

Figure 1-3. Land Allocation on the Long Prairie Allotment

CHAPTER 2 – ALTERNATIVES, INCLUDING THE PROPOSED ACTION

This section describes and compares the alternatives considered for the Long Prairie Allotment. The project includes a description and map of the alternatives considered. This section also presents the alternatives in comparative form, defining the differences between each alternative and providing a clear basis for choice among options by the decision maker and the public.

Alternatives Considered But Dropped From Further Analysis

Reduce Authorized Number of Cattle

The Forest Service considered an alternative that was suggested by Bark and Oregon Natural Resources Council (ONRC) during scoping and the comment period that would permanently reduce the number of permitted cattle on the allotment to the existing permit of 52 cow/calf pairs. Essentially, this alternative would have removed the option to reissue an authorized permit for 53 cow/calf pairs that was waived back to the Forest Service in 2002. No additional livestock would be authorized, even following an adaptive management approach. The District Ranger used the following rationale for not evaluating this alternative in detail:

- A forage capacity study completed in 2005 by the Mt. Hood National Forest Range Conservationist found that forage production is not a limiting factor given the current level of grazing. The forage production survey found that there was enough forage available to sustain 1,756 animal unit months, or approximately 380 cow/calf pairs, without considering other factors;
- The analysis showed that resource concerns raised in the purpose and need are not based on the lack of forage production but on distribution of cattle across the allotment. The intensity and scope of effects have reduced as the number of cattle has declined; however, use is still occurring in the identified areas of concern. For this reason, it was not immediately clear that permanently reducing the number of cattle alone would move the allotment toward the desired future condition;
- The identified areas of concern would be addressed through the proposed action. Based on the preliminary analysis (detailing distribution concerns and the associated isolated resource damage), the District Ranger believes that increasing carrying capacity is not ripe at this time, and would only be considered if the areas of concern showed resource recovery; therefore analyzing an alternative restricting the number of livestock to 52 cow/calf pairs would be redundant to the proposed action.
- If distribution were to improve and an upward resource trend occurred, the effects of authorizing more livestock on the allotment would still be within carrying capacity limits and the effects of the increase should be similar to the existing impacts of 52 cow/calf pairs.

In summary, based on the forage capacity analysis and the current distribution patterns, it appeared arbitrary to justify a permanent reduction below the 52 cow/calf pairs and the District Ranger chose not to analyze it as an alternative (See IDT Meeting Minutes, December 16, 2004 and January 11, 2005).

Reduce Allotment Size

The Forest Service gave consideration to an alternative that would permanently reduce the size of the Long Prairie Allotment. This alternative would have removed a large section on the west side of the allotment that is inside the Surveyor's Ridge Late Successional Reserve (LSR). It would have also removed a large section in the southeast corner of the allotment that is designated winter range for deer and elk under the Mt. Hood Forest Plan. The District Ranger used the following rationale for not evaluating this alternative in detail:

- The allotment boundary has been reduced over the last several decades. Since the 1950s, the allotment has been reduced from over 10,000 acres to its current size of 5,700 acres. It is currently the smallest allotment on the Mt. Hood Forest. Reductions in the past have been based on restricting the allotment to National Forest System lands. In 1993 two township and range sections on the northern boundary of the allotment were a part of a regional Forest Service land exchange and are now privately owned. A further reduction may cause concern with grazing interest groups, as other reductions have occurred across the region;
- The analysis determined that apart from an occasional drift, cattle were not utilizing either the far west end of the allotment (in Surveyor's Ridge LSR) or the winter range area; and a preliminary analysis suggested that cattle were not causing any negative impacts to the resources located in these areas. Both areas are quite steep and wooded and not amiable to cattle. For this reason, a change in allotment size would not equate to any real changes on the ground;
- In addition, according to both the Mt. Hood Forest Plan and the Surveyor's Ridge Late Successional Reserve (LSR) Assessment, cattle grazing is consistent with winter range (designated in the Forest Plan) and LSR land allocations;
- If the allotment boundary were to be changed, new fence construction would have to occur along the new allotment boundary, adding initial expense to the project, as well as long-term project maintenance.

In summary, preliminary analysis by the interdisciplinary team established that management direction for both areas proposed for elimination were consistent with grazing objectives; and, because of topography, cattle were not utilizing these areas in excess. For these reasons, a decision to reduce the allotment boundary and restrict cattle from these areas appeared arbitrary. (See IDT Meeting Minutes, November 10, 2004).

