

Appendix N - Wild and Scenic Rivers Suitability Evaluations

WILD AND SCENIC RIVER SUITABILITY EVALUATION THREEMILE CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

Fisheries and cultural resource (prehistoric) are the two outstandingly remarkable values identified on public land within the river corridor, which could contribute to the designation of a Wild and Scenic River.

Threemile Creek is one of only three streams that provide habitat for the Catlow Valley redband trout, one of two native fish species of the Catlow Valley. A fourth stream within the area, has recently lost its redband trout population. However, the redband trout population may be greatly influenced by the private operation of the Threemile Creek Reservoir and diversion below the corridor. This can have an effect on how the fish move through the system. The stream historically, but no longer contains the other native fish species, the Catlow tui chub.

This segment of Threemile Creek contains significant prehistoric sites. One site is considered to be in very good condition, which is the reason for the outstandingly remarkable value, and is described in more detail in the following section. There are several other sites found within the segment, but are only found to be considered significant.

With a Wild and Scenic River designation, it is possible that any management activity that can effect the outstandingly remarkable values, may have fewer options. For example, livestock grazing for cattle may be eliminated as a result of designation. Designation may also draw more people to the area, increasing recreational activities within the corridor.

Because of the broken ownership, the stream segment would be difficult to manage due to the private land within the headwaters of the river corridor.

Landownership Status and Current Management and Uses

The Andrews Resource Area administers approximately 4.3 miles (63.2 percent) of the 6.8-mile stream length. Of the 2180.1 acres within the river corridor, 1558.9 acres are public land, and 621.2 acres are private property. The segment lies on the west side of Steens Mountain and flows westerly from its headwater until it enters private land in the Catlow Valley.

Threemile Creek begins on a plateau before cutting down through a canyon that exhibits Steens Basalt lava flows in its walls. The present amount of flow in the creek is undersized for the size of the canyon that it flows through, indicating that the canyon was downcut by the creek mostly during the wetter Late Pleistocene, common for this geographic region. There is a linear plateau northeast of Threemile Creek consisting of sediments capped by the Devine Canyon Ash-Flow Tuff. The plateau has a linear form that is parallel to the linear form of Threemile Creek, suggesting that the tuff was deposited in an ancient drainage that had the same trend as the current drainage. It is common to see similar linear plateaus paralleling present-day drainages on the west slope of Steens Mountain.

The stream is one of only three that provide habitat for the endemic Catlow Valley redband trout, a Bureau and Oregon Sensitive species. Higher quality fish habitat occurs in the portion of the canyon where good condition riparian vegetation provides a good cover of woody riparian species and large springs provide cooler water. No exotic fish species are in the system. The upper portion of the stream is above the canyon and has a lower gradient with sedge-rush dominated sites and very little woody riparian cover. During mid- or late summer, there is no water in the upper 1.3 miles of the drainage. Habitat for the Catlow Valley redband trout is poor or nonexistent in the upper area. The population of redband trout may be currently influenced by several years of drought, loss of good habitat in the upper reaches, and the private irrigation operation of Threemile Reservoir and diversion of water from the lower end of the stream, immediately below the corridor. Because of the low population seen during an Oregon Department of Fish and Wildlife survey in 1995, the Oregon Department of Fish and Wildlife closed the stream to angling. Catlow tui chub, another endemic Bureau Sensitive and Oregon Sensitive species, has been found in the lower reaches of the stream and on the reservoir in the past, but they are no longer in the system. They have never been located in public reaches of the stream.

California bighorn sheep use the canyon reaches yearlong. Mule deer winter at the lower elevations, and chukar are abundant. Valley quail are also found within the canyon. A sage grouse lek (strutting ground used in courtship) is in the upper part of the area, and nesting and brood use also occurs. The Federally endangered American peregrine falcon and Federally threatened northern bald eagle are documented migrants using this segment of the stream. Sensitive species that use the segment are western sage grouse, ferruginous hawk, California bighorn sheep, Townsend's big-eared bat, and Preble's shrew. Other Special Status species found or that possibly might use the stream segment are Swainson's hawk, merlin, yellow-billed cuckoo, gray catbird, mountain bluebird, western bluebird, bobolink, and northern sagebrush lizard.

The botanical values on this drainage are common to the region.

Prehistoric sites have been located in the drainage. A relatively intact rock shelter is located within the assessment area. Rock shelters are the source of much of the most spectacular, complete information about prehistoric American Indians. Because rock shelters are very often dry, they possess the proper environmental conditions for the preservation of prehistoric basketry, textiles, and other perishable artifacts. These items are extremely rare and provide much of the missing information not found at a majority of other prehistoric sites in the region.

This site remains unevaluated. It has the potential to be regionally important in the interpretation of prehistory because of its potential to contain perishable, datable items. There are two other prehistoric sites within the assessment area. Both are surface lithic scatters probably containing data of local importance only. These sites do not possess outstandingly remarkable values, but contribute substantially to the river setting because they are a part of the prehistoric settlement pattern found in Threemile Creek. All of the sites need to be evaluated for significance through subsurface testing and mapping of surface elements. Until this information is gathered, the data potential of these sites is not fully known.

The public and private portions of the corridor are managed for livestock grazing as part of the 332,400-acre South Steens Allotment Management Plan. It is also part of the active Herd Management Area of the South Steens Wild Horse Herd Area. Recreational use activities include hiking, hunting, sightseeing, photography, and wildlife observation, but currently not angling. The

corridor lies within the Home Creek Wilderness Study Area, and is being managed to protect those values.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If designated as a scenic river, management would be similar to the present situation for most activities, but could be curtailed if there are impacts to the outstandingly remarkable values.

Recreation use would continue at the current level, until such a time that it is determined that impacts were occurring from overuse of the corridor. Livestock grazing is currently managed as described in the South Steens Allotment Management Plan, but could be eliminated due to designation.

Designation as a scenic river would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other streambank modifications along the river. There are currently no known applications for such stream modifications.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National Wild and Scenic River. They published a brochure in the early 1990's, showing a list of their recommended rivers. Currently, there is no sponsor for their proposal.

Cost of Administration

The basic objective of Federal designation is to protect and enhanced the outstandingly remarkable values. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists	6 people for 3 WMs @ \$3,700	=	\$ 66,600
Management and Support	4 people for 1 WM @ \$4,000	=	\$ 16,000
Miscellaneous		=	\$ 5,000
Subtotal		=	\$ 87,600

Annual Management:

(signing, data collection, monitoring)		=	\$ 10,000
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Acquisition:

Purchase or exchange of private land at \$225./acre		=	\$139,720
Administrative cost of split-estate acquisition		=	NA
Total		=	\$237,320

No State or local agency has come forward and stated they would be willing to share in the cost of administering this stream should it become part of the system.

Bureau of Land Management's Ability to Manage

The Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel. Threemile Creek is within the Home Creek Wilderness Study Area and is being managed to protect wilderness values until Congress makes a determination on wilderness designation.

The Catlow redband trout will continued to be managed and protected under existing Bureau of Land Management policy. At the present time, Threemile Creek is closed to fishing. The entire watershed is part of the nominated Catlow Redband Trout Area of Critical Environmental Concern and a portion is part of the nominated North Catlow Rim Area of Critical Environmental Concern. Under any of these, if approved, the area would have further protective management prescriptions, as yet to be decided.

All sensitive species will be managed in such a manner as to conserve the species to prevent listing.

The prehistoric rock shelter site would be protected by the Bureau of Land Management in compliance with the National Historic Preservation Act of 1966, as amended.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek.

Suitability Determination

The Bureau of Land Management has determined that the eligible 4.3 miles of Threemile Creek that is located on public land is "not suitable" for inclusion in the National Wild and Scenic River system. The amount of private land located in the headwaters of the system would make management difficult.

It is felt that the two listed outstandingly remarkable values are currently being protected under existing management, as previous described, and will offer the same protection as found under the Wild and Scenic Rivers Act.

WILD AND SCENIC RIVER SUITABILITY EVALUATION WILLOW CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The outstandingly remarkable values identified within this river corridor are the botanical values associated with the existing South Fork Willow Creek Research Natural Area/Area of Critical Environmental Concern.

