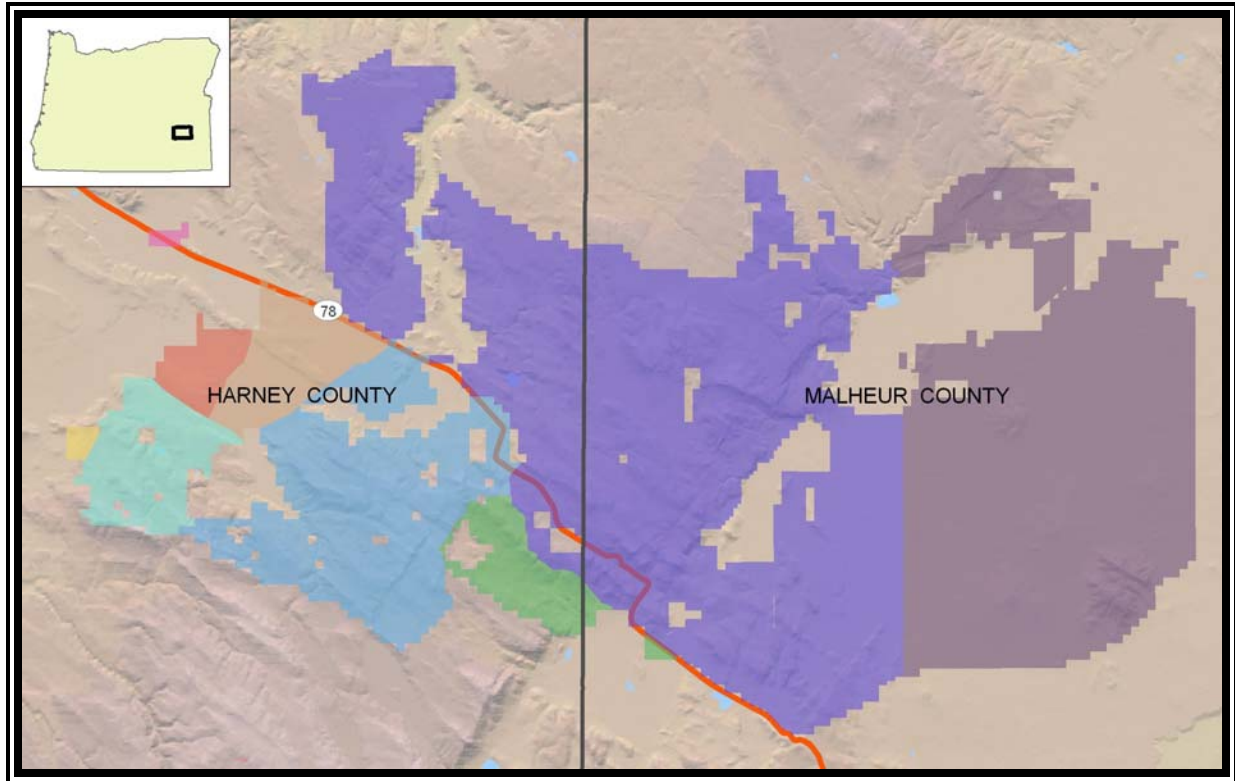


OREGON DEPARTMENT OF STATE LANDS



STOCKADE BLOCK AREA MANAGEMENT PLAN *An Asset of the Common School Fund*

Adopted by the State Land Board
June 16, 2009



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THE STATE LAND BOARD

Ted Kulongoski – Governor

Kate Brown – Secretary of State

Ben Westlund – State Treasurer

OREGON DEPARTMENT OF STATE LANDS

Louise Solliday - Director

“The Governor, Secretary of State and State Treasurer shall constitute a State Land Board...the board shall manage lands under its jurisdiction with the object of obtaining the greatest benefit for the people of this state, consistent with the conservation of this resource under sound management techniques of land management.”