Current Management with No Modifications

The Forest Service also considered analyzing current management with no changes. According to Forest Service Handbook 2209.13, Chapter 90 (Grazing Permit Administration Handbook), current management should be analyzed in detail as an alternative to the proposed action if it meets the purpose and need for action. The handbook states that current management as an alternative would be appropriate when it has been shown to be effective in meeting resource objectives through monitoring over time (FSH 2209.13, page13). The District Ranger used the following rationale for not evaluating this alternative in detail:

- In the preliminary analysis, it was difficult to determine if current management would be consistent with all laws, policies and agency direction in the long term. Although the impacts from existing and historic grazing practices seem to be consistent with riparian and aquatic

requirements including the Clean Water Act, it was difficult to tell if continued management in this way would maintain water quality standards;¹

- The purpose and need is focused on correcting the lack of distribution across the allotment. The preliminary analysis showed that without any design criteria to deter cattle from riparian areas and prairies incorporated into the alternative, the alternative would not address those needs;
- If further analysis determined that current management was potentially inconsistent with any requirements, it may not be a viable alternative.

In summary, it was decided that an alternative that evaluated current management with preventative design criteria would ensure that the alternative would be compliant with all laws, policies, and regulations in the long term. This also would ensure that the District Ranger would have a range of viable alternatives upon which to make her decision (See IDT Meeting Minutes, January 11, 2005).

Alternatives Considered in Detail

The following alternatives were considered in detail for management of the Long Prairie Allotment:

Alternative 1 - No Grazing

This alternative would eliminate commercial livestock grazing from the Long Prairie Allotment. Existing improvements that do not serve another purpose (i.e. use by horseback riders) would be removed. All pasture, allotment boundary, and drift fences would be removed. Any cattleguards put in place for the cattle on the Long Prairie Allotment would be removed and the roads would be reconstructed to roadbed. All watering troughs, salt mineral blocks or other range improvement would be removed. All other uses in the area such as recreation would remain the same.

Alternative 2 - Continuation of Current Management with Slight Modifications

This alternative would propose no considerable changes to current management. It would continue to authorize grazing of 105 cow/calf pairs. This includes one active permit for 52 cow/calf pairs and one waived permit (inactive) for 53 cow/calf pairs. The waived permit may be re-issued to a legitimate livestock operator following Forest Service Manual (FSM) procedures. The normal grazing season would be approximately June 15th to September 30th. This means that the permittee could not turn cattle out onto the allotment until June 15th and would have to have all of the animals gathered and removed off the allotment by September 30th of each year. The season may be adjusted to reflect annual variations in range readiness, range condition, utilization levels, and fisheries spawning season requirements.

A rest-rotation grazing system would continue to be followed in three separate pastures. Rest-rotation is a system of grazing management in which rest periods for individual pastures or

¹ Since the preliminary analysis, a separate NEPA decision was made to relocate the Long Prairie corrals and to fence off a sensitive area of West Fork Neal Creek in the southern portion of Long Prairie. This will ensure that the alternatives proposed in this EA are consistent with the Clean Water Act.

grazing units are incorporated into a grazing rotation. The rest generally applies for the full growing season. Pastures in this scheme include the Long Prairie pasture, the Gibson Prairie pasture and Surveyor's Ridge pasture. Cattle would be turned out in Long Prairie (in the meadow area) at the beginning of the grazing season and gathered again in the prairie before removal in the fall.

Since 1993, the permittee has had an agreement in place with the private land owner to the north of the allotment boundary in which he could graze an additional 10 cow/calf pairs. Because the land has changed hands twice since 1993, the District Ranger made the decision to no longer consider the private land for inclusion in a grazing system with National Forest System lands. There is currently no fence along this new boundary and new construction is not proposed in this alternative. The permittee would be responsible for keeping cattle within the allotment boundary.

Where evidence of streambank trampling exists, large pieces of downed logs would be placed along West Fork Neal Creek in Long Prairie to deter cattle from creating numerous stream crossings and cause streambank trampling. Large pieces of downed logs would also be placed near the headwaters of North Fork Mill Creek in Gibson Prairie.

Alternative 3 - Proposed Action

This proposal would initially authorize 52 cow/calf pairs as a starting point, although it would use adaptive management to adjust livestock numbers and other grazing practices, as necessary to reach the desired future condition of the allotment.

The proposed action would convert the allotment to a deferred-rotation grazing scheme, utilizing two, fenced pastures (Long Prairie and Gibson Prairie pastures). A deferred-rotation is a grazing system which provides for a systematic rotation of the delay or discontinuance of livestock grazing on an area to provide for plant reproduction establishment or restoration of vigor. Surveyor's Ridge pasture would not be considered part of this two-pasture scheme; however, it may be used on a limited basis, if necessary, to reduce unforeseen adverse effects to resource conditions (i.e. if a fire were to limit the use of either of the other two pastures, or if pasture or enclosure fences became ineffective).

