/year (33% of irrigation water) is lost to seepage with approximately 530 acre-feet ending up in the Paria River. This seepage carries about 1829 tons of salt per year into the Paria River drainage and eventually into the Colorado River.

The Company has evaluated a number of ways to reduce this seepage, including plans to abandon the last 5.5 miles of the ditch and convey the water through a pipeline 4 miles in length. The Bureau of Reclamation (Reclamation) received the Company's application for funding under the Colorado River Basin Salinitiy Control Program and has evaluated the economic and environmental concerns associated with such an undertaking.

Reclamation, in cooperation with the National Park Service (NPS), prepared an environmental assessment (EA) in June 2006 to report on evaluated alternatives and seek public comment on the Tropic Ditch Replacement project and as a necessary step in determining the impact of the project on the park and affected areas prior to beginning any replacement work.

Preferred Alternative

Under the Preferred Alternative, the section of ditch from its initial crossing of Highway 12 at Water Canyon, Bryce Canyon National Park to holding ponds in Tropic Valley will be replaced with a buried pipeline ranging from 18 to 30 inches in diameter and from 21,110 to 21,470 feet in length. The installation of the pipeline will require the excavation of a trench approximately 5-feet deep by approximately 4-feet wide for the length of the pipeline. The excavation of the trench and installation of pipe segments will require the use of a trackhoe with a footprint of 11-feet by 15-feet, pipe fuser, transportation vehicles (for construction crew), and possibly a loader for pipe transportation from staging areas.

This project will result in an efficient irrigation system with much less seepage and less salt loading into the Paria River drainage.

The following measures will be adhered to during implementation of the Preferred Alternative in the park:

- Standard Operating Procedures (SOPs) established to minimize adverse impacts will be followed throughout construction. A meeting, including representatives of Reclamation, NPS, the contractor, and the Company, will take place prior to starting work. Weekly meetings will take place to assess the progress of work within the Park.

- Standard Reclamation management practices will be applied during construction activities to minimize environmental effects and will be implemented by construction personnel or included in contract specifications. Specifically, the amount of open trench allowed during construction and at the end of each workday to protect wildlife. Also, workers will be reminded to drive carefully to avoid collisions with wildlife.

- Before implementing the Preferred Alternative, the Company will obtain from the Department of Natural Resources a State Stream Alteration Permit. The conditions and requirements of the State Stream Alteration Permit will be strictly adhered to by the Company.

- Construction activities will be contained within a 30-foot-wide corridor along the pipeline route with 50-foot by 100-foot turn around areas every 1000 feet. These corridors within the park have been surveyed for biological and cultural resources. Care will be taken to avoid sensitive biological soil crusts and the removal of vegetation and shrubs when possible, even within this corridor.

- Existing roads will be used for project activities. No new road construction will be necessary.

- Work will be completed progressively down the corridor, with crews and equipment traveling down the alignment together in order to reduce overall disturbance. Crews will be transported by as few transportation vehicles as possible. Pipe will be stockpiled at previously disturbed staging areas and transported to construction areas as needed.

- During construction, topsoil will be saved. It will then be redistributed after completion of construction activities. Subsequently, disturbed areas resulting from the project will be smoothed, shaped, contoured, reseeded, and rehabilitated to as near their pre-project construction condition as practicable. Excess backfill (and excess vegetation removed) will be transported and disposed of in either the Tropic area or Company property. Seeding and planting will occur at appropriate times with weed-free seed mixes of native plants. The composition of seed mixes will be coordinated with a wildlife habitat specialist. Following construction, manpower will be provided by the Company to inspect the pipeline alignment within the Park to insure that restoration goals are met. Monitoring and treatment will continue until there are two successive years without human intervention.

- Best management practices will be implemented to control fugitive dust during construction. The contractor will follow the U.S. Environmental Protection Agency's recommended control methods for aggregate storage pile emissions to minimize dust generation, including periodic watering of equipment staging areas, along with dirt and gravel roads. All loads that have the potential of leaving the bed of the truck during transportation will be covered or watered to prevent the generation on of fugitive dust. Chemical stabilization will not be allowed. Construction machinery and operation and maintenance vehicles will be routinely maintained to ensure that engines remain tuned and emission-control equipment is properly functioning as required by law. The contractor will comply with Utah State air quality regulations.

