

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 ALTERNATIVE DEVELOPMENT PROCESS

In accordance with 40 CFR 1502.14(a), the BLM is required to define issues and evaluate all reasonable alternatives. This EA evaluates two alternatives, Alternative 1 (Proposed Action) and the No Action. Alternative 1 meets the objective of the purpose and need, while minimizing or avoiding adverse environmental impacts to the greatest extent possible. The location of the proposed pipeline within an existing ROW was determined during the environmental analysis process to avoid and minimize impacts to resources. Additionally, only one action alternative was analyzed because the Sinclair pipeline ROW had been previously disturbed during installation of other pipelines and ongoing maintenance activities.

2.1.1 Alternative 1 – Proposed Action

The proposed project submitted by Sinclair consists of the installation, operation, and maintenance of a new 16-inch product pipeline to be located within an existing 50 foot ROW permitted by the BLM. Two pipelines, an 8-inch and 10-inch, are currently located in the ROW.

The PPPA is approximately 103 miles in length and will run from Casper, WY to Sinclair, WY. The entire project is located in Natrona and Carbon Counties. Land ownership of the ROW is a mix of federal, state, and private land. Federal land within the 50 foot permanent ROW comprises 238 acres, private land 283 acres, and state land 102 acres. The overall estimated temporary disturbance on federal land will be 343 acres of BLM administered lands and 27 acres of USFWS property within the Pathfinder National Wildlife Refuge. Temporary disturbance includes the 75 foot construction pipeline ROW and additional space required for construction activities. Additional construction activities and temporary disturbances include: directional bore sites for waterway crossings and storage space for pipeline and equipment.

Ancillary facilities associated with the PPPA include installation of above ground block valves. These block valves will be located at the same locations as the existing valves. Additionally, line markers will be installed as required by 49 CFR Part 195. No other above ground structures will be required for the pipeline.

Access to the pipeline ROW will be provided by existing roads and two-tracks suitable for trucks and construction equipment. These roads will be used for construction staging and transportation, and will continue to be used after construction for access to the pipeline for maintenance purposes. The pipeline can be accessed from Casper on Highway 220 at several locations. From Sinclair, the pipeline can be accessed from Carbon County Road 351.

Installation of the pipeline will result in temporary disturbance that will occur only during the construction phase of the project. After installation of the pipeline, the ROW will be reclaimed to the original contour and revegetated with an approved BLM native seed

mixture. **Table 2-1** identifies the estimated disturbance that will occur on federal, state, and private lands.

Construction of the pipeline is expected to last from three to four months. The scheduled start of construction will be after wildlife stipulations end, typically in late July or early August, and finish in late October. However, some sections of the ROW not under wildlife stipulations or areas granted a wildlife stipulation exemption could be allowed an earlier start in construction. An earlier construction date will need to be requested in writing to the BLM through the exemption process, and will require presence/absence surveys where protected wildlife resources occur. Exceptions may be granted by the BLM if they determine the activity has no impact on the species.

2.1.2 No Action Alternative

The No Action Alternative is required under 40 CFR 1502.14(d), and applicable BLM regulations implementing these requirements. This alternative is required to be analyzed in all EAs, thus allowing decision makers to compare the magnitude of environmental effects of all action alternatives versus not installing the new pipeline.

Under the No Action Alternative, Sinclair will not install the new 16-inch petroleum pipeline within the existing ROW. This alternative would result in no new disturbance within the existing pipeline ROW. However, standard operation and maintenance activities would continue along the pipeline ROW.

2.1.3 Alternatives Considered During Analysis

Several minor reroutes of the original pipeline ROW were adopted because of landowner issues and avoidance of environmental resources. The reroutes varied in length, with most being between one to seven miles. Reroutes occurred on private property and were proposed by landowners who requested the ROW across their property be moved so pipeline maintenance will not interfere with agricultural activities. Additional reroutes were designed to avoid impacts to the Oregon Trail. These reroutes were developed through collaboration between the BLM, Wyoming State Historic Preservation Office (SHPO), and Sinclair.

2.2 SUMMARY OF DISTURBANCE ESTIMATES

Sinclair is proposing a 75 foot wide temporary ROW during construction. Construction related activities for the 103 mile pipeline ROW will result in the temporary disturbance of approximately 1,012 acres. Included in this total will be designated temporary work spaces and directional bore sites resulting in the disturbance of approximately 77 acres. The installation of additional block valves will occur where the existing valves are located. This will result in .012 acres of permanent disturbance. Surface disturbances associated with the Proposed Action are summarized in **Table 2-1**.