This alternative proposes a normal grazing season of June 15th to September 30th. This means that the permittee could not turn cattle out onto the allotment until June 15th and would have to have all of the animals gathered and removed off the allotment by September 30th of each year. The season may be adjusted to reflect annual variations in range readiness, range condition, utilization levels, and fisheries spawning season requirements.

Specific proposed activities designed to improve distribution and improve riparian and prairie are detailed below.

- Rather than turning out cattle exclusively at Long Prairie in the spring, cattle would be turned out in one of four turn-out locations upland from riparian areas. The turn-out location selected each year would be based on the pasture in use. The turn-out location in the Gibson Prairie pasture would be at the 90-degree bend on Forest Service road 170013 (about half

way in on the 170013). For the Long Prairie pasture the turn-out location would be at the end of Forest Service Road 1710643 or Forest Service Road 1710630. When Surveyor's Ridge pasture is utilized, the turn-out location would be at the end of Forest Service road 1700672.

- To further reduce riparian concentration, the permittee would be responsible for placing salt mineral blocks in the uplands. Cattle are attracted to these mineral blocks and are encouraged to travel away from riparian areas to reach them. Salt blocks would be placed in the same spots as the turn-out locations: at the ends of Forest Service roads 1710643; 1710630; 1700672; and at the bend of Forest Service road 170013. In addition, the Forest Service would be responsible for the installation/construction of a water development (water guzzler) at Horseshoe pond on Forest Service road 1710-643 as another way to encourage cattle away from the streambanks within the allotment.
- A fence would be constructed to restrict cattle from the North Fork Mill Creek drainage. The fence would be approximately one mile and run perpendicular from the existing fence on Forest Service Road 17 through the south end of Gibson Prairie and connect with a dense forested area on the west side of the prairie. It would run along existing roads as much as possible to reduce future maintenance costs. Possible funding sources for this fencing include Oregon Water Enhancement Board (OWEB) grants (with the permittee or a soil and water conservation district as an applicant) and potential restoration funds from stewardship contracts awarded through fuels reduction projects in the Mill Creek watershed. The Forest Service district office may also have an opportunity to leverage monies from a challenge-cost-share program through the Forest Service Regional Office in Portland, Oregon.
- An overflow pipe would be installed to transport water from an existing spring (Joe's Spring) to a new trough inside the fenced, holding pasture in Long Prairie to provide adequate water for the animals when they are gathered in the fall. (The new holding pasture is an ongoing project from a separate NEPA document that will be completed before cattle are turned back out on the allotment in 2007.)
- In addition, where evidence of streambank trampling exists near the headwaters of West Fork Neal Creek in Long Prairie and North Fork Mill Creek in Gibson Prairie, downed logs would be placed along the streambank to discourage cattle from congregating in those areas.
- The private land north of the allotment boundary would no longer be considered for inclusion in a grazing system with National Forest System lands, as in the past. A fence would be constructed along the northern boundary of the allotment that would include the installment of three cattle guards. The Forest Service would work with the permittee to obtain funding through sources such as OWEB, cost-share monies, and stewardship contracts, and the permittee would be responsible for the maintenance of the fence.

Adaptive Management under the Proposed Action

This alternative would focus on end results for the resources by applying the principle of adaptive management. In the context of this allotment, this means future condition. Grazing management could be adjusted under adaptive management through adjusting the timing,

frequency, intensity, or duration of grazing. Each of these management elements are described in detail below. Any changes to management would be focused on moving toward the desired objectives.

The starting point for the proposed action would include authorizing 52 cow/calf pairs from June 15th to September 30th each season in a 2-pasture, deferred-rotation grazing scheme. It would also include the implementation of all of the proposed range improvements listed previously under Alternative 3. Monitoring of key indicators would occur over time and the data collected would be used by an interdisciplinary team and the decision maker to make adjustments to management as needed to ensure adequate progress toward the desired future condition.

The effects of any management changes would be within the scope of effects documented in this environmental assessment, or a supplemental NEPA document and decision would be prepared as appropriate.

Monitoring

Monitoring, in general, is used to evaluate whether the prescribed management is working, and if there is improvement and long-term recovery to the resource. Monitoring in the Long Prairie allotment includes both implementation indicators—monitored during and at the end of each season—and long-term effectiveness indicators monitored less frequently (every 3-5 years). Implementation indicators will give a year to year idea about the condition of the riparian vegetation and stream channel while the effectiveness indicators will help determine the recovery of the stream channel geomorphology, sediment supply and riparian vegetation.