- Pipe will be fused in the least number of places in the park to reduce disturbance.

- Drain valves will be placed in the pipeline in areas where natural drainages may collect excess water.

- Temporary impacts associated with construction will occur, such as soil and vegetation disturbance and the possibility of soil erosion. In an effort to avoid introduction of exotic plant species, equipment will be sprayed off before entering the park.

- A plan to replace wildlife values foregone will be finalized and approved by Reclamation following coordination with the U.S. Fish and Wildlife Service (USFWS) and the Utah Division of Wildlife Resources.

- Should construction unearth previously undiscovered archeological resources, work will be stopped in the area of any discovery and the park will consult with the state historic preservation officer/tribal historic preservation officer and the Advisory Council on Historic Preservation, as necessary, according to §36 CFR 800.13, Post Review Discoveries. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) will be followed.

- Construction personnel will be trained in proper procedures in the event of an inadvertent discovery. Anyone who has inadvertently discovered human remains must stop work immediately and contact the National Park Service (435-834-4900) if within the park or Reclamation's archaeologist in the Provo Area Office for all other lands. Work would stop until the proper authorities were able to asses the situation. A "Quick Reference" card explaining the required procedures will be provided by Reclamation to construction workers prior to the start of construction. Instructions for proper procedures in case of inadvertent discovery will be placed in all construction vehicles.

- If the Proposed Action were to change significantly from that described in the EA because of additional or new information, additional environmental analyses would be undertaken if necessary.

Alternatives Considered and Environmentally Preferred Alternative

Alternatives considered and analyzed in the EA were a No-Action Alternative (continuing the present management operation and condition) and an Action Alternative, Tropic Ditch Replacement Project (the Preferred Alternative). Alternatives considered, but dismissed from analysis included the construction of a pipeline in the existing ditch alignment, lining the existing ditch, construction of a pipeline within the Tropic Wash (from the Water Canyon exit), and construction of a pipeline within the Highway 12 corridor.

The Preferred Alternative is also the Environmentally Preferred Alternative. The Council on Environmental Quality defines the Environmentally Preferred Alternative as "...the alternative that will promote the national environmental policy as expressed in the National Environmental Policy Act's §101." Section 101 of the National Environmental Policy Act states that "... it is the continuing responsibility of the Federal Government to ...

> (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
>
> (2) assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
>
> (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
>
> (4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice;
>
> (5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
>
> (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources."

The Preferred Alternative meets policies 1-6 more fully than the No-Action Alternative, thereby establishing it as the Environmentally Preferred Alternative. The Action Alternative meets policy 1 through a careful approach to potential environmental impacts with mitigation of potential impacts to wildlife habitat, plant species, biological soil crusts, and other important environmental aspects of the construction area. Policies 2, 3, and 4 are met through pipeline installation because of key increases in the productivity and efficiency of irrigation water transport with minimal impacts to aesthetic, natural, and cultural surroundings. The Action Alternative better balances population and resource use (Policy 5) and quality of renewable resources (Policy 6) than the No-Action Alternative through greater irrigation water efficiency and reduced salinity transport into water sources for populations downstream, thereby permitting high standards of living for irrigation users in the local community and water users downstream in the Colorado River watershed.

Why the Preferred Alternative Will Not Have a Significant Effect on the Human Environment

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse

Resource topics that were addressed in the EA because the resultant impacts may have been greater-than-minor include air quality, water quality, upland vegetation resources, wetlands and riparian resources, fish and wildlife resources, special status species, cultural resources, paleontology, and soil erosion and sedimentation. All other resource topics were dismissed because the project will result in minor or less impacts to those resources. No major effects are anticipated as a result of this project.

Air Quality: Under the Action Alternative there will be no long term impact to local air quality since no new sources of air pollution will be created. Impacts due to construction activities will not be long lasting and any generation of new pollution will be eliminated after the project is completed. There is a potential for direct, short term fugitive dust generation from construction activities that could have an adverse affect on the air quality in the vicinity of the project area. The fugitive dust could be generated by excavation activities along with the movement of construction equipment on unpaved roads. Best management practices (i.e. watering for dust control) to minimize fugitive dust will be implemented.