Table 2-1: Temporary and Long-Term Surface Disturbance – Sinclair to Casper 16-Inch Pipeline Project

Facility	BLM Lands	Pathfinder National Wildlife Refuge (USFWS)	State Lands	Private Lands	Total Acres
Pipeline - 50 Foot Permanent ROW	222 Acres	16 Acres	102 Acres	283 Acres	623 Acres
Pipeline - Total Temporary Construction ROW Disturbance Outside Permanent ROW (Additional 25 Feet)	111 Acres	8 Acres	51 Acres	142 Acres	312 Acres
Temporary Work Areas - Laydown Areas / Directional Bore Sites	10 Acres	3 Acres	18 Acres	46 Acres	77 Acres
Block Valves (Long-Term Surface Disturbance)	.002 Acres	.002 Acres	.001 Acres	.007 Acres	.012 Acres or 522.7 Square Feet

2.3 CONSTRUCTION OPERATIONS

The engineering, design, maintenance, and inspection of the proposed pipeline will be performed by Sinclair personnel and their contractors. Design and construction of the pipeline will be in accordance with the Department of Transportation (DOT) 49 CFR Part 195 “Transportation of Hazardous Liquids by Pipeline.”

The proposed pipeline will be 16-inches in diameter and have a wall thickness of .375 to .500 inches. Pipe materials will meet the requirements of the American Petroleum Institute 5L PSL-2, specifications for line pipe. An impressed current cathodic protection system will be installed to protect the pipeline from corrosion.

Complete removal of vegetation and debris will occur within the entire 75 foot ROW. After the ROW is cleared, a trench 3 to 5 feet wide and 3 to 6 feet deep will be excavated with a trencher or backhoe. The top 4- to 6-inches of topsoil will be wind-rowed separately from other soils so it can be reused after installation of the pipeline. The pipeline will be buried at a minimum of 6 to 15 feet at all railroad, major roads, and waterway crossings. Pipeline will be installed at all perennial waterways by directionally boring under the streambed. This technique is used to insert the pipeline at a depth under the waterway that protects pipeline integrity and prevents environmental damage to the waterway. In general, the boring and receiving pits for the drill will be placed no closer than 80 feet from the ordinary high-water mark of the stream. At these locations, the pipeline will be installed 10 to 15 feet below the channel of the stream or river.

Pipe and other construction materials will be hauled to the PPPA by semi-trucks and placed along the ROW or at a staging area. A bending machine will be used to bend the pipe for proper fit in the trench. During construction, contractors will align sections of the pipe and weld them together, perform nondestructive testing, and protect the welds with shrink sleeves. Upon completion of welding and testing the pipeline, the pipeline will be placed in the trench. The ditch will then be backfilled using an angle dozer or auger. This backfill material will be compacted to prevent subsidence. Lastly, the 4-to 6-inches of topsoil separated during initial excavation will be evenly replaced across the disturbed area. Any additional excavated material that could not be replaced in the ditch will be disposed of in conformance with landowner or agency requirements. After construction and prior to topsoil replacement, Sinclair will leave no berms, windrows, or mounds on the surface except those authorized by the BLM for erosion control purposes.

Additional Work Space

During construction operations, Sinclair will require four additional work spaces that are outside the 75 foot construction ROW. These additional work spaces will be used for staging of construction equipment and materials, and for setting up equipment to directionally bore waterways.

All of the pipeline storage sites will be located on sites currently occupied by above grade Sinclair installations. These sites have been previously disturbed and storage of pipe will result in minimal new disturbance of vegetation and soils.

Directional bore set-up sites will require additional space to accommodate equipment and materials. These sites will be approximately 125 feet x 200 feet or 300 feet x 300 feet in dimension. Water required for directional drilling will be drawn from the City of Mills, Sinclair Oil Refinery, or from the Sweetwater River. Sweetwater River water will be acquired from the Pathfinder Ranch, and will be coordinated through the Wyoming State Engineer's Office (WY SEO).

A temporary crossing structure (such as matting) may be utilized at various locations along the pipeline ROW to transport construction equipment across waterways. **Table 2-1** identifies the temporary surface disturbance associated with the staging and directional bore sites. Additional information on the location of these sites is located in the POD that has been approved by the BLM.

2.3.1 Testing and Maintenance

Hydrostatic testing of the pipeline is required to identify possible weaknesses in the pipeline following construction; during its operation; and following maintenance and repair activities. Sinclair is required to hydrostatically test the pipeline with water to a pressure of 125 percent of the maximum operating pressure of the pipeline. The test pressure will be held for eight hours to verify the integrity of the pipeline. Hydrostatic testing of the pipeline will require approximately 1,500,000 gallons of water. Water for this test will be obtained from the City of Mills and the Sinclair Oil Refinery. Permits and/or agreements for this water use will be obtained from the WY SEO, WDEQ/WQD, and individual landowners. If additional water sources are needed for hydrostatic testing, these sources will be permitted and approved by the BLM before this water is used.