Implementation Monitoring

Implementation monitoring includes measurements of stubble height and bank alteration as well as establishing riparian photo points. Stubble height is a measure of the residual vegetation height which translates into grazing intensity. Bank alteration is the percent of the linear length of streambank alteration that can be directly attributed to cattle and other large herbivores. Photo points would be established in identified, high-use areas. These indicators would be measured during and at the end of each grazing season according to established protocol.

In addition to bank alteration, stubble height and photo points, a review of the condition and effectiveness of range improvements (such as fences, water troughs, salt licks) and permittee compliance with annual operating instructions would be part of the implementation monitoring. Compliance would include spot checking pasture move dates, evaluating allowable use, verifying permittee maintenance of range improvements, and confirming that authorized livestock are present.

Effectiveness Monitoring

Effectiveness monitoring indicators are to be monitored in the long term to help determine if the allotment activity is showing an improving trend related to aquatic and riparian area conditions. Effectiveness monitoring measures the progress from the existing condition towards the desired condition in response to changes in livestock management. Effectiveness indicators include greenline vegetation composition, woody species regeneration, and non-vegetated width. Non-vegetated width is the width of the stream channel from greenline to greenline. This indicator

would act as a surrogate for health of the stream channel relating to sedimentation and stream shading. These indicators generally address the same factors as the implementation indicators, but give a more detailed assessment of the riparian area and stream channel condition.

These indicators would be monitored during the summer of 2006 to get a “snapshot” of existing conditions. These items would then be monitored at approximately three to five-year intervals.

Potential Adjustments under Adaptive Management

All the elements of grazing management, including timing, frequency, intensity, and duration could be adjusted to bring grazing activities into line with project objectives. Many of these adjustments can already be made under the current permit and annual operating plan to protect resources on an emergency basis and are listed below. Additional adaptive management practices that could be adjusted as part of this analysis include increasing or decreasing livestock numbers, the placement of downed wood along riparian areas where evidence of streambank trampling exists, and the limited use of Surveyor’s Ridge pasture.

Duration and intensity of grazing could be adjusted to meet objectives and the desired future condition. Intensity is used to describe what percent of an herbaceous plant is removed and is related to the location of the plants and the plant regrowth or recovery rate. Similarly, duration is used to describe how long animals are left in an area. As described in the purpose and need for the proposed action, livestock are currently concentrated in riparian areas.

The proposed action includes riparian fencing, the construction and reconstruction of alternative water sources and salt blocks, away from riparian areas, and downed wood placed along North Fork Mill Creek to deter cattle from the headwaters. These improvements would serve as the starting point to move the allotment toward the desired future condition. If monitoring indicated that concentration in select areas was continuing, adjustments to the amount and size of downed wood placed along the headwaters of North Fork Mill Creek could be made to meet management objectives. In addition, annual maintenance of riparian fencing (responsibility of the permittee) would be a part of the adaptive management monitoring and the fences may be adjusted if necessary.

Also as a part of the proposed action, the number of cow/calf pairs on the allotment could be changed to meet management objectives. The starting point would be to authorize 52 cow/calf pairs and monitor effectiveness (long-term) indicators to determine if the allotment is showing a resource recovery trend and moving toward the desired future condition. If analysis and monitoring determined that an incremental increase in livestock numbers could be made while the allotment area continued to have an upward trend in resource recovery, the District Ranger could decide to authorize more cattle without additional NEPA analysis. The maximum animals authorized under this alternative would be 105 cow/calf pairs for a 3.5-month grazing season. The number of cow/calf pairs could also be incrementally decreased if monitoring determined that there was not an upward trend on the allotment based on the number of livestock.

The current permit was authorized in 2003 and expires in 2012. It is not anticipated that any adjustment to livestock numbers would occur before that time. At this time, no increase is projected; however, because the land is suitable for grazing and the carrying capacity studies

show that the allotment could sustain more livestock, an increase could be authorized as part of the proposed action with no additional NEPA analysis. Any increase of livestock numbers could only occur if the high-use areas showed a recovery trend and the decision maker was confident that an increase in cattle would not cause any negative impacts to the identified riparian areas of concern or a downward trend in resource condition.

Adaptive management is a long-term approach that would include both the implementation and effectiveness monitoring. Much of this data would take years to show resource trends. An upward trend would be determined by conducting long term effectiveness monitoring through the establishment of transects at permanent monitoring locations. Indicators would have to show at least two consecutive improvement readings in the particular monitoring indicator looked at before any increase in AUMs would be considered. For example if the monitoring indicator is to increase woody vegetation along streambanks, then monitoring data would need to show an increase in the amount of new tree (alder, willow, aspen, etc.) seedling starts within the monitoring transect. The increase would have to be apparent for two consecutive readings to show an upward trend. After initially establishing the monitoring location, long-term indicators reflecting resource condition (bank stability, greenline vegetation, and woody regeneration) would be sampled every 3-5 years. Any increase in AUMs would not occur for at least 6-10 years after establishing monitoring plots.