Approximately 200 acres out of a total of 230 acres of the Research Natural Area are within the river corridor. The area represents a wide variety of microhabitats including rock outcrops, ledges, a

series of three bog terraces with pools, streams, and open shrubs. Plant communities includes those associated with stream systems originating in a glacial cirque.

With a Wild and Scenic River designation, it is possible that any management activities that could effect the outstandingly remarkable values, may have fewer options. For example, livestock grazing for cattle may be eliminated as a result of designation. Designation may also draw more people to the area, increasing recreation activities within the corridor.

Manageability will be a problem due to the private lands, adjacent to the county road, for public access.

Landownership Status and Current Management and Uses

The Andrews Resource Area administers approximately 6.2 miles of Willow Creek, while approximately .76-mile of Willow Creek is private property. Approximately 1,951 acres of public land are within the river corridor, while 243 acres are private land.

The head of Willow Creek and the head of Little Blitzen River meet at a narrow divide that has thick soil and no ice erosional features. Within the exposure of Steens Basalt and Steens Mountain Volcanics, there are some erosion-resistant feeder dikes that look like wall protrusions that extend northward for miles. These are inferred to be feeder dikes for the Steens Basalt flows.

Cirques developed in about 10 drainages on the east side of the Steens during the Pleistocene epoch. Each of these drainages generally contains two cirques, one about 2,500 feet above the Alvord Valley floor and the other about 1,500 feet above the lower one. It is interpreted that the more severe Fish Lake phase of glaciation formed cirques at a lower elevation than those that formed during the later and less severe Blitzen phase of glaciation.

In the northern fork of Willow Creek, the base of the upper cirque was at about 8,000 feet elevation and in the southern fork was at about 8,600 feet. The base of the lower cirque was at about 6,600 feet elevation for both forks. Below 6,600 feet, the creeks have a V-shaped cross section, indicative of normal stream erosion.

Lateral and ground moraines extend as low as 6,200 feet elevation in Willow Creek. Above these glacial deposits, the drainage exposes lava flows and pyroclastic rocks of the Steens Mountain volcanic to 5,500 feet elevation. Between 5,500 feet and 5,400 feet are exposures of tuffaceous sediments of the Alvord Creek Formation. Below this, the creek is in alluvial fan deposits to the valley floor. On the south side of the creek, below 5,400 feet, there is a large landslide that was probably active during the Pleistocene.

Steens Mountain, which includes the Willow Creek drainage, falls within the Bureau of Land Management Visual Resource Management Class II. The objective of this class is to maintain the existing character of the landscape. It is also part of the High Steens Wilderness Study Area. This Wilderness Study Area is being recommended to Congress as part of the national wilderness system.

Recreational use within the river corridor is primitive in nature such as hiking, backpacking, hunting, and sightseeing.

Livestock grazing does occur and is within the Alvord Allotment. Due to topography, grazing occurs only in the lower elevation of the system.

Willow Creek is one of nine streams in the Alvord basin that has provided habitat for a transplanted population of Lahontan cutthroat trout, a Federally listed threatened species. Populations in the Alvord basin are addressed in the Recovery Plan for the species as being important as a source for possible reintroduction of the species into streams in the Coyote, Willow, and Whitehorse basins from which the original transplants came.

The area is closed to recreational angling for the protection of the Lahontan cutthroat trout.

Willow Creek has a high wildlife habitat diversity and most of the riparian habitat is in good or excellent condition. Willow Creek is a steep, rough, rocky drainage that drops 4,400 feet in elevation over approximately 2.5 horizontal miles.

California bighorn sheep may be viewed within the canyon yearlong. Raptor nesting occurs in abundant numbers in the cliffs and rims along Willow Creek. The area provides both summer and winter habitat for mule deer. As winter snow increases, deer may be forced to lower elevations. Deer use is often heavy during winter months.

Chukars are abundant in the area and valley quail are found along the riparian areas and at lower elevation within the uplands. Pika are found in the upper elevation within the talus slopes.

As mentioned, the botanical values were identified as an outstandingly remarkable value because of the designated Research Natural Area for a high elevation cirque plant communities known as the South Fork of Willow Creek.

The remaining botanical resources within the Willow Creek system are interesting, but not unique to the area.

No archaeological inventory has been completed for the area, nor are historic or prehistoric values of any significance known to occur within this area.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If designated as a Wild or Scenic River, management would be similar to the present situation, for most activities, but could be curtailed if there are impacts to the outstandingly remarkable values.

Existing uses, such as recreation, would continue in the corridor at current levels, until such a time that increased uses or activities could harm the outstandingly remarkable value. The corridor would still be managed under Visual Resource Management Class II. The Wilderness Study Area would continue to be managed to protect their wilderness values, until Congress makes a determination on designation as wilderness.

Designation as a wild or scenic river area would continue with the existing management for botanical values, under the Research Natural Area/Area of Critical Environmental Concern

management plan. Fish and wildlife habitat would be maintained, but not necessarily enhanced through long-term protection under the Wild and Scenic Rivers Act.

Designation would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other major streambank modifications along the river. Currently, there are no known applications for such stream modifications.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National Wild and Scenic River. They published a brochure in the early 1990's, showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The objective of Federal river designation is to maintain the rivers existing condition, and to protect and enhance the outstandingly remarkable values. Developing a management plan will depend upon the complexity of the issues associated with each designation. Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists	6 people for 3 WMs @ \$3,700	=	\$ 66,600
Management and Support	4 people for 1 WM @ \$4,000	=	\$ 16,000
Miscellaneous		=	\$ 5,000
Subtotal		=	\$ 87,600

Annual Management:

(signing, data collection, monitoring)		=	\$ 10,000
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Acquisition:

Purchase or exchange of private land at \$300./acre		=	\$ 72,900
Administrative cost of split-estate acquisition		=	NA
Total		=	\$170,500

No State or local agency has come forward and stated they would be willing to share in the cost of administering this river segment should it become part of the national system.

Bureau of Land Management's Ability to Manage

The Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel.

All sensitive species, within the river corridor, will be managed or action mitigated in such a manner as to conserve the species so as not to contribute to the need to list the species.

The South Fork of Willow Creek Research Natural Area/Area of Critical Environmental Concern will continue to be managed under the existing Research Natural Area plan to preserve the character of streams originating in glacial cirques. Scenic values will be managed under the guidelines for Visual Resource Management Class II and Wilderness Study Areas will be managed to protect their wilderness values until Congress makes a decision on wilderness designation.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek.

Suitability Determination

The Bureau of Land Management has determined that the eligible 6.2 miles of public land within the Willow Creek drainage is "not suitable" for inclusion in the National Wild and Scenic River system. There are 243 acres of private land which breaks up the ownership pattern. There is also no legal public access to this drainage from the county road. Visitors to the area would have to find other ways to access the corridor for recreational opportunities.

It is felt that the outstandingly remarkable value listed for the system is only a small part of the headwaters of Willow Creek, and is already protected under an existing management plan for the Research Natural Area. The Research Natural Area is inaccessible due to topography, adding further to its protection from physical disturbance.

WILD AND SCENIC RIVER SUITABILITY EVALUATION VAN HORN CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The outstandingly remarkable value identified on public land, within the river corridor, is recreation. This outstandingly remarkable value could contribute to the designation of a Wild and Scenic River.

Approximately 1-mile of the Oregon High Desert National Recreation Trail parallels the upper portion of Van Horn Creek, and offers outstanding recreation opportunities for hiking and backpacking within the area.

With a Wild and Scenic River designation, it is possible that any management activities that could affect the outstandingly remarkable value, may have fewer options. For example, livestock grazing for cattle may be eliminated as a result of designation. Designation may also draw more people to the area, increasing recreation activities within the corridor.

Management of the river corridor would be practical due to public ownership.

Landownership Status and Current Management and Uses

The Andrews Resource Area administers approximately 9.9 miles of Van Horn Creek. Approximately 3,153 acres of public land are within the river corridor. The segment runs through one section of split-estate land (State owns the mineral rights).

Like Colony Creek and Cherry Creek, Van Horn Creek cuts through alluvial fan deposits from the valley floor to approximately 4,500 feet elevation. From 4,500 feet to beyond the ridgeline, the creek cuts through Mesozoic schistose metavolcanic rocks. These rocks are generally rich in muscovite and have a whitish sheen. They form erosion resistant outcrops that protrude into Van Horn Creek.