The pipeline will be tested at five sections from north to south. The hydrostatic test water will be discharged on upland areas within the pipeline ROW, or on Sinclair property located near the Sinclair Oil Refinery. The discharge will be limited to approximately 1-cubic foot per second, and flow will be controlled through use of structures such as gated pipe, straw bales, or other structures designed to increase infiltration and reduce the potential for concentrated overland flow. Prior to discharge, water will be tested and treated or filtered to reduce pollutant levels. Discharge volumes will be monitored to ensure concentrated overland flow and rilling does not occur. All water discharges will be permitted through the WDEQ/WQD.

Sinclair will periodically inspect the pipeline in accordance with DOT regulations to check for erosion problems, pipe exposure, hazardous ROW conditions, and potential pipeline leaks. These inspections will be conducted on foot or from a vehicle along the existing road system. If damage to the pipeline is detected, repair or replacement of the pipeline will occur immediately.

2.3.2 Pipeline Operation

Sinclair will monitor the pipeline seven days a week at their Pipeline Control Center, which is located in Sinclair, WY. This ensures an accurate log of their use of the pipeline and can help detect and correct maintenance issues, if they would occur.

2.4 RECLAMATION

Sinclair will be responsible for reclaiming all disturbed areas after the completion of construction activities. At the completion of pipeline installation activities, Sinclair will rip, grade, and contour all disturbed areas to preconstruction conditions to prepare soil for enhanced seed establishment. Topsoil will be spread evenly and disturbed areas will be seeded with native species compatible with plant communities and soil conditions present in the PPPA. During this phase of the project, appropriate measures will be employed to prevent erosion through the use of construction diversion terraces, rip-rap, matting, silt fence, and water bars.

All disturbed areas will be reseeded in accordance with BLM guidelines. In suitable areas, the seed mixture will be drill-seeded to ensure planting at a proper depth for optimum germination. Areas not appropriate for drilling, such as steep slopes, will be broadcast-seeded and raked or chained to cover the seed. Seeding rates for broadcast-seeded areas will be double that used in the drill-seeded areas. Ongoing monitoring of this reclamation effort will be required by the BLM to ensure the establishment of vegetation and correction of any erosion problems. The success of the reclamation effort will be documented and provided to the BLM as a year-end report.

Performance Standards

The following performance standards will be used to determine the attainment of successful revegetation and reclamation:

- By the third growing season at least 80 percent predisturbance ground cover.

- The reclaimed area should be comprised of at least 90 percent of the species contained in the seed mix and/or present on adjacent, undisturbed area. No single species should account for more than 30 percent of the total vegetative cover unless similar to adjacent, undisturbed areas. Invasive species will be controlled. To meet standards, no noxious weed species are allowed.
- Erosion condition of the reclaimed areas is equal to, or in better condition than the adjacent undisturbed area.

2.5 APPLICANT-COMMITTED RESOURCE PROTECTION MEASURES

The following section describes the applicant proposed practices that will be implemented as part of the Proposed Action to avoid or minimize impacts to resources.

2.5.1 Geology, Minerals, Paleontology Resources

1. If paleontological resources were uncovered during ground disturbing activities, Sinclair will suspend all operations that may further disturb such materials and immediately call the BLM. The BLM will make an assessment of significance within an agreed timeframe. Construction activities will be allowed to resume upon written notification from the BLM.

2.5.2 Floodplains and Wetlands

1. Disturbance and impacts to wetlands and streambanks will be avoided through directional drilling under these areas. Wetland and streambank boundaries have been identified and mapped during the environmental analysis process. Directional bore sites will be predetermined and based on mapped wetland and streambank boundaries.

2.5.3 Vegetation and Reclamation

1. Sinclair will seed all disturbed areas with a specific seed mixture for vegetation communities and soil conditions identified and mapped along the pipeline ROW. Additional species in alkaline wetland areas may be utilized based on availability. The following four seed mixtures will be used for the project based on their compatibility with an identified vegetative community:

Dry Loamy/Clay Sites – Characterized as a sagebrush/wheatgrass community with less than and greater than 10-inches of precipitation.