Frequency is used to describe how often the herbaceous or grazed plants are defoliated throughout the grazing season. Management manipulates frequency by using such tools as rest and non-use of pastures. The starting point under the proposed action would be a deferred-rotation grazing scheme, utilizing two, fenced pastures (Long Prairie and Gibson Prairie pastures). Surveyor's Ridge pasture would not be considered part of this two-pasture scheme; however, it may be used on a limited basis, if necessary, to reduce or eliminate adverse effects to resource conditions.

In an adaptive management approach, the pasture rotation grazing scheme could be changed if monitoring determines that the existing pasture rotation is not meeting objectives. If this were the case in the Long Prairie Allotment, Surveyor's Ridge could be used as part of a three-pasture rotation where one pasture was rested every year. This might be selected if it was determined that each pasture (or a particular pasture) did not have enough time to recover and may do better with rest every three years. This would only occur if monitoring determined that adjustments were necessary to protect resources from unexpected impacts.

Timing is used to describe the particular grazing season when livestock would be on the allotment. Although infrequent, the grazing season may need to be adjusted to avoid unforeseen impacts. The season may be adjusted to reflect annual variations in range readiness, range condition, utilization levels, or fisheries spawning season requirements. The initial grazing season is from June 15th to September 30th. This season may need to be postponed during high water flow years when cutthroat may be spawning later in the year. Alternatively, cattle may need to be removed earlier than September 30th in during years of severe drought. This flexibility has always been a part of the management of the grazing permits; however, the adaptive management monitoring would add a more detailed rationale for any seasonal adjustments.

Best Management Practices included in the Proposed Action

General Water Quality Best Management Practices (BMPs) are a list of key practices to enable the achievement of water quality standards in land management activities. The general BMPs describe methods and procedures that can be used to control or prevent nonpoint sources of pollution from resource management activities and to ensure compliance with the: the Clean Water Act and the water requirements in the Oregon Administrative Rules (Chapter 340-41-001-975).

For this project, the interdisciplinary team has selected appropriate site-specific BMPs based on the objectives of the project and the desired future condition of the allotment in relation to water quality. If Alternative 3 is selected, these BMPs would be incorporated into the Allotment Management Plan for the Long Prairie Allotment. The following BMPs have guided the proposed action and effects analysis (General Water Quality Best Management Practices, 75-78):

RM-1: Range Analysis, Allotment Management Plan, Grazing Permit System, and Permittee Operating Plan

Objective: To safeguard water quality under sustained forage production, and manage forage harvest by livestock and wildlife.

Explanation: A decision to implement Alternative 3 would revise the Allotment Management Plan (AMP) on the Long Prairie Grazing Allotment. The number of livestock authorized, and the terms and conditions of the permit would be included in the annual operating plan. This plan would be reviewed annually to account for current allotment conditions and trends.

Implementation and effectiveness monitoring indicators would be evaluated as a requirement of the AMP to determine if changes were necessary in timing, frequency, intensity or duration.

RM-2: Controlling Livestock Numbers and Season of Use

Objective: To maintain and protect soil and water resources through management of livestock numbers and season of use.

Explanation: Field checks would be made before and during the season that would include: range readiness evaluations to assure that the soil is not too wet and that sufficient forage growth has occurred; livestock counts to assure that only permitted livestock enter the allotment; forage utilization measurements to provide data for improved livestock distribution and stocking; and, periodic in-season checks to verify soil and vegetative condition and trend.

RM-3: Controlling Livestock Distribution within Allotments

Objective: Preclude concentration of livestock in areas that are sensitive to concentrated use and/or preclude prolonged use of areas which will result in lost vegetative cover and soil compaction

Explanation: The analysis has determined that a lack of sufficient distribution is cause of the majority of resource impacts in the allotment. Areas of concern have been identified and mitigations proposed to reduce concentration in these areas. Techniques to improve distribution across the allotment include: the construction of a water development in an area that receives little use and is away from riparian areas; the placement of salt blocks away from natural water sources and in areas with light grazing; increasing the number of turn-out locations to distribute cattle patterns across the allotment; and, the active monitoring of utilization levels in order to move livestock when prescribed utilization levels have been reached.

RM-4: Rangeland Improvements

Objective: Safeguard water quality under sustained forage production and manage forage harvest by livestock and wildlife.

