



ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER

MINIMUM REQUIREMENTS DECISION GUIDE

WORKSHEETS

“ . . . except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act...”

– the Wilderness Act, 1964

Please refer to the accompanying MRDG [Instructions](#) for filling out this guide.

The spaces in the worksheets will expand as necessary as you enter your response.

Step 1: Determine if any administrative action is necessary.

Description: Briefly describe the situation that may prompt action.
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A special use permit is issued to the Williams Company to maintain the 7.2 miles of Northwest Pipeline that crosses through Arches National Park. The pipeline is in recommended Wilderness.

To determine if administrative action is necessary, answer the questions listed in A - F on the following pages.

A. Describe Options Outside of Wilderness

Is action necessary within wilderness?

Yes: No:

Explain: Since the Williams Northwest pipeline was built before the Wilderness Act was established in 1964 and before the recommendation to create Wilderness lands in the park the pipeline is now part of Arches National Park. The action to maintain the pipeline is necessary to ensure the integrity of the pipeline and the safety of the public.

B. Describe Valid Existing Rights or Special Provisions of Wilderness Legislation

Is action necessary to satisfy valid existing rights or a special provision in wilderness legislation (the Wilderness Act of 1964 or subsequent wilderness laws) that allows consideration of the Section 4(c) prohibited uses? Cite law and section.

Yes: No: Not Applicable:

Explain: In 1955, the pipeline was authorized by the NPS Regional Director of Region 3. The pipeline was constructed and installed Sept. 30-Nov. 17, 1955, by El Paso Natural Gas, through 2.6 miles of Arches National Monument. (The western monument boundary at the time was only about 0.7 mile west of the current park road near Sand Dune Arch).

Congress authorized the expansion of Arches boundaries and changed designation from monument to park in 1971, and the length of pipeline within the park increased from 2.6 miles to 6.8 miles.

In 1974, El Paso Gas divested its interest to Northwest Pipeline.

In 1998, Congress authorized the expansion of the park's boundaries again and currently the Williams Company owns and maintains the 7.2 miles of pipeline, all of which is within recommended Wilderness. However, in the 1984 Wilderness recommendation, the question was asked that any wilderness legislation make a special provision for the underground natural gas pipeline right-of-way and for the continuation of previously established maintenance practices which included using motorized vehicles along the 50 foot wide pipeline right-of-way.

Although, section 4(c) of the Wilderness Act states there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area, Williams has a valid right-of-way to maintain the 6.8 miles of pipeline through Arches National Park. A special use permit is issued annually for the maintenance of the original 2.6 miles of pipeline.

C. Describe Requirements of Other Legislation

Is action necessary to meet the requirements of other laws?

Yes: No: Not Applicable:

Explain: The U.S. Department of Transportation (DOT) regulates the operation and maintenance of natural gas pipelines pursuant to the Natural Gas Pipeline Safety Act of 1968. The DOT safety standards and regulations are codified under Chapter 49 of the Code of federal Regulations (CFR) Part 192.

D. Describe Other Guidance

Is action necessary to conform to direction contained in agency policy, unit and wilderness management plans, species recovery plans, or agreements with tribal, state and local governments or other federal agencies?

Yes: **No:** **Not Applicable:**

Explain: N/A

E. Wilderness Character

Is action necessary to preserve one or more of the qualities of wilderness character including: untrammeled, undeveloped, natural, outstanding opportunities for solitude or a primitive and unconfined type of recreation, or unique components that reflect the character of this wilderness area?

Untrammeled: **Yes:** **No:** **Not Applicable:**

Explain: Maintenance of the pipeline would affect the untrammeled quality of adjacent Wilderness areas because the maintenance of the pipeline is an action that is a modern human control or manipulation. The pipeline, as designed, requires mechanical tracked/wheeled vehicles to complete repairs and can manipulate the components or processes of ecological systems inside a Wilderness area.