At approximately 4,900 feet, the edge of a pluton crosses the creek. This pluton is composed of fine-grained quartz diorite, and is one of seven plutons in the Pueblos. In the quartz diorite, the most easily recognized mineral is plagioclase. The mafic minerals in the quartz diorite have been metamorphosed from hornblende to biotite, magnetite, and epidote.

The upper reaches of the creek, above 6,700 feet elevation in Van Horn basin, are in the lower part of a several thousand foot thick package of lava flows known as Steens Basalt. The tertiary Steens Basalt tilts gently westward and lies in erosional unconformity on the older metamorphic rocks.

Pueblo Mountains, which includes the Van Horn Creek drainage, fall within the Bureau of Land Management Visual Resource Management Class II. The objective of this class is to maintain the existing character of the landscape. Van Horn Creek is within the Pueblo Mountain Wilderness Study Area, with portions of this Wilderness Study Area being recommended to Congress as wilderness.

Recreation has been identified as an outstandingly remarkable value. Recreational use within the river corridor is a primitive type such as hiking, backpacking, hunting, and sightseeing. Approximately 1-mile of Van Horn Creek, located in Van Horn basin, is within close proximity of the Oregon High Desert National Recreational Trail.

The majority of Van Horn Creek is inaccessible for hiking due to the dense vegetation, boulders, and steep cliffs found in the drainage.

Van Horn Creek is one of nine streams in the Alvord basin that has provided habitat for a transplanted population of Lahontan cutthroat trout, a Federally listed threatened species. Populations in the Alvord basin are addressed in the Recovery Plan for the species as being important as a source for possible reintroduction of the species into streams in the Coyote, Willow, and Whitehorse basins from which the original transplants came.

Brown trout, which are not native to this system, are also present within this stream, along with the Lahontan cutthroat trout.

Van Horn Creek also provides habitat for Alvord chub, a Bureau of Land Management sensitive species. These fish have been seen in the lower reaches, but probably do not extend much upstream because of the steeper gradient in the lower canyon reaches.

Livestock grazing does occur and is within the Pueblo Lone Mountain Allotment.

The area is closed to recreational angling for the protection of the Lahontan cutthroat trout.

Van Horn Creek has a good wildlife habitat diversity, but is much lower in elevation than many other streams.

The creek provides habitat for California bighorn sheep from spring through the fall, but move out of the area during winter. Mule deer summer at upper elevations and winter at lower areas. Antelope make light use of the area.

Sage grouse use upper elevation springs during the summer. Chukars are abundant in the rough lower canyon of Van Horn Creek. Valley quail are also present along the lower reaches.

Narrowleaf cottonwood, which only grows in a few areas in the region, occurs in the drainage. This botanical value is considered significant, but not exceptional.

No archaeological inventory has been completed for the area, nor are historic or prehistoric values of any significance known to occur within this area.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If designated as a scenic river, management would be similar to the present situation, for most activities, but could be curtailed if there are impacts to the outstandingly remarkable value.

Existing uses, such as recreation, would continue in the corridor at current levels, until such a time that increased uses or activities could harm the outstandingly remarkable value, or free-flowing character of the stream. The corridor would still be managed under Visual Resource Management Class II. Wilderness Study Areas would continue to be managed to protect their wilderness values, until Congress makes a determination on designation as wilderness.

A scenic designation would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other major streambank modifications along the river.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National Wild and Scenic River. They published a brochure in the early 1990's, showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The objective of Federal river designation is to protect and enhance the outstandingly remarkable values. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists	6 people for 3 WMs @ \$3,700	=	\$ 66,600
Management and Support	4 people for 1 WM @ \$4,000	=	\$ 16,000
Miscellaneous		=	\$ 5,000
Subtotal		=	\$ 87,600

Annual Management:

(signing, data collection, monitoring)		=	\$ 10,000
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Acquisition:

Purchase or exchange of private land		=	NA
Administrative cost of split-estate acquisition		=	\$ 5,280*
Total		=	\$102,880

- * **The administrative cost of split-estate acquisition includes preparation of a mineral report by Bureau of Land Management staff. At this time, cost for the actual mineral estate cannot be determined because each parcel's mineral value is unknown without the detailed mineral report.**

No State or local agency has come forward and stated they would be willing to share in the cost of administering this river segment should it become part of the national system.

Bureau of Land Management's Ability to Manage

The Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel.

All sensitive species, within the river corridor, will be managed or action mitigated in such manner as to conserve the species so as not to contribute to the need to list the species.

Recreation values will continue to be managed under the existing guidelines and policy for recreation management. Scenic values will continue to be managed under existing guidelines for Visual Resource Management Class II, and Wilderness Study Areas will continue to be managed to protect their wilderness values until Congress makes a decision on wilderness designation.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek.

Suitability Determination

The Bureau of Land Management has determined that the eligible 9.9-mile segment of the Van Horn Creek is "not suitable" for inclusion in the National Wild and Scenic River system. It is felt that the

recreation outstandingly remarkable value is currently being managed under the existing guidelines and policy for recreation management. The 1-mile portion of the Oregon High Desert National Recreation Trail, which is in close proximity of Van Horn Creek, has been established since 1992. The original Oregon High Desert Trail was established in 1980.

The combined management activities as discussed will offer the same protection as found under the National Wild and Scenic Rivers Act.

WILD AND SCENIC RIVER SUITABILITY EVALUATION COTTONWOOD CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The outstandingly remarkable value identified within this river corridor is the botanical value associated with the narrowleaf cottonwood/Mormon tea community, and could contribute to the designation of a Wild and Scenic River.

Several State and Bureau sensitive species are also found within the corridor.

With a Wild and Scenic River designation, it is possible that any management activities that could effect the outstandingly remarkable value, may have fewer options. For example, livestock grazing for cattle may be eliminated as a result of designation. Designation may also draw more people to the area, increasing recreation activities within the corridor.

Manageability of the river corridor would be practical due to total public ownership.

Landownership Status and Current Management and Uses

The Andrews Resource Area administers all of the 12.1 miles of Cottonwood Creek. Approximately 3,712 acres of public land are within the river corridor.

The area contains geologic characteristics similar to other creeks in this geographic region. Steens basalt and tertiary sediment deposited in the ancestral Pueblo Valley have been exposed by the action of the stream.

Recreational use within the river corridor is of a primitive type such as hiking, backpacking, solitude, and hunting.

The diverse vegetation and geomorphic features influence the diversity of wildlife species. Deer and antelope summer at the upper elevations, and winter at lower elevations along the river corridor. Bighorn sheep summer in the headwaters of Cottonwood Creek and winter outside the area. Sage grouse use the drainage all year with the meadows being important habitat in the spring and summer. Chukars are abundant throughout the steep parts of the drainage and valley quail are found at mid- and lower elevations.

No fish are present within the Cottonwood Creek drainage.

The lower reach of the stream is a Research Natural Area/Area of Critical Environmental Concern for the special narrowleaf cottonwood/Mormon tea complex plant community. Several State sensitive plant species of concern are present in the lower reaches of this drainage. The upper reaches contain alder and aspen groves.

All of the drainage is within the Pueblo Mountain Wilderness Study Area, with a portion of this area being recommended to Congress for wilderness designation.

Livestock grazing occurs within the Pueblo-Lone Mountain Allotment from April to June each year.

No archaeological inventory has been completed for the area, nor are significant historic or prehistoric values known to occur.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If designated as a Wild and Scenic River, management for most activities would be similar to the present situation, but could be curtailed if there are impacts to the outstandingly remarkable value.

Recreation use would continue at current levels until such a time that it was determined that impacts were occurring from overuse of the river corridor. The corridor will still be managed under Visual Resource Management Class II. The Wilderness Study Area would continue to be managed to protect their wilderness values, until Congress makes a determination on designation as wilderness.