Explanation: Range improvement efforts are directed at increasing the ability of range to produce at or as near its potential as possible; to make forage available to livestock and wildlife; and, to provide protection to other resources such as riparian areas. Implementation of Alternative 3 would construct a one-mile long fence through Gibson Prairie to exclude cattle from the North Fork Mill Creek drainage. This would protect many of the high-use areas described in the purpose and need.

Mitigation Measures for all Action Alternatives

1. As a recommendation from the US Fish and Wildlife Service, disturbance activities in occupied or unsurveyed, suitable spotted owl habitat between March 1st and July 16th should be scheduled as late in spotted owl nesting season as is operationally feasible.
2. The permittee will be required to clean all livestock operations equipment (livestock trailers/stock trucks) prior to moving onto the Long Prairie Allotment. This cleaning shall remove all soil, plant parts, seeds, vegetative matter, or other debris that could contain or hold noxious weed seeds. Only livestock trailers and the equipment necessary to transport said livestock, will be cleaned. All subsequent move-ins of equipment to the allotment shall be treated in the same manner as the initial move-in. This requirement does not apply to service vehicles, water trucks, pickups, cars, and/or similar vehicles (R6/SPS-601.01 Work).
3. Identified sensitive plant populations that are not excluded from cattle with fencing will be monitored and if necessary management actions will be taken before cattle are turned out onto the allotment (such as constructing enclosure devices) to avoid any trampling and grazing from cattle. See Botanical Biological Evaluation for details of monitoring plan.
4. Monitoring plots will be established for elderberry plants in the allotment. If it is determined that cattle are causing severe damage to elderberry plants,
5. All fence work or placement of downed wood in riparian areas that are within the wetted stream channel should take place during the in-water work window which is July 1 – September 30 for North Fork Mill Creek, and July 15 – August 31 for Neal and West Fork Neal Creeks.
6. All new fence construction or reconstruction will be designed to facilitate the movement of wildlife. For barbed wire fences, the top barbed wire must be 42” high, which most deer can easily jump. The bottom wire must be smooth, rather than barbed, and is required to be 16” off the ground.

Effectiveness of Mitigation Measures and Best Management Practices

There is an existing fence enclosure around a *Lomatium Watsonii* site that is adequately protecting the species from cattle grazing and trampling (see page 117 and 118).

Alternative water developments (such as water troughs and guzzlers) are effective at drawing cattle away from riparian areas. As discussed in the hydrology section, Bailey and Welling (1999) showed that cattle spent more time and grazed more forage in pasture areas where low-moisture supplement was provided than in similar control areas where no supplement was provided. In an Oregon study, Miner et al. (1992) observed that cows spent an average of 25.6 minutes/day in the stream if it was the only source of water. However, if an off-stream tank was made available, cows spent only 1.6 minutes/day in the stream.

The effectiveness of fences is directly related to the degree of maintenance they receive after they are constructed. If they are maintained to specifications then they can last up 30-35 years before re-construction would need to occur. The life expectancy for pressure treated wood used in this construction is around 35 years. The life expectancy for the barbed/smooth wire used is around 30 years. The years till rust appears is around 11 on a typical barbed wire, with 50+ years after rust appears until the wire reaches its half strength and may have to be replaced (“Fences”, Missoula Technology & Development Center, July, 1988).

Future Foreseeable Range Improvements/Annual Allotment Maintenance

Under both action alternatives, annual allotment maintenance would continue. Future foreseeable projects that have been proposed as part of a separate analysis (that are expected to be completed before cattle are turned back out onto the allotment in 2007) include:

- New construction of 150 yards of an east-west fence (just north of the current corrals) that will connect with a fence on the east bank of the West Fork Neal Creek (essentially forming an enclosure) to keep cattle out of the riparian area along West Fork Neal Creek;
- New construction of a buck and rail fence enclosure at the western-most headwaters fork of West Fork Neal will protect this area from cattle trampling and stream crossings;
- The perimeter fence (1/2 mile) around Long Prairie would be maintained. The permittee would be responsible for this maintenance (Range Improvement # R06-113);
- The pasture fence on 1711 (1.5 miles) and 1700 (2.5 miles) that separates Surveyor’s Ridge pasture from Long Prairie pasture would be reconstructed (Range Improvement # R06-114 and R06-109);
- The eastern allotment boundary and drift fence (1-2 miles) would also be reconstructed (Range Improvement # R06-112 and R06-115);
- The north guzzler on Forest Service Road 1700-642 would be repaired (Range Improvement # R06-107).

Unless otherwise noted, the permittee would be assigned maintenance of all fence and water improvements. These maintenance activities are on-going projects and are not a part of this proposal. However the cumulative effects of these activities together with the proposed action are analyzed in the effects analysis throughout the document.