Undeveloped: **Yes:** **No:** **Not Applicable:**

Explain: Maintenance may require driving light duty vehicles or heavy equipment along pipeline and is an adverse effect on undeveloped character of adjacent Wilderness areas as the use of motors for mechanical transport increases the human ability to occupy or modify the undeveloped environment.

Natural: **Yes:** **No:** **Not Applicable:**

Explain: The road that is reestablished along the pipeline whenever maintenance is performed is not natural nor is the noise produced from associated maintenance activities and can have an impact on the natural character of adjacent Wilderness areas. Maintenance along the pipeline also has the ability to introduce exotic species into the park which is an unnatural impact from the effects of modern civilization.

Outstanding opportunities for solitude or a primitive and unconfined type of recreation:

Yes: **No:** **Not Applicable:**

Explain: When pipeline maintenance is performed by workers with vehicles and equipment, the pipeline maintenance detracts visitors from an opportunity of solitude and primitive type of recreation in adjacent Wilderness areas.

Other unique components that reflect the character of this wilderness:

Yes: **No:** **Not Applicable:**

Explain: It is likely that pipeline maintenance would have minor to moderate adverse impacts on any “optional” value not already accounted for in the four mandatory values.

F. Describe Effects to the Public Purposes of Wilderness

Is action necessary to support one or more of the public purposes for wilderness (as stated in Section 4(b) of the Wilderness Act) of recreation, scenic, scientific, education, conservation, and historical use?

Recreation: **Yes:** **No:** **Not Applicable:**

Explain: This natural gas pipeline does not provide a service for the park. However, this pipeline does provide gas to towns in southwestern Colorado, eastern Utah and to the northwestern United States and maintaining the pipeline is essential in the operation of this service to these areas.

Scenic: **Yes:** **No:** **Not Applicable:**

Explain: 7.2 miles of a pipeline right-of-way developed from installing the pipeline and from accessing the pipeline with maintenance equipment does not support the public purpose of scenic.

Scientific: **Yes:** **No:** **Not Applicable:**

Explain: Conducting maintenance on the pipeline does not provide any scientific opportunities for the park.

Education: **Yes:** **No:** **Not Applicable:**

Explain: Conducting maintenance on the pipeline does not enhance the educational opportunities of the park.

Conservation: **Yes:** **No:** **Not Applicable:**

Explain: Conducting maintenance on the pipeline does not provide conservation opportunities for the park.

Historical use: **Yes:** **No:** **Not Applicable:**

Explain: Maintaining the pipeline does not provide historical use at the park.

Step 1 Decision: Is any administrative action necessary in wilderness?

Yes: **No:** **More information needed:**

Explain: The NPS is providing a special use permit for the Williams Northwest Pipeline Company to maintain the pipeline within a national park. This pipeline provides natural gas to towns in southwestern Colorado, eastern Utah and to the northwestern United States. The various maintenance activities Williams proposes are carried out to maintain the integrity and safety of the pipeline and the public. Most of the work is required by the Office of Pipeline Safety and audited under the DOT and Office of Pipeline Safety.

If action is necessary, proceed to Step 2 to determine the minimum activity.

Step 2: Determine the minimum activity.

Please refer to the accompanying MRDG [Instructions](#) for an explanation of the effects criteria displayed below.

Description of Alternatives

For each alternative, describe what methods and techniques will be used, when the activity will take place, where the activity will take place, what mitigation measures are necessary, and the general effects to the wilderness resource and character.

Alternative # A-No Action

Description:

Continue current management of pipeline. No evaluation of impacts on park resources regarding anticipated pipeline maintenance. Evaluation of park resources is only done on a case-by-case basis.

Alternative # B-Preferred Alternative

Description:

Consider anticipated pipeline maintenance needs and evaluate the impacts of this maintenance on park resources to develop mitigation measures if impacts are greater than minor.

Effects:

Wilderness Character

“Untrammeled”

Alternative A will impact the untrammeled quality of adjacent Wilderness. Vehicles and heavy equipment will impact the soil surface and create tracks and/or roads by manipulating the landscape. Vegetation may be crushed due to the same equipment.