<u>Species</u>	<u>Variety</u>	<u>Lbs. PLS*</u>
Grasses		
Streambank wheatgrass	Sodar	1
Thickspike wheatgrass	Critana	1
Western wheatgrass	Rosana	1
Indian ricegrass	Rimrock (Nez Par)	2
Bottlebrush squirreltail	Sand Hollow	2
Slender wheatgrass	Pryror (San Luis)	4
Little bluegrass “Sandbergh”	High Plains	0.5
Bluebunch wheatgrass	Secor	2

<u>Species</u>	<u>Variety</u>	<u>Lbs. PLS*</u>
Letterman's Needlegrass		2

Shrubs

Big sagebrush		0.5
Gardners saltbrush		1
Fourwing saltbrush	Wytana	1
Shadescale		0.5
Rubber rabbitbrush		1
Winterfat	Open Range	0.5

Forbs

Scarlet globemallow		0.5+
Lewis' flax		0.5+
Rocky Mountain beeplant		0.5+
Western yarrow	Yakima	0.5+
Firecracker Penstemon	Richfield	1

Sandy Sites – Characterized as a sagebrush/bunchgrass community with less than or greater than 10 inches of precipitation.

<u>Species</u>	<u>Variety</u>	<u>Lbs. PLS*</u>
----------------	----------------	------------------

Grasses

Western wheatgrass	Rosana	1
Indian ricegrass	Rimrock	2
Green needlegrass		3
Needle and thread grass		2
Slender wheatgrass	Prior	2
Mutton bluegrass		0.5
Sand dropseed	Borden County	0.5
Canby bluegrass	Canbar	0.5

Shrubs

Silver sagebrush		0.5
Fourwing saltbrush		1
Antelope bitterbrush		1
Winterfat	Open Range	0.5
White sage		0.5

Forbs

Firecracker Penstemon		0.5+
Lewis flax		0.5+
Rocky Mountain beeplant		0.5+
Western yarrow		0.5+

Wet Alkaline/Saline Sites – Characterized as a greasewood or saltbush community in a lowland location. Additional alkaline wetland species will be utilized based on seed availability. These species include: alkali cord grass and baltic rush.

<u>Species</u>	<u>Variety</u>	<u>Lbs. PLS*</u>
Grasses		
Western wheatgrass	Rosana	3
Slender wheatgrass	Pryor	4
Alkali sacaton		0.5
Inland saltgrass		2
Basin wildrye	Trailhead	2
Shrubs		
Fourwing saltbrush	Wytana	1
Greasewood		0.5
Gardners saltbrush		1

Riparian Sites – Characterized as a riparian streambank community dominated by sedges.

<u>Species</u>	<u>Variety</u>	<u>Lbs. PLS*</u>
Sedge	Nebraska	2
Rush	Baltic	3

2. On disturbed sites where compaction interferes with establishing vegetation, Sinclair will disk, rip, and/or treat the area to condition the site for effective revegetation.
3. To prevent the introduction or spread of weeds, Sinclair will power-wash all field vehicles and equipment prior to the beginning of project construction. Additional cleaning may be required based on construction timing or any inspection that is performed that deems such measures necessary to prevent the transport of weed propagules. In addition, field vehicles and construction equipment will be cleaned prior to crossing county lines or entering Steamboat Lakes.
4. In accordance with recommendations from the Wyoming Weed & Pest Council, mulches utilized for erosion control purposes will be certified weed-free.
5. Sinclair will be responsible for future weed control along the ROW. They will consult with BLM on acceptable weed control methods for the PPPA. Sinclair will comply with the applicable federal and state laws and regulations concerning use of herbicides.

2.5.4 Wildlife

1. Construction will not be allowed during the raptor nesting period between February 1 and July 31. Activities related to construction of the pipeline will be prohibited within one mile of active ferruginous hawk and golden eagle nests and within 0.75 miles of all other raptor nests.
2. If project construction activities are planned during the raptor breeding season (February 1 through July 31), a raptor nest survey must be completed to ensure nests are not active and/or new nesting sites have not been established along the ROW.

2.5.5 Special Status Terrestrial Wildlife

1. Construction activity is prohibited within a two mile radius of active greater sage-grouse leks during the breeding, egg-laying, and incubation period from March 1 through July 15.
2. Construction activity is prohibited in mountain plover habitat from April 10 through July 10.
3. If construction activities are planned in mountain plover habitat from April 10 through July 10, a mountain plover presence/absence survey is required to determine if the habitat is occupied.