Comparison of Alternatives

This section provides a summary of the effects of the implementing each alternative. Information in the table is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives.

Table 2-1. Comparison of Action Alternatives by Design Feature

Design Feature	Current Management with Slight Modifications	Proposed Action
# of cow/calf pairs	52 pair/240 AUMs (105 pair/485 AUMs if 2 nd permit is re-issued)	52 pair/ 240 AUMs More can be added if resource condition thresholds are met (105 pair/485 AUMs maximum)
Turn-out location in the spring	The existing corral in the southern portion of Long Prairie	Four locations away from riparian areas (see map).
Pasture configuration	Rest-rotation scheme using 3 pastures	Deferred-rotation scheme using 2-3 pastures
Protection of West Fork Neal and North Fork Mill Creeks	Where evidence of streambank trampling exists, down logs would be placed along riparian areas.	An east-west fence is proposed to restrict cattle from the North Fork Mill Creek drainage (see map). Where evidence of streambank trampling exists, down logs would be placed along riparian areas.
North end of the allotment	No new fence proposed	Fence is proposed along northern boundary (2 miles) with 3 cattleguards.
New water sources	No new water sources proposed	Develop water guzzler at Horseshoe pond on Forest Service road 1710643. Pipe water from Joe's trough into new corral area at the north end of Long Prairie
Salt Mineral Blocks	Salt has been used by permittee, but no locations specified	Four locations away from streams in lighter-grazed areas.

Table 2-2. Comparison of Effects in Relation to Purpose and Need/Desired Future Condition

P&N/DFC Component	No Action	Current Management with Slight Modifications	Proposed Action
Provide for livestock use on suitable lands	Does not meet the P&N/DFC; grazing would not be provided	Meets P&N/DFC; grazing would be authorized	Meets P&N/DFC; grazing would be authorized
Protect riparian areas and prairies from cattle concentration	Meets P&N/DFC; cattle would be completely removed from the allotment	Does not fully meet the P&N/DFC; limited range improvements proposed; cattle would continue to congregate near riparian areas and prairies	Meets the P&N/DFC; cattle would be excluded and/or deterred from riparian areas with the proposed fence in Gibson Prairie, an increase in salt blocks and water guzzlers placed in the uplands, and various turn-out locations to spread cattle distribution
Protect the North Fork Mill Creek drainage from cattle concentration	Meets P&N/DFC; cattle would be completely removed from the allotment	Does not fully meet the P&N/DFC; cattle would not be restricted from the North Fork Mill Creek drainage	Meets the P&N/DFC; an east-west fence would exclude cattle from the North Fork Mill Creek drainage
Reduce bank trampling and stream crossings at the headwaters of West Fork Neal Creek and North Fork Mill Creek	Meets P&N/DFC; cattle would be completely removed from the allotment	Addresses the P&N/DFC; cattle would be deterred from headwaters with the placement of downed wood.	Addresses the P&N/DFC; cattle would be deterred from headwaters with the placement of downed wood.

Table 2-3. Comparison of Effects in Relation to Issues Raised by the Public

Significant Issue	No Action	Current Management with Slight Modifications	Proposed Action
Cattle may impact elderberry	There would be no damage to elderberry from cattle grazing.	It is not anticipated that localized damage to elderberry would have a substantial effect on forage for deer and elk.	It is not anticipated that localized damage to elderberry would have a substantial effect on forage for deer and elk. With adaptive management, elderberry plants would be monitored and damage mitigated if necessary.
Cattle grazing may decrease forage for wildlife	There would be no competition for forage from cattle.	Forage-use plots established within the allotment show adequate forage for deer and elk even with the presence of cattle grazing.	Forage-use plots established within the allotment show adequate forage for deer and elk even with the presence of cattle grazing.
The construction of a fence may inhibit the migration and dispersal of mammals	The removal of fence structures would be a benefit to elk and deer movement patterns.	There would be no additional impact to deer and elk dispersal. All reconstruction would be designed to facilitate the movement of wildlife.	The establishment of new fences may alter deer and elk movement patterns in the short term until they become use to the new locations. All new fence construction and/or reconstruction would be designed to facilitate the movement of wildlife.
Cattle grazing may have a negative impact on native plant species	Removing livestock from the allotment would have a beneficial effect to identified <i>Botrichium</i> sites.	Identified <i>Botrichium</i> would not be protected and current management may impact individual plants.	All <i>Botrichium</i> sites would be protected from cattle by either the proposed Gibson Prairie fence or through mitigation.
Cattle grazing may disturb soil and create bare ground, which may facilitate the spread of existing noxious weeds	No new bare group would be disturbed. Eliminating grazing from the area is not expected to alter the current populations of noxious weeds since the plants are already well established.	Riparian areas along North Fork Mill Creek would continue to receive concentrated use and soil disturbance. The effects of grazing on the current level of noxious weeds would be expected to stay the same; current populations of noxious weeds are already established in those areas where they occur such as road prisms, landings and slash piles. Mitigations are included to reduce the potential for spread.	The proposed riparian fence would reduce the amount of bare ground created by cattle concentrated in the riparian area. The effects of grazing on the current level of noxious weeds would be expected to stay the same; current populations of noxious weeds are already established in those areas where they occur such as road prisms, landings and slash piles. Mitigations are included to reduce the potential for spread.