Scenic designation would preclude major diversions, hydroelectric power facilities, water supply for flood control dams, or other major streambank modifications along the stream. Currently, there are no known applications for such stream modifications.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National Wild and Scenic River. They published a brochure in the early 1990's, showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The basic objective of Federal river designation is to protect and enhance the outstandingly remarkable values. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists	6 people for 3 WMs @ \$3,700	=	\$ 66,600
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Annual Management:

(signing, data collection, monitoring)		=	\$ 10,000
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Acquisition:

Purchase or exchange of private land		=	NA
Administrative cost of split-estate acquisition		=	\$ 5,280*
Total		=	\$102,880

- * **The administrative cost of split-estate acquisitions includes preparation of a mineral report by Bureau of Land Management staff. At this time, cost for the actual mineral estate cannot be determined because each parcel's mineral value is unknown without the detailed mineral report.**

No State or local agency has come forward and stated they would be willing to share in the cost of administering this stream should it become part of the system.

Bureau of Land Management's Ability to Manage

The Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel.

All sensitive species within the river corridor will be managed or action mitigated in such a manner, as to conserve the species so as not to contribute to the need to list the species.

The Pueblo Foothills Research Natural Area/Area of Critical Environmental Concern contains most of the narrowleaf cottonwood and Mormon tea, as well as several State and Bureau sensitive plant species. This particular value is currently being managed and protected under the Pueblo Foothill Research Natural Area/Area of Critical Environmental Concern management plan.

Scenic values will continue to be managed under existing Visual Resource Management guidelines for Class II, and Wilderness Study Areas will continue to be managed to protect their wilderness values until Congress makes a decision on wilderness designation.

Historic and Existing Rights

The area in and around the Cottonwood Creek drainage is high in mineralization and claims have been filed and worked in the past. Presently, there are no valid mining claims or any other existing rights within the study portions of the creek.

Suitability Determination

The Bureau of Land Management has determined that the eligible 12.1 miles of Cottonwood Creek is "not suitable" for inclusion in the National Wild and Scenic River system.

It is felt that the outstandingly remarkable value for botanical resources is currently being managed under the existing Pueblo Mountain Research Natural Area/Area of Critical Environmental Concern management plan. The Research Natural Area has been established since 1982, with the first management plan being developed in 1984, and updated in 1994.

The continued Bureau of Land Management riparian management and sensitive species policies, will also add protection to the Cottonwood Creek area.

WILD AND SCENIC RIVER SUITABILITY EVALUATION BIG TROUT CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The outstandingly remarkable value identified within this river corridor is scenic quality, and could contribute to the designation of a Wild and Scenic River.

Big Trout Creek, which includes the East Fork, has a diverse landscape with rock outcrops and a thick blanket of quaking aspen throughout the canyon. The scenic quality is currently being managed under the Visual Resource Management Class II. The objective of this class is to retain the existing character of the landscape.

With a Wild and Scenic River designation, it is possible that any management activities that could affect the outstandingly remarkable value, may have fewer options. For example, livestock grazing for cattle may be eliminated as a result of designation. Designation may also draw more people to the area, increasing recreation activities within the corridor.

Manageability of the river corridor would be a problem, due the amount of private land within the river corridor.

Landownership Status and Current Management and Uses

The Andrews Resource Area administers approximately 9.6 miles of Big Trout Creek, and 2.9 miles of the East Fork of Trout Creek, while there are 4.2 miles of private land in Big Trout Creek, and 3.6 miles within the East Fork of Trout Creek. This totals 20.3 miles of stream within the river corridor. The segment also runs through three different sections of split-estate land (State owns the minerals).

Approximately 4,998 acres of public land are within the river corridor, and 1,493 acres of private land, for a total of 6,491 acres.

Big Trout Creek and the East Fork of Trout Creek cut through gently-dipping Steens Basalt flows that are overlain by andesitic lava flows and rhyolitic ash-flow tuffs. The linear pattern of the creeks indicate that the location of Big Trout Creek and the East Fork of Trout Creek are fault-controlled, and geologic mapping in "The V" topographic quadrangle shows faults along portions of the creeks. The plateaus between the creeks are nearly flat because the ash-flow tuffs and lava flows capping the plateaus were deposited with a flat top and are thick and resistant to erosion. The ash-flow tuffs erupted from the McDermitt Caldera complex to the southeast, the Pueblo Caldera to the west, and the Whitehorse Caldera to the north.

As described earlier, Trout Creek Mountains fall within the Bureau of Land Management's Visual Resource Management Class II. A good portion of Big Trout Creek is within the Mahogany Ridge Wilderness Study Area. None of this Wilderness Study Area is being recommended to Congress for wilderness designation.

Recreational use within the corridor includes primitive types such as hiking, backpacking, hunting, fishing, and sightseeing.

Big Trout Creek provides habitat for hybrid rainbow-cutthroat trout and Alvord chub. The Alvord chub is a Bureau sensitive species.

Livestock grazing does occur and is within the Trout Creek Allotment Management Plan. As a result of recent changes in grazing management, the riparian area is rapidly improving.

Big Trout Creek has good diversity of wildlife habitats. The lower elevations provide deer winter range and the upper elevations provide deer summer range. Sage grouse use meadows and springs near the headwaters as summer habitat and winter at lower elevations.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If designated as a Wild and Scenic River, management for most activities would be similar to the present situation, but could be curtailed if there are impacts to the outstandingly remarkable value.

Existing uses, such as recreation, would continue in the corridor at current levels, until such a time that increased uses or activities could harm the outstandingly remarkable value, or free-flowing character of the stream.

Designation as a scenic river area would allow continued management under the current Visual Resource Management Class II. Wilderness Study Areas would continue to be managed to protect their wilderness values, until Congress makes a determination on designation as wilderness.

Scenic designation would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other major streambank modifications along the river. Currently, there are no known applications for such stream modifications.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National Wild and Scenic River. They published a brochure in the early 1990's, showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The objective of Federal river designation is to protect and enhance the outstandingly remarkable values. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists	6 people for 3 WMs @ \$3,700	=	\$ 66,600
Management and Support	4 people for 1 WM @ \$4,000	=	\$ 16,000
Miscellaneous		=	\$ 5,000
Subtotal		=	\$ 87,600
Annual Management:			
	(signing, data collection, monitoring)	=	\$ 10,000
Acquisition:			
Purchase or exchange of private land at \$350./acre		=	\$522,830
Administrative cost of split-estate acquisition		=	\$ 5,280*
Total		=	\$625,710

- * **The administrative cost of split-estate acquisition includes preparation of a mineral report by Bureau of Land Management staff. At this time, cost for the actual mineral estate cannot be determined because each parcel's mineral value is unknown without the detailed mineral report.**

No State or local agency has come forward and stated they would be willing to share in the cost of administering this river segment should it become part of the national system.

Bureau of Land Management's Ability to Manage

The Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel.

Scenic values will continue to be managed under the existing Visual Resource Management guidelines for Class II, and Wilderness Study Areas will continue to be managed to protect their wilderness values until Congress makes a decision on wilderness designation.

Even though the area is not recommended by the Bureau of Land Management for designation as wilderness, this does not mean that Congress will not decide to designate this area as part of the national wilderness system.

All sensitive species within the river corridor will be managed or action mitigated in such a manner as to conserve the species so as not to contribute to the need to list the species.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek.

Suitability Determination

The Bureau of Land Management has determined that the eligible 11.9-mile segment of the Big Trout Creek, on public land, which includes the East Fork tributary, is "not suitable" for inclusion in the National Wild and Scenic River system.

The area has a large amount of private land, primarily in the form of 40-acre parcels, scattered within the bottom of the river corridor. Manageability would be very difficult due to the broken ownership.

WILD AND SCENIC RIVER SUITABILITY EVALUATION BIG ALVORD CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The outstandingly remarkable value identified for this stream is the diversity and excellent condition of riparian and wildlife habitat found in Big Alvord Creek, especially the upper elevation.

The outstandingly remarkable values discussed make Big Alvord Creek a potential addition to the National Wild and Scenic River system. The excellent condition riparian and upland vegetation is similar to other drainage on the East Steens, but the diversity here is greater.

This drainage is one of nine streams in the Alvord Basin which provided habitat for a transplanted population of Lahontan cutthroat trout, a Federally listed fish species. Populations of this fish in the Alvord Basin are addressed in the Recovery Plan for the species as being important as a source for possible reintroduction of the species into streams in the Coyote-Willow-Whitehorse basin from which the original transplants came. The fish in Big Alvord Creek, however, are not native to the stream, so the effects of the introduction of the species on what was the native aquatic fauna are not known. It is not known if the fish are still present in the stream and an intensive examination has not been done. Even if the fish are present, the stream may not provide sufficient habitat for a long-term reliable source for future reintroduction.