Water Quality: The Action Alternative will reduce seepage from the historic Tropic Ditch. By eliminating this seepage, 1829 tons of salt will be prevented from reaching the Paria River each year and eventually the Colorado River. This will result in minor long-term reduced salinity in the Colorado River, which will be a positive impact and part of the defined purpose of the Colorado River Salinity Control Program.

Upland Vegetation Resources: The majority of the project area lies within upland habitat areas, and these vegetation communities will be temporarily affected during construction activities. Most areas where construction will take place are already altered from their natural states. These upland and altered areas may experience short term losses. Best management practices will be followed to reduce impacts, including placing staging and material sources outside of sensitive areas. All areas disturbed by construction activities will be recontoured and revegetated with native species. This will help to reduce the possible infestation by non-native and noxious weeds.. In addition construction materials and equipment will be washed to remove dirt and weed seeds to reduce the possibility of infestation In some cases, trees and brush will be removed within the proposed alignment where they can not be avoided. In areas of pinyon and juniper woodland, such as the project area within Bryce Canyon National Park, trees selected for removal will be chosen in a manner in which to maintain the visual quality objectives of the area. Upon completion of reseeding, relatively minor native habitat will be permanently lost. Vegetation communities will likely reestablish, and some previously disturbed areas will see an increase in native species compositions after reseeding. Monitoring and inspection of the reseeded areas will be performed by members of the Company to provide control of exotic weeds until success criteria are met with no human intervention for two consecutive years.

Wetlands and Riparian Resources: The majority of long-term project impacts will occur in ditch-induced wetland and riparian habitats, while naturally occurring wetlands will not be impacted. The majority of project impacts will result not from actual construction activities but from die-off in riparian areas once the ditch is abandoned. Many of the wetland and riparian habitats in the project area are ditch-induced and supported by seepage. These areas will be impacted by implementation of project practices resulting in elimination of seepage, and the distribution, size, and quality of these wetlands will decrease. Both the extent and density of vegetation associated with these areas may be reduced. But it is likely that not all riparian habitats will be lost as the ditch will act as a natural drainage for historically heavy storm and spring runoff. Nonetheless, Reclamation is currently working with Tropic Irrigation Company to develop a habitat replacement plan. Replacement habitat will be of an equal or greater value to the habitat lost by the proposed project.

Additionally, these areas may see increases in dominance of non-native species including tamarisk and Russian olive; these two species will be able to out-compete native species for limited water supplies when irrigation flows are ceased. Some portions of the ditch will be filled in, which will result in a total loss of riparian habitat in those areas. These areas will be located in small areas around The Backbone in the Tropic Valley outside of Bryce Canyon' s boundary to prevent animals from getting into the ditch. Construction activities within the wash will follow standard guidelines for construction within stream channels to protect flood flow capacity, channel integrity, and pipeline integrity.

Fish and Wildlife Resources: The upland wildlife habitat impacted by the Proposed Action will result in minor impacts to all wildlife species present on the project area. There will be some upland habitat, approximately 24 acres, temporarily lost due to pipeline construction, but similar habitat is available in surrounding areas. During the construction period or when maintenance of the pipeline is necessary, there could be an impact of short term displacement (approximately three to six months) of animals that would normally occupy the immediate project area. Construction will occur during late summer through fall because this is not a critical period of time for nesting or fawning for many wildlife species. It will occur within a 50 foot wide area along the Proposed Pipeline Alignment and within a 30 foot wide corridor within the Park. Generally, animals will move easily and find alternative areas for forage and cover, and will return after construction and maintenance operations have been completed. Some upland habitats will experience short term disturbance until native vegetation components within these areas are restored (two to three growing seasons) by recontouring and reseeding.