Alternative B will impact the untrammeled quality of adjacent Wilderness by manipulating the landscape. Vehicles and heavy equipment will impact the soil surface and create tracks and/or roads. Vegetation may be crushed due to the same equipment. However, under this alternative mitigation measures will already be in place to lessen the impacts of vehicles and/or require only certain types of equipment to be used that will also lessen the impacts to park resources. Alternative B will have a restoration monitoring plan in place for revegetation efforts.

“Undeveloped”

Alternative A will have a noticeable imprint of man’s work since light duty vehicles and heavy equipment will be used along the pipeline. Maintenance of the pipeline requires the use of motors and mechanical transport which will increase the human ability to occupy or modify the environment.

Under Alternative B the effects will be the same as Alternative A.

“Natural”

Alternative A will have a noticeable impact on the naturalness of Wilderness. This alternative will have greater than minor negative effects to the soils, soundscape, vegetation, wildlife, water resources and geology.

Alternative B will also have a noticeable impact on the naturalness of Wilderness. However, in evaluating the impacts of anticipated maintenance of the pipeline on park resources, the effects may be less than minor when specific mitigation measures are adhered to. Restoration efforts will not be as extensive and will be more successful.

Under either alternative the maintenance of an underground pipeline is not natural in an adjacent Wilderness area. The straight-line of different vegetation or bare soil is visible from aerial photos and from the park roads and/or overlooks. The overflights of aircraft performing survey work are not natural components in a Wilderness environment. Erosional control structures built along the pipeline to ensure the pipeline remains covered are not natural. The eroded area near the “salt pan” near Salt Valley Wash is bare of vegetation and constant revegetation is in process when ever maintenance is performed along the pipeline which is another unnatural procedure.

“Outstanding opportunities for solitude or a primitive and unconfined type of recreation”

Alternative A will negatively impact visitors experience in the Wilderness. Noise from workers and equipment will prevent visitors from experiencing solitude or a primitive type of recreation. The visual impairments of large heavy equipment or freshly dug soil, crushed vegetation or the road created from vehicles driving along the pipeline will also prevent visitors from experiencing outstanding Wilderness character.

Under Alternative B the effects will be the same as Alternative A.

Other unique components that reflect the character of this wilderness

Heritage and Cultural Resources

Alternative A may impact several cultural resources found along the pipeline route. Good analyses of these sites and proper mitigation measures need to be in place to prevent cultural resources from becoming damaged from workers, vehicles and equipment. Cultural resource surveys will be conducted prior to any work being done.

Under Alternative B a cultural resource survey will be conducted along the entire pipeline within the park. Any sites found along the pipeline will be analyzed and proper mitigation measures will be in place to prevent cultural resources from becoming damaged from workers, vehicles and equipment.

Maintaining Traditional Skills

Alternative A may not maintain the proficiency of using traditional skills, non-motorized tools, and non-mechanical travel methods. Although the use of hand shovels will be the preferred tool and may be effective, some maintenance issues along the pipeline may require the use of mechanized equipment as well as motor vehicles.

After working with the Williams Pipeline Company on two anomalies that required emergency work, efficiency and bottom line were strong factors in using heavy equipment.

Safety is also a driving force in using equipment that will allow workers to perform the maintenance quickly and safely.

Alternative B will have the same issues as Alternative A. However, in analyzing anticipated maintenance issues, specific mitigation measures will be in place that will try to lessen the impacts to resources from the use of vehicles and heavy equipment.

Special Provisions

N/A

Economic and Time Constraints

Alternative A will cost more and require more time to analyze park resources on a case-by-case basis than Alternative B. Each time a maintenance issue arises along the pipeline the NPS needs to have separate surveys conducted for wildlife, cultural resources, vegetation and soils and anything else that may pertain to the area requiring maintenance.

Alternative B will cost less and require less amount of time to analyze park resources since wildlife, cultural resources, biological and any other additional surveys will be conducted along the entire pipeline and will be conducted one time instead of each time a maintenance issue arises.