2.5.6 Special Status Plants

1. Construction activities occurring within the many-stemmed spider-flower habitat in the Steamboat Lakes area on Pathfinder National Wildlife Refuge will follow these measures to minimize impacts:
 - a. The construction footprint will be minimized to 35 feet for approximately 2,600 feet in occupied many-stemmed spider-flower habitat.
 - b. A survey will be conducted prior to construction to map populations of the plant occurring within the ROW.
 - c. If areas of particularly high population densities of the plant are encountered, one of two construction methods will be followed:
 - The high population densities will be marked by a qualified biologist or botanist. Topsoil will be removed along the pipeline trench; no other ROW preparation will be done. Pipe joints will be welded outside the marked area and the welded sections will be “walked” into position and placed in the ditch. The topsoil will then be replaced.
 - The second method will be essentially the same; with the exception that the topsoil and trench spoil will be placed on plastic or fabric “pit liner” or equivalent material in order to protect the underlying seedbed.

Both of the above methods will be used, and the success of the reclamation will be monitored by the BLM to determine which method is most effective. A biologist will be present during construction activity to ensure the construction methods are being used.

2.5.7 Air Quality

1. Sinclair has proposed to use dust suppression techniques in certain locations to minimize fugitive dust emissions. Water spraying will be used for dust control.

2.5.8 Visual Resources

1. Reclamation will occur immediately after construction. All disturbed areas on federal, state, and private lands will be final graded and contoured to their original condition.
2. To mitigate visual scarring, Sinclair will seed all disturbed areas with a BLM approved seeding mixtures. Revegetation will be coordinated with the BLM and accomplished using best management practices.

2.5.9 Cultural Resources

1. An open trench inspection will be conducted by an approved cultural resource specialist to prevent impacts to undocumented cultural resources.

2.5.10 Soils

1. Temporary erosion control structures will remain in place until permanent revegetation is successful. Erosion control structures and best management practices for the project are identified in the Construction Stormwater Manual prepared by Sinclair for the project.
2. Sinclair will selectively strip and salvage topsoil or the best suitable medium for plant growth from all disturbed areas. Topsoil will be removed and separated to a depth of 4- to 6-inches for use in reclamation.
3. After the pipeline is in place, soils from the trench will be backfilled and compacted to prevent soil subsidence. All disturbed areas will be final graded to as close to their original condition as possible.
4. All disturbed areas will be seeded with a BLM approved seeding mixture. This will be completed immediately after construction activities are completed.
5. When working in sand dunes, Sinclair will use best management practices to prevent impacts to sensitive soils. The top 4- to 5-inches of the sand will be wind-rowed separately to preserve seeds and enhance the success of reclamation.

2.5.11 Environmental Compliance

1. An environmental compliance monitor will be present during all construction activities. This individual will be responsible for ensuring the open trench cultural resource inspection and biological monitoring are completed. Additional duties will include the inspection of ROW to ensure construction activities are in compliance with BLM and other regulatory agency regulations.

2.5.12 Surface Water Quality

1. All streams and associated wetlands will be directionally bored to prevent impacts to these waterbodies. Sinclair will obtain a USACE Permit and a WY DEQ Stormwater Permit for the project. All of the permit stipulations will be adhered to and all construction activities will be done in a manner that will minimize impacts to water quality.

2. The pipeline will be buried a minimum of 10 to 15 feet below the channel bottom in all waterway installations.
3. All directional bore sites will be at least 80 feet from the ordinary high-water mark of the stream. These sites will be protected with best management practices to prevent release of sediment to waterways.
4. Hydrostatic test water used in conjunction with pipeline testing, and all water used during construction must be extracted from sources that contain sufficient water quantities and with appropriate permits approved by the State of Wyoming.
5. Sinclair will exercise stringent precautions against pipelines breaks and other potential accidental discharges of oil and or hazardous chemicals into streams. If liquid petroleum products are stored on site in sufficient quantities (per the criteria contained in Title 40 CFR Part 112), a Spill Prevention Control and Countermeasures Plan will be developed in accordance with 40 CFR Part 112, dated December 1973 and updated July 2002.
6. Sinclair will implement a list of best management practices to serve as temporary stormwater controls including:
 - a. Temporary berms
 - b. Silt fencing
 - c. Sediment Traps
 - d. Straw bale barriers
 - e. Seed reclamation and mulching

2.5.13 Access

1. State, county roads, two-tracks, and the pipeline ROW will be used to transport crews and equipment needed for project construction.
2. Sinclair will repair any cut or damaged fences resulting from construction activities.

2.5.14 Livestock/Range

1. Sinclair is responsible for notifying grazing lessees prior to entering allotments.
2. Sinclair shall make every effort to avoid disturbing or altering fences.
3. Sinclair's operations will comply with the Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for the Public Lands Administered by the BLM in the State of Wyoming.