Impacts to small mammals, especially burrowing animals, could include direct mortality and displacement during construction activities. Most small mammal species will likely experience reduced populations in direct proportion to the amount of disturbed habitat. These species and habitats are relatively common in the area, so the loss will be minor. Impacts to big game will include short term disturbance and displacement of late summer and fall incidental use during the construction period. It is anticipated, due to the limited amount of habitat disturbance, that minor to no impact to wintering big game populations will occur. Impacts to raptors and other avian species will include minor short term disturbance and displacement, with no long term impacts. Those species, including avian and amphibian species, which are dependent on wetland and riparian

habitats will experience a long term (greater than five years) loss of habitat. The Proposed Action will result in a decrease in salinity which will increase water quality in the Colorado River and potentially indirectly benefit fish within the Colorado River System. The total habitat value that will be lost long term will be replaced through acquired mitigation habitat.

Special Status Species: There have been no documented occurrences of any federally threatened, endangered or candidate species or Utah state sensitive species within the project area. However, potential habitat for these species does exist within or adjacent to the project area. Effects of the development of the Proposed Action on Federal and State of Utah sensitive species will be similar to effects on general wildlife.

The Paria River and the wash where the proposed alignment will be located are not perennial streams. The project will be constructed during times when the river is not flowing. As a result, no impact to endangered fish species within the Colorado River will result due to sedimentation entering the Paria River during construction activities. The project will result in long term minor depletions of flows to the Colorado River due to reduced seepage to the Paria River from the Proposed Action. The potential for long term depletion may affect, but is not likely to adversely affect the Colorado Endangered Fish Recovery Program. The project will result in a long term minor decrease in salinity which would increase water quality in the Colorado River and will benefit fish.

Cultural Resources: Under the Action Alternative there will be ground-disturbing activities which have the potential to expose buried cultural resources. In the event human remains or other unknown cultural resources are found during the Proposed Action Alternative all agents will stop work immediately and contact the appropriate archaeologist. All sites identified by the cultural resource survey will be identified and avoided during construction and staging activities. Disturbance of the ditch will be less than 10% so as to not affect the characteristics that make the Tropic Ditch (42Ga5970) eligible to the NRHP under Criterion A. If no cultural resources are exposed during construction, there will be no effect to cultural resources from this alternative.

Paleontology: Under the Action Alternative there will be ground-disturbing activities which have the potential to disturb subsurface fossil material. A file search of the proposed project area by the State of Utah Department of Natural Resources, Utah Geological Survey, was conducted in June 2005. The results of that research revealed that there was one area of concern near but outside of the north end of the project area. The Utah Geological Survey concluded that this area would not be affected by the Tropic Ditch Salinity Project and therefore, there is no need for a paleontological survey.

If there are inadvertent discoveries of fossil remains during construction, especially near the north end of the proposed project area, work in that area will cease, and the Bureau of Reclamation, Provo Area Office archaeologist will be notified immediately. The archaeologist would notify the land owner and the Utah State Paleontologist at that time and the resource would be avoided, protected or mitigated. If there are no subsurface discoveries, there will be no effect to paleontological resources from this alternative.

Soil Erosion and Sedimentation: Under the Action Alternative, soil will be excavated and then replaced, compacted and regraded during construction. In the short term period

immediately following construction erosion and sedimentation will increase. However, the proposed pipeline alignment will be reseeded and over the long term, the soil will return to a pre-project condition once vegetation is established.

There will be little to no impacts to the biological soil crusts found within the project area in the Park since the construction corridor follows an existing cattle trail. Whenever possible, the biological soil crust will be avoided. The strategic placement of turnaround areas and the decreased width of the construction corridor within the park will limit the amount of disturbance to these resources.

Degree of effect on public health or safety

Under the Preferred Alternative, construction work will be completed and the irrigation system will return to good condition allowing the Company to better serve shareholders and reduce salt loading into the Paria River and downstream where millions of people receive their water supply from; therefore there will be long-term, beneficial minor to moderate impacts to public health.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas

The Preferred Alternative will have minor, long-term impacts to unique characteristics of the geographic area including historic and cultural resources, park lands, and wetlands. The project will have no effect on prime farmlands, wild and scenic rivers, or ecologically critical areas because these resources do not exist in the project area.