Additional Wilderness-specific Comparison Criteria

N/A

Safety of Visitors, Personnel, and Contractors

Alternative A will address safety issues and mitigation measures on a case-by-case basis.

Alternative B will address safety issues and mitigation measures for the anticipated maintenance needs.

Comparison of Alternatives

It may be useful to compare each alternative's positive (+) and negative (-) effects to each of the criteria in tabular form, keeping in mind the law's mandate to "preserve wilderness character."

	No Action	Alternative B
Untrammelled	-	-
Undeveloped	-	-
Natural	-	-
Solitude or Primitive Recreation	-	-
Unique components	-	+
WILDERNESS CHARACTER	-----	----+

*Both Alternatives will have negative effects to each criterion and will not meet Wilderness Character values. However, in an effort to lessen impacts and to preserve Wilderness Character, only the minimum equipment necessary will be allowed for each repair project. This will be assessed based on the nature of each repair project and access to the site(s). Before any equipment is driven to a repair site, anomaly/repair site locations will be verified using walk-in crews with shovels. Exceptions will only be made if a sincere attempt at hand-digging fails (due to, for example, segments of pipe unusually deep or placed in a cut through solid rock). No vehicles of any kind will leave designated park roads before either: 1) the anomaly has been located, or 2) the NPS has agreed to an exemption following a failed hand-digging attempt.

	No Action	Alternative B
Heritage & Cultural Resources	-	+
Maintaining Traditional Skills	-	-
Special Provisions	NA	NA
Economics & Time	-	+
Additional Wilderness Criteria	NA	NA
OTHER CRITERIA SUMMARY	---	+++

* Under Alternative B, the evaluation of potential impacts along the entire pipeline from anticipated maintenance and the development of mitigation measures will lessen those impacts to other unique components such as cultural resources, economics and time. Cultural resource surveys will be conducted along the entire pipeline prior to any additional maintenance work. If cultural resources are found, these resources will be documented, removed if needed, or mitigations will be developed to preserve the sites and to ensure that there will be no adverse effect on cultural resources. Additional surveys of park resources along the entire pipeline prior to maintenance work will have a beneficial impact on money and time management. These surveys will also assist in determining that good mitigation measures are in place to preserve these resources.

	No Action	Alternative B
SAFETY	+	+

Safety Criterion

If safety issues override impacts to wilderness character or other criteria, provide documentation that the use of motorized equipment or other prohibited uses is necessary because to do otherwise would cause increased risks to workers or visitors that cannot be satisfactorily mitigated through training, use of personal protective equipment (PPE), or other requirements to alleviate the safety risk. (This

documentation can take the form of agency accident-rate data tracking occurrences and severity; a project-specific job hazard analysis; research literature; or other specific agency guidelines.)

Documentation:

The U.S. Department of Transportation (DOT) regulates the operation and maintenance of natural gas pipelines pursuant to the Natural Gas Pipeline Safety Act of 1968. The DOT safety standards and regulations are codified under Chapter 49 of the Code of Federal Regulations (CFR) Part 192 and the Williams Northwest Pipeline follows these standards and regulations.

The pipeline through Arches National Park is 26 inches in diameter and has the capacity to deliver natural gas at 650-809 pounds per square inch of pressure within the park. Working on and around a large diameter high-pressure gas pipeline requires specific tools and equipment to maintain the integrity and safety of the pipeline and the public.

The following maintenance activities have the potential to occur along the pipeline in proposed Wilderness with the following potential equipment:

An annual low-level flight survey along the pipeline is conducted with a helicopter and is flown approximately forty feet above the pipeline right of way. The purpose is to look for erosion, exposed pipe, slides, leaks, encroachments, and any other activity along the right of way that could possibly cause damage to the pipeline. Upon completion of the flight plan of action is created to correct any noted problems.

The pipeline may need to be recoated due to age of the coating and possible erosion damage. The pipeline may require excavation with the following equipment: 1 small rubber tracked excavator or 1 large tracked excavator, air compressors/sandblaster, vehicles capable of transporting safely approximately 8 individuals, a tool trailer.