With a Wild and Scenic River designation, it is possible that the management of activities that can affect the outstandingly remarkable values, may have fewer options. Livestock grazing for cattle may be eliminated if this system was designated. Designation may also draw more people to the area, causing increased use of the area for recreation.

The lower portion of this drainage, west of the county road, is private property. There is no public access from the county road to the Bureau of Land Management lands. Manageability problems will occur, if the segment is added to the system. Recreationists will have to find other ways around the private property to gain access to Big Alvord Creek.

Landownership Status and Current Management and Uses

The Andrews Resource Area administers approximately 6.3 miles of Big Alvord Creek. The lower reach of the stream is on private land owned by Alvord Ranch.

Land in the Big Alvord Creek drainage is used for wildlife habitat, recreation, and livestock grazing. This drainage has a high wildlife habitat diversity and the riparian habitat is in excellent condition. It is a steep, rough, and rocky drainage that drops about 5,000 feet within three horizontal miles. Wildlife using the area include California bighorn sheep, deer, chukar, quail, pikas, and many other birds and mammals. Bighorn sheep may be viewed within the canyon all year. Raptors nest in the cliffs and rims, and deer occupy the area during both summer and winter. Deer use is often heavy in the winter as snow forces them to move to lower elevations. Chukars are abundant on the steep, lower slopes and valley quail are found along the riparian areas and in the lower uplands. Pikas are found in the upper elevation talus slopes.

The vegetation in the drainage is diverse and in excellent condition. Plant communities include upper cirque communities, alpine areas, rocky rims and slopes, black cottonwood, alder, dogwood and willow riparian areas, bluebunch wheatgrass slopes, Idaho fescue slopes, mountain mahogany, and aspen patches.

The public land within the drainage is part of the High Steens Wilderness Study Area, the Steens Mountain Area of Critical Environmental Concern for scenic values, and the potential Big Alvord Creek Research Natural Area for special plant communities.

The Big Alvord drainage is within the Alvord grazing allotment, but only the lowest reaches can be grazed by livestock due to steep topography.

The geology of this area is similar to other creeks in this region. The drainage contains glacial cirques, moraines, remnants of lava flows, and a large alluvial fan.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If the Big Alvord Creek drainage is designated as a Wild or Scenic River, the management for most activities would be similar to the present situation, but could be curtailed if there are impacts to the outstandingly remarkable values. Livestock grazing could be eliminated due to the designation of the stream into the Wild and Scenic River system. Recreational use would continue at the current level, until such a time that it was determined that impacts were occurring from overuse of the river corridor.

Many parts of Steens Mountain could end up having one special designation stacked on top of another. The Big Alvord Creek drainage is proposed to become an Area of Critical Environmental Concern for the excellent condition vegetation resources. It is also part of an existing Area of

Critical Environmental Concern for scenic qualities and is also recommended to be designated as wilderness.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National Wild and Scenic River. They published a brochure in the early 1990's, showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The basic objective of Federal river designation is to protect and enhance the outstandingly remarkable values. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists	6 people for 3 WMs @ \$3,700	=	\$66,600
Management and Support	4 people for 1 WM @ \$4,000	=	\$16,000
Miscellaneous		=	\$ 5,000
Subtotal		=	\$87,600

Annual Management:

(signing, data collection, monitoring)		=	\$10,000
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Acquisition:

Purchase or exchange of private land		=	NA
Administrative cost of split-estate acquisition		=	NA
Total		=	\$97,600

No State or local agency has come forward and stated that they would be willing to share in the cost of administering this river segment, should it become part of the national system.

Bureau of Land Management's Ability to Manage

The Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel. The Big Alvord Creek drainage is currently within the High Steens Wilderness Study Area and is also being managed to protect these values until Congress makes a determination on wilderness designation.

The overall condition of the watershed and the riparian area is being managed in compliance with the Endangered Species Act Section 7 Biological Opinion for the Lahontan cutthroat trout, the Bureaus policies for riparian areas and the Terms and Conditions of the grazing permit consistent with the Biological Opinion.

Other sensitive species will be managed or actions mitigated in such a manner as to conserve the species so as not to contribute to the need to list the species.

The outstandingly remarkable values within this drainage can be protected without the Wild and Scenic designation because of existing management, and also because the majority of the stream is inaccessible to most types of disturbances.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek.

Suitability Determination

The Bureau of Land Management has determined that the eligible 6.3 miles of Big Alvord Creek is "not suitable" for inclusion in the National Wild and Scenic River system. The presence of the Federally listed trout, the Wilderness Study Area status, the location and topography of the drainage along the east face of the Steens, the continued Bureau of Land Management riparian management policies will provide the same level of protection for the two outstandingly remarkable values, as would protection under the Wild and Scenic Rivers Act.

Public access from the county road is not available to the public, and offers no legal access for visitor use.

WILD AND SCENIC RIVER SUITABILITY EVALUATION HOME CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

Fisheries, scenic quality, and recreation are the outstandingly remarkable values identified for Home Creek. Home Creek is one of only three streams that provide habitat for the Catlow Valley redband trout, one of two native fish species of the Catlow Valley. Recently, a fourth stream has apparently lost its redband trout population. The limited and possibly diminishing distribution of the Catlow Valley redband trout would make Home Creek a potential for designation, because it offers the most habitat for this species. The stream historically, but no longer, contains the other native fish species, the Catlow tui chub.

Management for the protection of the stream habitat, however, is complicated by the landownership pattern. The Bureau of Land Management manages less than half of the corridor and less than half of the stream length. Most of the upper watershed is privately owned. Any adverse impacts to the condition of the watershed in this upper area can affect the downstream portion. Management to prevent such threats and to improve the overall condition of the stream is dependent upon cooperative and adaptive management with the private landowner, through the South Steens Allotment Management Plan.

With a Wild and Scenic River designation, it is possible that management of activities that can affect the outstandingly remarkable values may have fewer options. For example, livestock grazing for cattle may be eliminated due to designation.

If the stream continues to be open for angling, designation may draw more anglers to the area, increase angling pressure, and possibly impact the Catlow redband trout population.

Management as a Wild and Scenic River would be difficult due to the large size of the pastures in which it is situated, the amount of private land in the watershed, and the free-roaming nature of the wild horse herd in the area.

Landownership Status and Current Management and Uses

The Andrews Resource Area administers approximately 5.7 stream miles (2,096 acres), which is 38.5 percent of the 14.8 stream length (4,615 acres). The remaining 9.1 miles of stream are on private land. All three tributaries of Home Creek in the headwaters are located on private property. The upper two-thirds of the creek is located on private property, while the lower one-third is public land. The lower one-third portion of the creek flows through a deep basalt canyon, terminating in Catlow Valley.

Home Creek begins on a plateau, before cutting down through a canyon that exhibits Steens Basalt lava flows within its walls. There is a linear plateau lying parallel to and northeast of Home Creek, consisting of sediments capped by the Devine Canyon Ash-Flow Tuff. The location and orientation of the plateau suggests that the tuff was deposited in an ancient drainage that had the same trend as the current drainage. It is common to see similar linear plateaus paralleling present-day drainages on the west slope of Steens Mountain. The present amount of stream flow in the creek is undersized for the size of the canyon that it flows through, indicating that the canyon was downcut by the creek mostly during the wetter Late Pleistocene, common for this geographic region. At the mouth of Home Creek Canyon, there is a curved deposit of alluvium that may either be a delta that formed during the time of pluvial Catlow Lake or it may be recent faulting of a shoreline wave-cut terrace formed by pluvial Catlow Lake. Neither feature is unique to this geographic region.