Degree to which effects on the quality of the human environment are likely to be highly controversial

Throughout the environmental process the proposal to replace the Tropic Ditch has not been highly controversial. The effects are not expected to generate future controversy.

Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks

The effects of replacing the Tropic Ditch with a pipeline are fairly straightforward and do not pose many uncertainties. The environmental process has not identified any effects that would involve highly unique or unknown risks.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration

The Preferred Alternative is not expected to set a precedent for future actions with significant effects, nor does it represent a decision in principle about a future consideration because all future actions involving utility rights-of-way and replacement at Bryce Canyon National Park will be considered on a case-by-case basis.

Because there are utility and right-of-way projects throughout the National Park System, action for this project will not set any NPS precedent. The Preferred Alternative is consistent with actions permitted elsewhere.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts

Cumulative effects were analyzed in the Environmental Assessment, and no significant cumulative impacts were identified.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

After applying the Advisory Council on Historic Preservation's criteria of adverse effects (36 CFR Part 800.5, Assessment of Adverse Effects), the Bureau of Reclamation concludes that implementation of the Preferred Alternative will result in a "no historic properties affected" determination. This is due to the fact that the project will avoid and/or monitor the two eligible historic properties near the construction area. The National Park Service and State Historic Preservation Officer concurred with this determination.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat

The U.S. Fish and Wildlife Service has been consulted pursuant to all applicable laws and are involved with all relevant processes. USFWS was represented at the July 17, 2006 site visit. USFWS concurred with Reclamation's determination of not likely to adversely affect threatened or endangered species in a letter dated September 29 2006.

Whether the action threatens a violation of Federal, state, or local environmental protection law

This action violates no federal, state, or local environmental protection laws. The Preferred Alternative will be implemented in accordance with all federal, state and local environmental protection laws.

Impairment

Under the Preferred Alternative, it was determined that there would be no major, adverse impacts to the resources addressed in section 3.4 Environmental Consequences whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Bryce Canyon National Park; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's General Management Plan or other relevant National Park Service planning documents. Due to this determination there would be no impairment of the park's resources or values (air quality, soils, water quality, upland vegetation resources, wetlands/riparian resources, fish and wildlife resources, special status species, cultural resources, and paleontology).

Public Involvement

Reclamation sent a Scoping Letter on June 13, 2005 to explain the project to interested individuals, groups and stakeholders included in the NPS mailing list and to solicit public input regarding the proposed project. Seven responses to the Scoping Letter were received and were considered in preparing this Environmental Assessment.

Coordination between the Bureau of Reclamation and Bryce Canyon National Park has been occurring to discuss pipeline alignment alternatives, cultural resource impacts, and biological resource impacts. Land owners have been involved in the pipeline alignment alternatives selection process. The State Historic Preservation Office and the U.S. Fish and Wildlife Service have been made aware of the project and are involved with all relevant processes. The City of Tropic and Garfield County have also been made aware of the proposed project.

The draft EA was made available for public review and comment in June 2006. Notices of the public review and comment period were mailed to the NPS mailing list. Two comment letters were received and were fully considered in preparing the final EA. The first was from a land owner who opposed the project based on concerns of economic damage to his property values and impacts to wildlife and vegetation. Reclamation was unable to find economic damage to the landowner and considered impacts to wildlife and vegetation not significant and mitigated for in the final EA. The second comment letter was from the USFWS and expressed concerns over the placement of a habitat replacement plan in the EA and components of such a plan, revegetation and weed monitoring measures, disposition of the abandoned canal prism, and species to include in Endangered Species (ESA) evaluation in the EA. Reclamation responded to these comments and and addressed concerns of note in the Final EA, including additional ESA species evaluated. Other USFWS concerns were considered adequately addressed in the reviewed draft.

Conclusion

The Preferred Alternative does not constitute an action that normally requires preparation of an environmental impact statement (EIS). The Preferred Alternative will not have a significant effect on the human environment. Negative environmental impacts that could occur are minor or moderate in intensity. There are no significant impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Approved: For Anthony L. Schetzsle — 10-16-06

Michael D. Snyder, Director, Intermountain Region — Date