The pipeline may require repair by replacement, a weld on repair sleeve, or a composite sleeve, depending on the severity of the anomaly. All of these require excavation and possibly the following equipment: 1- small rubber tracked excavator or 2 large tracked excavators, possibility a bulldozer, a side boom used to remove and replace the pipe, 2 Welding trucks, 2 air compressors/sandblasters, vehicles capable of transporting safely approximately 12 individuals, a tool trailer.

The pipeline may require erosion control. Erosion control work is accomplished by using hand shovels to cover exposed sections of pipeline or by installing flow control devices in the wash or stream that consist of: gabion baskets, benway weirs, upstream flow control device, etc. The proposed equipment required is as follows: hand shovels or a backhoe or small rubber tracked excavator, a vehicle capable of safely transporting approximately four individuals and the required equipment and materials.

Step 2 Decision: What is the Minimum Activity?

Please refer to the accompanying MRDG [Instructions](#) before describing the selected alternative and describing the rationale for selection.

Selected alternative:

Alternative B: Consider anticipated pipeline maintenance needs and evaluate the impacts of this maintenance on park resources to develop mitigation measures if impacts are greater than minor.

Rationale for selecting this alternative (including documentation of safety criterion, if appropriate):

Alternative B is the proactive approach in determining the potential impacts that specific maintenance activities will have on park resources before any maintenance will be required and/or conducted. Although neither alternative preserves Wilderness character nor values, this alternative will better save time and money since time constraints will not be an issue. Alternative B will also have the potential to better preserve cultural resources and prevent damage to these resources. Cultural, biological, paleontological resource surveys will also be conducted prior to any maintenance and if any special resources are found along the pipeline, proper documentation and artifact collections, if needed, will be conducted. Mitigation measures will be developed based on the analysis of potential impacts to resources. Mitigation measures will be followed by the Williams Northwest Pipeline Company personnel to lessen any impacts to park resources when performing any pipeline maintenance within Arches National Park.

Only the minimum equipment necessary will be allowed for each repair project. This will be assessed based on the nature of each repair project and access to the site(s). Before any equipment is driven to a repair site, anomaly/repair site locations will be verified using walk-in crews with shovels. Exceptions will only be made if a sincere attempt at hand-digging fails (due to, for example, segments of pipe unusually deep or placed in a cut through solid rock). No vehicles of any kind will leave designated park roads before either: 1) the anomaly has been located, or 2) the NPS has agreed to an exemption following a failed hand-digging attempt.

Monitoring and reporting requirements:

- A biological monitor familiar with biological soil crusts and with pipeline work will be contracted by Williams and approved by the NPS. This monitor must consult with NPS-Resource Management before work begins, including a site visit with NPS staff and the contract restoration specialist.
- The biological monitor must be onsite throughout all of the pipeline work to ensure worker compliance with NPS stipulations, and to inform any new workers or inspectors of stipulations. Secondary duties of the biological monitor include assisting with restoration work, and updating NPS personnel of each day's activities and progress.
- The contract biological monitor must accompany vehicles being driven in or out of repair sites to assist drivers in avoiding or straddling trees, shrubs, plants and soil crusts wherever possible, particularly those plants targeted by the NPS and/or restoration specialist as being most sensitive. These monitors will stop equipment progress when soils are deeply churned (such as on steep slopes or curves), so that the restoration specialist can direct plant salvage if targeted plants are present.