The lower portion of Home Creek flows through a rough, rocky canyon with 300 to 1,300-foot canyon walls and has a high habitat diversity in excellent riparian condition. California bighorn sheep use the lower canyon yearlong, and mule deer use it in winter. Steep canyon walls provide good nesting sites for raptors. The lower canyon is excellent habitat for chukar and valley quail. The lower reach of the stream is in a naturally vegetated state due to the inaccessibility of the area to livestock and wild horses. Above Home Creek Canyon, the habitat on public land has a low diversity, the condition is poor, and woody riparian species are absent or sparse. This is partly due to livestock and wild horse grazing, but is expected to improve under a recently implemented Allotment Management Plan. Mule deer summer at the upper elevations, and some antelope summer use also occurs. Sage grouse use the mid- and upper portions spring through fall. The Federally endangered American peregrine falcon and the Federally threatened northern bald eagle are documented migrants for the area. Bureau sensitive species that are found or possibly found are ferruginous hawk, western sage grouse, California bighorn sheep, Townsend's big-eared bat, and Preble's shrew. Other Special Status species that are found or possibly occur are Swainson's hawk, merlin, yellow-billed cuckoo, bank swallow, mountain bluebird, western bluebird, loggerhead shrike, bobolink, and northern sagebrush lizard.

Home Creek has provided habitat for the Catlow redband trout and Catlow tui chub, both Bureau sensitive species and endemic to the Catlow Valley. Home Creek is one of only four streams in the valley that historically provided habitat for these species, only three of which still provide habitat for the Catlow redband trout. No exotic fish species are in the system. Part of the stream reaches on public land provide good quality redband trout habitat, associated with excellent riparian conditions. The upper reaches, which are privately owned, do not provide good quality fish habitat

and can affect the lower reaches; however, they are managed as part of a public grazing allotment and have the potential for improvement.

Surveys in 1974, 1994, and 1995 indicate that the Catlow tui chub is not in Home Creek. However, it is possible that the tui chub was never abundant in the system because of the steep gradient in its lower reaches.

The botanical resources indigenous to Home Creek are not remarkable or unique to the area.

Prehistoric cultural sites are known to occur within this drainage. None have rare, unusual characteristics or exceptional human interest value. No historic sites have been recorded for this drainage.

From a scenic and recreation perspective, Home Creek, compared to the other creeks in the immediate area, offers diversity. Home Creek Canyon cuts into the plateau with a depth of 300 to 1,300 feet for over 2.5 miles. With sheer rock walls, the canyon rises 1,300 feet in about 0.25-mile. The remaining 13.5 miles of Home Creek and associated tributaries are in a fairly shallow canyon just over 100 feet in depth. The variety of landforms and color, scenic views of the canyon, and its impressive size contribute to the high quality of the scenery. Compared to other streams in the broader area, such as the larger Donner und Blitzen National Wild and Scenic River, Home Creek is not considered as spectacular.

Recreation opportunities are accessible, but challenging. Primitive recreation, such as hiking, hunting, and fishing are available to those willing to dare the steep, rocky terrain. The length of the canyon and its ruggedness and steepness would be a challenge to the hiker and of interest to a backpacker. Hunting occurs in the area as a whole, and to some degree in Home Creek, although this is limited due to the extremely rugged terrain. Fishing for inland redband trout occurs.

The public and private portions of the corridor are managed for livestock grazing as part of the 332,400-acre South Steens Allotment, which has an Allotment Management Plan. It is also part of the active Herd Management Area of the South Steens Wild Horse Herd Area. The corridor lies within the Home Creek Wilderness Study Area, but only the Federal portion falls within the area the Bureau of Land Management recommended as suitable for wilderness designation.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If Home Creek is designated as a Wild and Scenic River, the management for most activities would be similar to the present situation, but could be curtailed if there are impacts to the outstandingly remarkable values. The Catlow redband trout would be managed and protected under the Bureau of Land Management's policy to manage sensitive species in such a manner as to conserve the species.

Livestock grazing, which includes cattle and wild horses, could be eliminated due to designation.

Until such time as Congress determines wilderness designation, the area would continue to be managed to protect those values. Recreation use would continue at its current level, until such a time that it was determined that impacts were occurring from overuse of the river corridor.

Designation as a scenic river, would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other streambank modifications along the river. There are currently no known applications for such stream modifications. No management activities that could adversely affect the fish habitat or free-flowing character of the river would be allowed on public land.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National Wild and Scenic River. They published a brochure in the early 1990's, showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The basic objective of Federal river designation is to protect and enhance the outstandingly remarkable values. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists	6 people for 3 WMs @ \$3,700	=	\$ 66,600
Management and Support	4 people for 1 WM @ \$4,000	=	\$ 16,000
Miscellaneous		=	\$ 5,000
Subtotal			\$ 87,600

Annual Management:

(signing, data collection monitoring)		=	\$ 10,000
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Acquisition:

Purchase or exchange of private land, estimated at \$225./acre		=	\$556,707
Administrative cost of split-estate		=	NA
Total		=	\$654,307

No State or local agency has come forward and stated that they would be willing to share in the cost of administering this river segment, should it become part of the national system.

Bureau of Land Management's Ability to Manage

The Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel. The Home Creek drainage is currently within the Home Creek Wilderness Study Area and is being managed to protect wilderness values until Congress makes a determination on wilderness designation.

The Catlow redband trout are currently being managed as a sensitive species. All sensitive species will be managed or actions mitigated in such a manner as to conserve the species so as not to contribute to the need to list the species.

The South Steens Allotment Management Plan currently outlines the management of livestock, including cattle and wild horses. The Allotment Management Plan describes the present conditions for riparian, aquatic habitat, and upland, and outlines how this area will be monitored on a yearly basis.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek.

Suitability Determination

The Bureau of Land Management has determined that the eligible 5.7 miles of Home Creek that is on public land is "not suitable" for inclusion in the National Wild and Scenic River system. The presence of the Catlow redband trout, is currently being managed as a sensitive species. The amount of private land within the system would make it difficult to manage.

The continued Bureau of Land Management policies, as described previously, will provide the same level of protection for the three listed outstandingly remarkable values for this stream, as would protection under the Wild and Scenic Rivers Act.

WILD AND SCENIC RIVER SUITABILITY EVALUATION MCCOY CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The diversity of wildlife habitat is the outstandingly remarkable value identified on public land, within the river corridor, and could contribute to the designation of a Wild and Scenic River. McCoy Creek is a free-flowing stream that has a high diversity of wildlife habitat including subalpine, meadows, springs, beaver dams, black cottonwoods, aspen, willows, cliffs, and talus slopes.

With a Wild and Scenic designation, it is possible that the management of activities that can affect the outstandingly remarkable value may have fewer options. For example, livestock grazing for cattle may be eliminated if this system is designated.

The stream segment would be difficult to manage due to the broken ownership, and the amount of private land that is found throughout the system.

Landownership Status and Current Management and Uses

The Andrews Resource Area administers approximately 18.2 miles of McCoy Creek, while approximately 12.6 miles are private property. Approximately 5,238.1 acres of public land are within the river corridor, while 3,161.4 acres are private land. Landownership is broken throughout the system, with the majority of Bureau of Land Management land being in the headwaters of the system. This segment runs through approximately one section of split-estate land (State owns the minerals).

The geologic values of McCoy Creek are similar to other streams on Steens Mountain. McCoy Creek, like Kiger and Cucamonga Creeks, is north-flowing and is probably located along faults with at least minor displacement. The cap of ice that extended down to about 6,000 feet elevation during the Fish Lake advance of the Pleistocene glaciation on the Steens, moved downslope at right angles (westward) over the north-flowing McCoy Creek.

Later, during the Blitzen glacial advance, ice moved from the southern highlands and flowed northward along McCoy Creek for about 3 miles to about 6,760 feet elevation. Here the creek's cross-section shows an abrupt transition from U-shaped (glacially carved) to V-shaped (stream erosion). Lateral and ground moraines were locally deposited by the glacier. Steens Basalt lava flows are exposed in the canyon walls.

Steens Mountain, which includes the McCoy Creek drainage, falls within the Bureau of Land Management Visual Resource Management Class II. The objective of this class is to maintain the existing character of the landscape.

There are many opportunities for primitive types of recreation such as hunting, hiking, horseback riding, and fishing, but none of these are considered exceptional or unusual. The view from above the canyon is scenic, but similar to other views in this area.

McCoy Creek is within the Chimney grazing allotment and is currently divided into three pastures.

Inland redband trout, a sensitive species, is found throughout McCoy Creek and its tributaries. Nineteen sensitive species including the Malheur mottled sculpin, Steens Mountain carabid beetle, and Preble's shrew may be found in the area.

Bald eagle, a threatened species, winter in the lower reaches of McCoy Creek, while the American peregrine falcon, an endangered species, are migrants that use the area during spring and fall.