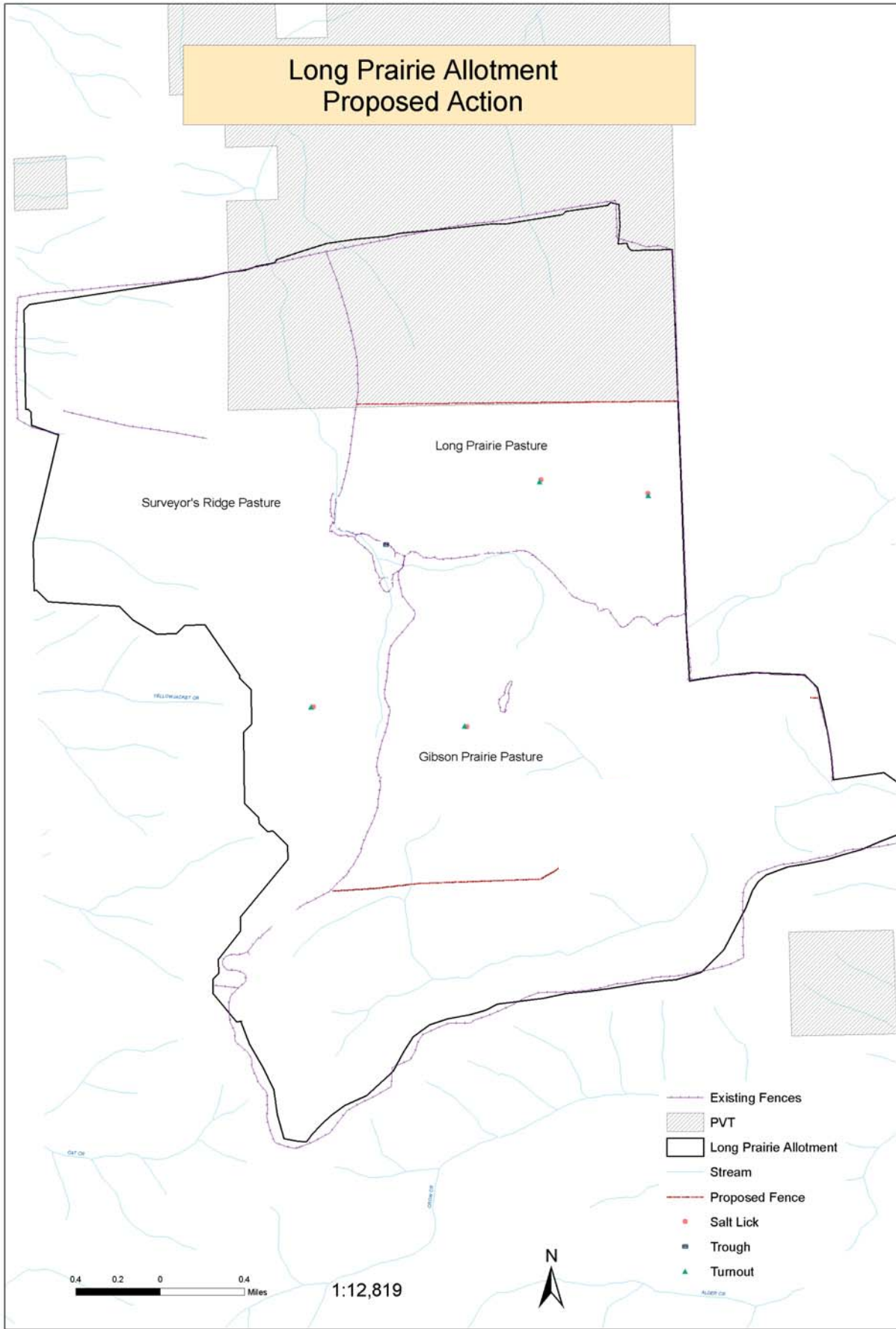


Figure 2-1. Map of Proposed Action