- A restoration specialist familiar with biological soil crusts and with plants of the high desert Colorado Plateau will be contracted by Williams and approved by the NPS. The specialist will develop a site-specific restoration plan in consultation with the NPS Resource Management Division, for the particular access route and work area in question. Depending on the scope and nature of proposed work, vegetation communities and soils impacted, season, plant and seed availability, and ongoing restoration experiments and research, the restoration plan for a project may require some plants to be salvaged while others are run over, and for various species to be purchased, grown out, or sown as seed. Salvaging of biological soil crusts may be required in areas with well-developed crusts. Salvaged materials will be placed near the access route, but out of harm's way, kept moist during repair work, and replanted as work equipment leaves a site at the end of a project.
- The restoration specialist will instruct and lead pipeline crews and/or additional contract restoration crew in implementing the restoration steps planned for the project duration, including salvaging and watering targeted plants that can't be missed when driving equipment to a repair site, and implementing restoration steps upon leaving the site possibly including but not limited to laying and securing erosion-control matting, replanting and watering plants and/or soil crusts, and hand-raking tracks. A restoration company crew member must be present at all times during the project except after digging is complete and before equipment begins leaving the site (i.e, during actual pipe repair). If absent during pipeline repairs, the restoration specialist must remain in contact with William's crew leader and be available to return to site as necessary.
- A contract paleontologist approved by the NPS must also be onsite for the digging work to inspect any dirt moved for paleontological resources identified.
- A contract Archeologist who qualifies under the Secretary of the Interior's Standards must be onsite during all work periods and especially to observe any digging to inspect any dirt moved looking for archeological material. Archeological material that can provide occupational and/or temporal information (i.e. projectile points, ceramics, features, etc.) must be collected, their description and location documented with photographs and/or in writing, and the park Superintendent notified of the uncovered material. All maintenance activities will be halted until the materials can be analyzed and recovered. The state historic preservation officer and the Advisory Council on Historic Preservation, will be consulted as necessary, according to §36 CFR 800.13, *Post Review Discoveries*. If needed, formal §106 compliance will be conducted prior to resuming construction. The material, along with related data, will be given to the park archeologist at the completion of the project. Williams Company is responsible for the cost of archeological services.
- In the event that human remains are discovered during maintenance activities, all work on the project must stop and the park archeologist contacted immediately. As required by law, the coroner will be notified first. All provisions outlined in the Native American Graves Protection and Repatriation Act (1990) will be followed.
- The restoration specialist will be responsible for follow-up monitoring and restoration efforts, including additional planting or seeding as needed. They will be responsible for maintaining any matting materials, or removing them if they prove ineffective. Monitoring will continue for at least three years, and longer if restoration goals have not been met during this period.

Check any Wilderness Act Section 4(c) uses approved in this alternative:

- | | |
|--|---|
| <input checked="" type="checkbox"/> mechanical transport | <input type="checkbox"/> landing of aircraft |
| <input checked="" type="checkbox"/> motorized equipment | <input checked="" type="checkbox"/> temporary road |
| <input checked="" type="checkbox"/> motor vehicles | <input checked="" type="checkbox"/> structure or installation |
| <input type="checkbox"/> motorboats | |

Record and report any authorizations of Wilderness Act Section 4(c) uses according to agency procedures.

The Fire and Fuel Management Plan for the Southeast Utah Group authorizes the use of chainsaws, motorized pumps, and/ or helicopter landings for wildland fire suppression in order to resolve emergencies involving human health and safety and to protect key natural and cultural resources (such as fire-vulnerable cultural sites as determined by a park archeologist and important T &E habitat, mature cottonwoods, native grasslands/relict areas, as determined by a resource advisor).

Locations and nonconforming measures that do not meet these conditions (e.g. motorized pumps in other locations, motorized vehicles off roads) will only be used if approved by the Superintendent, analyzed and documented through case-by-case minimum requirement analyses.

Approvals	Signature	Name	Position	Date
Prepared by:	<i>/s/ Sabrina Henry</i>	Sabrina Henry	Compliance Coordinator	1/12/10
Recommended:	<i>/s/ Douglas Buttery</i>	Doug Buttery	Wilderness Coordinator	1/12/10
Recommended:	<i>/s/ Thomas J. Troutman</i>	Jeff Troutman	Chief of Resource Management	1/12/10
Approved:	<i>/s/ Kate Cannon</i>	Kate Cannon	Superintendent	3/24/10