The Special Status plant, Castilleja pilosa v. Steenensis, is present at upper elevations on the ridge.

The variety of plant communities and geomorphic features provides summer habitat for an excellent diversity of wildlife species including mule deer and Rocky Mountain elk; cavity-nesting species in the black cottonwoods, western junipers, and aspens; black rosy finch (a rare species on public land); and sage grouse (a sensitive species) summering in the subalpine. Raptors nest in cliffs along the canyon.

The remaining botanical resources, within the McCoy Creek system, are interesting, but not unique to the area.

No archaeological inventory has been completed for the area, nor are significant historic values known to occur. One prehistoric site is located in the area and offers possibility for study or interpretation.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

Designation as a scenic river area would allow continuation of existing management for most activities, but could be curtailed if they impact the outstandingly remarkable value. As mentioned,

livestock grazing could be eliminated due to designation. Recreation use would continue at the current level, until such a time that it was determined that impacts were occurring from overuse of the river corridor.

Scenic designation would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other major streambank modifications along the river. Currently, there are no known applications for such stream modifications.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National Wild and Scenic River. They published a brochure in the early 1990's, showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The objective of Federal river designation is to maintain the river's existing condition, and to protect and enhance the outstandingly remarkable values. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists	6 people for 3 WMs @ \$3,700	=	\$ 66,000
Management and Support	4 people for 1 WM @ \$4,000	=	\$ 16,000
Miscellaneous		=	\$ 5,000
Subtotal		=	\$ 87,600

Annual Management:

(signing, data collection, monitoring)		=	\$ 10,000
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Acquisition:

Purchase or exchange of private land, estimated at \$300./acre		=	\$ 949,320
Administrative cost of split-estate acquisition		=	\$ 5,280*
Total		=	\$1,052,200

* **The administrative cost of split-estate acquisitions includes preparation of a mineral report by Bureau of Land Management staff. At this time, cost for the actual mineral estate cannot be determined because each parcel's mineral value is unknown without the detailed mineral report.**

No State or local agency has come forward and stated they would be willing to share in the cost of administering this river segment, should it become part of the national system.

Bureau of Land Management's Ability to Manage

The Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel. If McCoy Creek was added to the National Wild and Scenic River system, the Bureau of Land Management would continue to manage the land and resources in the river corridor.

Portions of McCoy Creek are within the High Steens Wilderness Study Area and are being managed to protect wilderness values until Congress makes a determination on wilderness designation.

All sensitive species will be managed or actions mitigated in such a manner as to conserve the species so as not to contribute to the need to list the species. Whether or not the stream receives designation, the inland redband trout and the Malheur mottled sculpin would be managed and protected through application of Bureau of Land Management policy. Recreation use will continue at the current level until such a time that the use will impact the outstandingly remarkable value, within the McCoy Creek system.

Historic and Existing Use

There are no known historic or existing rights within the studied portions of the creek. The Bureau of Land Management would negotiate with the State of Oregon to seek fee title acquisition or exchange of the split-estate land.

Suitability Determination

The 18.2-mile segment of McCoy Creek, which is located on public land, is "not suitable" for inclusion in the National Wild and Scenic River system. The broken landownership (12.6 miles being private) would make it very difficult to manage. It is felt that the outstandingly remarkable values listed for McCoy Creek, are currently being protected under existing management.

The inland redband trout and the Malheur mottled sculpin will continue to be managed as sensitive species. All of the combined management activities for McCoy Creek, as previously described, will offer the same protection as found under the Wild and Scenic Rivers Act.

WILD AND SCENIC RIVER SUITABILITY EVALUATION MUD CREEK

Characteristics Which do or Do Not Make the Area a Worthy Addition to the System

The botanical values have been identified as the outstandingly remarkable value within the river corridor. An isolated patch of white fir, approximately 15 acres, is located along Little Fir Creek, which is a tributary of Mud Creek.

An error in the inventory shows that the tributaries of Mud Creek, within the headwaters, should not have been inventoried due to the amount of private land. These tributaries include Fence, Big, and Little Fir Creeks. The inventory was to start below the confluences of these tributaries, to the Malheur National Wildlife Refuge boundary, a total of 7.2 miles. The isolated patch of white fir is located outside the inventoried stretch, in Little Fir Creek.

With a Wild and Scenic River designation, it is possible that the management activities that can affect the outstandingly remarkable values may have fewer options. For example, livestock grazing for cattle may be eliminated as a result of designation. Designation may also draw more people to the area, which could have an impact on the area.

Landownership Status and Current Management and Uses

The Andrews Resource Area administers approximately 7.2 miles of the lower reaches of Mud Creek. Approximately 2,133 acres of public land are within the river corridor. There is no private land within the lower reach. All the private land is located in the tributaries as described above.

The Steens Mountain fault-block tilts westward, forming a gentle western flank that extends upward from the Blitzen and Catlow Valleys for a distance of approximately 20 miles to the mountain crest. Mud Creek is incised into this western flank, exposing flows of Steens Basalt that are individually 10-30 feet thick and may be separated by soil horizons that developed by weathering during lulls in volcanic activity. The total thickness of the Steens Basalt flows is around 4,000 feet, but the creek walls expose no more than 400 feet maximum in any one stretch of this drainage. Parallel to the drainage are low mesas capped by ash-flowed tuff. During glaciation on Steens Mountain, less than 1-million years ago, an ice field called the Fish Lake Advance extended from the mountain crest westward almost 10 miles. The edge of the maximum extent of this ice field was at approximately 6,000 feet elevation, which is near the confluence of Fir and Fence Creeks. Land above this elevation may be hummocky and contain glacial erratics and kettle holes.

Steens Mountain, which includes the Mud Creek drainage, falls within the Bureau of Land Management Visual Resource Management Class II. The objective of this class is to maintain the existing character of the landscape.

Recreational use within the river corridor is primitive in nature such as hiking, backpacking, hunting, fishing, and sightseeing. Portions of Mud Creek are also part of the Bridge Creek Wilderness Study Area.

Livestock grazing does occur and is within the Mud Creek Allotment. The lower 50 yards of Mud Creek are used as a watering gap for livestock, while the rest of the drainage is within an enclosure.

Mud Creek contains inland redband trout and Malheur mottled sculpin, both Bureau of Land Management sensitive species. The stream also contains the other native fish species of the Malheur Lake basin.

Raptors nest along the steep canyon walls of Mud Creek Canyon. The upper portions of the area provide summer habitat for mule deer and Rocky Mountain elk. Mule deer make heavy use of the area during normal winters, but most of their use is outside the canyon. Wintering elk also make some use of the area.

Spotted frogs, a Federal candidate for Threatened and Endangered species, have been found in Mud Creek.

Chukars and valley quail are found in the area. Bald eagles, a Threatened species, make occasional use during the winter.

The botanical values were identified as outstandingly remarkable, because of the isolated groves of white fir found at the confluence of Little Fir Creek, is outside the inventoried section for Mud Creek.

The remaining botanical resources on public land, within the Mud Creek system, are not remarkable or unique to the area.

No archaeological inventory has been completed, nor are historic or prehistoric values of any significance known to occur within this area.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If designated as a scenic river, management for most activities would be similar to the present situation, but could be curtailed if there are impacts to the system.

Recreation use would continue at the current level, until such a time that it was determined impacts were occurring from overuse of the river corridor. Livestock grazing is currently managed under the Mud Creek Allotment Management Plan, but could be eliminated due to designation. Wilderness Study Areas, fish and wildlife habitat would be maintained or possibly enhanced through long-term protection under the Wild and Scenic Rivers Act.

Scenic designation would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other major streambank modifications along the river. Currently, there are no known applications for such stream modifications.

Groups, Individuals or Other Agencies' Interest in designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National Wild and Scenic River. They published a brochure in the early 1990's, showing a list of their recommended river. Currently, they have no sponsor for their proposal.

Cost of Administration

The objective of Federal designation is to protect and enhance the outstandingly remarkable values. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following cost:

Plan Development:

Resource Specialists	6 people for 3 WMs @ \$3,700	=	\$66,600
Management and Support	4 people for 1 WM @ \$4,000	=	\$16,000
Miscellaneous		=	\$ 5,000
Subtotal		=	\$87,600

Annual Management:

(signing, data collection, monitoring)		=	\$10,000
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Acquisition:

Purchase or exchange of private land		=	NA
Administrative cost of split-estate acquisition		=	NA
Total		=	\$97,600

No State or local agency has come forward and stated they would be willing to share in the cost of administering this river segment should it become part of the national system.

Bureau of Land Management's Ability to Manage

The Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel. Mud Creek is within the Bridge Creek Wilderness Study Area, and is being managed to protect wilderness values until Congress makes a determination on wilderness designation.

All sensitive species will be managed or actions mitigated in such a manner as to conserve the species so as not to contribute to the need to list the species. Whether or not the stream receives Wild and Scenic designation, the inland redband trout and Malheur mottled sculpin would be managed and protected through application of Bureau of Land Management policies.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek.

Suitability Determination

The Bureau of Land Management has determined that the 7.2-mile segment of Mud Creek is "not suitable" for inclusion in the National Wild and Scenic River system. An error was made in the inventory. The botanical outstandingly remarkable value, which describes the isolated patch of white fir, is located outside the segment of Mud Creek that has been inventoried.

The 7.2 mile stretch of Mud Creek has significant botanical values, which are common to the area. There are no outstandingly remarkable values for Mud Creek.

WILD AND SCENIC RIVER SUITABILITY EVALUATION PIKE CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

Wildlife habitat diversity is the outstandingly remarkable value identified within the river corridor, and could contribute to the designation of a Wild and Scenic River. The excellent condition of riparian and upland vegetation is similar to other drainages located on the east side of Steens Mountain.

This drainage is one of nine streams in the Alvord Basin which provided habitat for a transplanted population of Lahontan cutthroat trout, a Federally listed fish species. Populations of this fish in the Alvord Basin are addressed in the Recovery Plan for the species as being important as a source for possible reintroduction of the species into streams in the Coyote-Willow-Whitehorse basin from which the original transplants came. The fish in Pike Creek are not native to the stream, so the effects of the introduction of the species on what is the native aquatic fauna are not known.

With a Wild and Scenic River designation, it is possible that the management activities that could impact the outstandingly remarkable values, may have fewer options. For example, livestock grazing for cattle may be eliminated as a result of designation. Designation may also draw more people to the area, causing increased recreation.

The lower portion of this segment, west of the county road, is private property. There is no legal public access to the Bureau of Land Management land from the county road. At the present time, this is one place that the Alvord Ranch is allowing the public to access a favorite camping site located on Bureau of Land Management land next to Pike Creek, however, this privilege could be denied at any time.

Landownership Status and Current Management and Uses

The Bureau of Land Management administers approximately 4.17 miles of Pike Creek. This land is all west of the county road and does not include the private property.

Land in the Pike Creek drainage is used for livestock grazing, recreation, and as wildlife habitat.

Pike Creek contains geologic values similar to other creeks in this region. Above about 6,400 feet elevation the drainage exposes lava flows and feeder dikes of the Steens Basalt with glacial cirques in the headwaters. Between 6,400 and 6,000 feet elevation are andesitic lava flows and pyroclastic rocks of the Steens Mountain Volcanics. Between 6,000 and 4,800 feet elevation are exposures of rhyolitic to dacitic lava flows and domes and minor tuffaceous sediments of the Pike Creek Formation. Between 4,800 feet and 4,400 feet, the creek is in exposures of tuffaceous sediments of the Alvord Creek Formation. Below this, the creek is in landslide deposits and alluvial fan deposits to the valley floor.

The area is within the High Steens Wilderness Study Area and is being managed to protect wilderness values until Congress makes a determination. It is also within a Visual Resource Management Class II. The objective of this class is to maintain the existing character of the landscape.

Portions of Pike Creek are also within the Steens Summit Scenic Area of Critical Environmental Concern which includes 50,500 acres of the upper elevations of Steens.

Pike Creek is a free-flowing stream that has a high diversity of wildlife habitat including subalpine, meadows, springs, narrowleaf cottonwoods, willows, cliffs, and talus. This variety of plant communities and geomorphic features provides habitat for an excellent diversity of wildlife species. California bighorn sheep use the area yearlong. Heavy use by wintering mule deer occurs at lower elevations. Cavity nesting species use cottonwoods and western junipers. Raptors, including golden eagles and prairie falcon, nest in abundant cliffs. Chukar are common. Pika may be found at upper elevation talus slopes. Sixteen sensitive wildlife species may be found using the area including three Federally listed species. Bald eagle (Federal threatened) and American peregrine falcon (Federal endangered) are migrants that use the area, but sightings are uncommon.

Sensitive species include loggerhead shrike, yellow-billed cuckoo, ferruginous hawk, and others.

The stream contains Lahontan cutthroat trout as described earlier. This lower reach of Pike Creek was burned by wildfire in 1992, reducing the density and height of woody riparian species. Habitat of Lahontan cutthroat trout is of high quality, but is limited due to the small stream size and steep gradient.

There are no sensitive plant species identified in the area, but narrowleaf cottonwoods are rare in southeast Oregon.

One prehistoric archaeological site is located within the corridor, but it is not considered to be rare, and quite common to the area.

Most of Pike Creek has had considerable exploration for uranium and mercury with no recorded production. There are at least two prospect tunnels and about 1,000 feet of bulldozer cuts in addition to a road that extends about a mile up the canyon. The old road is mostly more than 50 feet above the creek and is not accessible beyond the canyon mouth. It probably once extended the entire length of the canyon but has since been obliterated by landslides and rockfalls.

Recreation use includes car camping, rockhounding, and hunting. Day hiking and backpacking are available, but limited opportunities are available compared to other places in the area. Angling is currently not permitted by the State in order to protect the Lahontan cutthroat trout.

Pike Creek is part of the Alvord Allotment which is grazed by cattle in the spring. The lower five percent is grazed while the upper portion is not used due to steep, rocky slopes.

Reasonably Foreseeable Uses of Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If designated as a Wild and Scenic River, the management would be similar to the present situation, unless there are impacts to the outstandingly remarkable values. Livestock grazing could be eliminated due to designation. Recreational use would continue at the current level, until such a time that it was determined that impacts were occurring from overuse of the river corridor.

Until such time as Congress determines wilderness designation, the area would continue to be managed to protect those values.

Designation as a scenic river would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other streambank modifications. No management activities that

could adversely affect the fish habitat or free-flowing character of the river would be allowed on public land.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National Wild and Scenic River. They published a brochure in the early 1990's, showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The objective of Federal river designation is to protect and enhance the outstandingly remarkable values. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists	6 people for 3 WMs @ \$3,700	=	\$66,600
Management and Support	4 people for 1 WM @ \$4,000	=	\$16,000
Miscellaneous		=	\$ 5,000
Subtotal		=	\$87,600

Annual Management:

(signing, data collection, monitoring)	=	\$10,000
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Acquisition:

Purchase or exchange of private land	=	NA
Administrative cost of split-estate acquisition	=	NA
Total	=	\$97,600

No State or local agency has come forward and stated they would be willing to share in the cost of administering this river segment should it become part of the national system.

Bureau of Land Management's Ability to Manage

The Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel.

Whether or not the system becomes designated, the overall watershed and the riparian area would be managed in compliance with the Biological Opinion to protect the habitat of the Lahontan cutthroat trout under Section 7 of the Endangered Species Act.

Other sensitive species will also be managed or actions mitigated in such a manner as to conserve the species so as not to contribute to the need to list the species.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek. Historic mining has occurred in the past, as described earlier, but no valid mining claims are known to exist.

Suitability Determination

The Bureau of Land Management has determined that the eligible 4.2-mile segment of Pike Creek is "not suitable" for inclusion in the National Wild and Scenic River system.

The scars left from the exploration of minerals detract from the character of the stream. They include the old road, prospect tunnels, and disturbances from bulldozer work.

The issue with public access is uncertain. As mentioned, no legal access exists from the county road. Visitors to the area will have to find other ways to enjoy the recreational values of Pike Creek.

The presence of the Federally listed trout, the Wilderness Study Area status, the similarity of the adjacent streams along the east face of the Steens, the continued Bureau of Land Management riparian management policies will provide the same level of protection for the outstandingly remarkable value, as would designation under the Wild and Scenic Rivers Act.

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