(Constitution of 1859; Amendment proposed by H.J.R. No. 7, 1967, adopted by the people May 28, 1968)

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Executive Summary

The Stockade Block (SB or Block) Area Management Plan (AMP) or Plan is a comprehensive and long-term Plan for a diverse yet rangeland dominated land base in southeast Oregon. The SB is the largest contiguous area of Common School Fund Trust land in Oregon. It is located within and is exemplary of the Northern Basin and Range Ecosystem.

The purpose of this Area Management Plan is to establish a 20-year vision for the long-term management of the 230,000-acre Stockade Block.

The Plan is based upon field data that describes or inventories the land base along with documentation and analysis of the dynamic interactions of environmental and cultural factors, historic and current land uses, and vectors of change including climate, alternative energy production and at-risk plant and animal species.

A Plan Vision and Implementation Program were developed that articulates management strategies that the Plan is designed to achieve. The Plan Vision sets the road map for long-term SB land management.

The Vision includes four primary goal statements/directives as follows:

1. Business activities (e.g. land use leases) provide a stable, predictable positive net income from the land.
2. Land and resources (water, soil, vegetative communities) are well understood and managed to achieve both land and financial stewardship.
3. Management of the Stockade Block as an asset of the Common School Fund reflects a long-term view of the land as an investment.
4. While meeting Trust land obligations, management of the Stockade Block considers the interests of neighbors, agencies, tribal governments, and lessees.

The Vision reveals a sustainable management strategy that maintains (and even enhances) the land base/environment while producing the maximum possible financial return to the Common School Fund. The primary revenue source on the SB is derived from livestock grazing on leased land although alternative energy production feasibility investigations are currently underway and have the potential to become a significant revenue source as well.

The 230,000-acre Block was assembled in the mid-1980s as a result of land exchanges between the Department of State Lands (DSL or the Department) and the federal Bureau of Land Management (BLM) – both agencies transfer of surface land rights but retention of sub-surface mineral and geothermal rights has resulted in a split-estate status for the majority of the Block. This large area cooperative land transfer was undertaken to enhance land management efficiency.

The Plan concludes with a Vision Implementation Program that enumerates and prioritizes the recommended actions to be carried out on the SB during the Plan lifespan (20 years) to realize and achieve the Plan Vision. All of this is accomplished in full compliance with local, state and federal laws, rules, and guidelines including the operating plans and policies of the Department. Revisions to the DRAFT Plan based on response to public comments received are discussed in the Public Involvement section.

Background

The 230,000-acre Stockade Block, located in southeast Oregon, is one of many properties throughout the state managed by the State Land Board through the Department of State Lands. Revenues generated from the Block benefit the Common School Fund (CSF) to support K-12 public education in Oregon. CSF lands are managed by the State Land Board as a “Trust” to maximize short and long-term revenue consistent with sound stewardship and business management principles. As the Trustee, the State Land Board has a duty to maximize the value of and revenue from CSF lands over the long-term.

The 1859 Oregon Admission Act granted to the State two 640-acre sections per township (Sections 16 and 36) to be used to fund public schools. This land grant resulted in a checkerboard pattern of land ownership spread over a large area. This pattern proved challenging and inefficient to manage. Interspersed with federal land ownership, an initiative began to trade equal value land between the state and federal government to create more manageable blocks of consolidated land ownership.

The Stockade Block is an assemblage or block of land ownership that came together after 15 years of land exchange negotiations with the federal Bureau of Land Management (BLM). This large-scale land exchange program began in 1969 and resulted in the May 1984 *Stockade Exchange* (110,135 acres) with the Vale BLM District and the June 1984 *Burns Exchange* (139,760 acres) with the Burns BLM District. At the time, the Stockade and Burns Exchanges represented the most significant effort ever undertaken to consolidate ownership between a state and federal agency in the United States.

Straddling the line between Malheur and Harney counties, the Block is located between Burns and Burns Junction along State Highway 78, which cuts diagonally through the southwest portion of the Block. Steens Mountains and the Sheepshead Mountains are located to the immediate south, Saddle Butte and the Saddle Butte Lava Fields to the southeast, Owyhee River and Canyon to the east, Stockade Buttes to the north, with Malheur Lake and the Malheur National Wildlife Refuge to the more distant west.

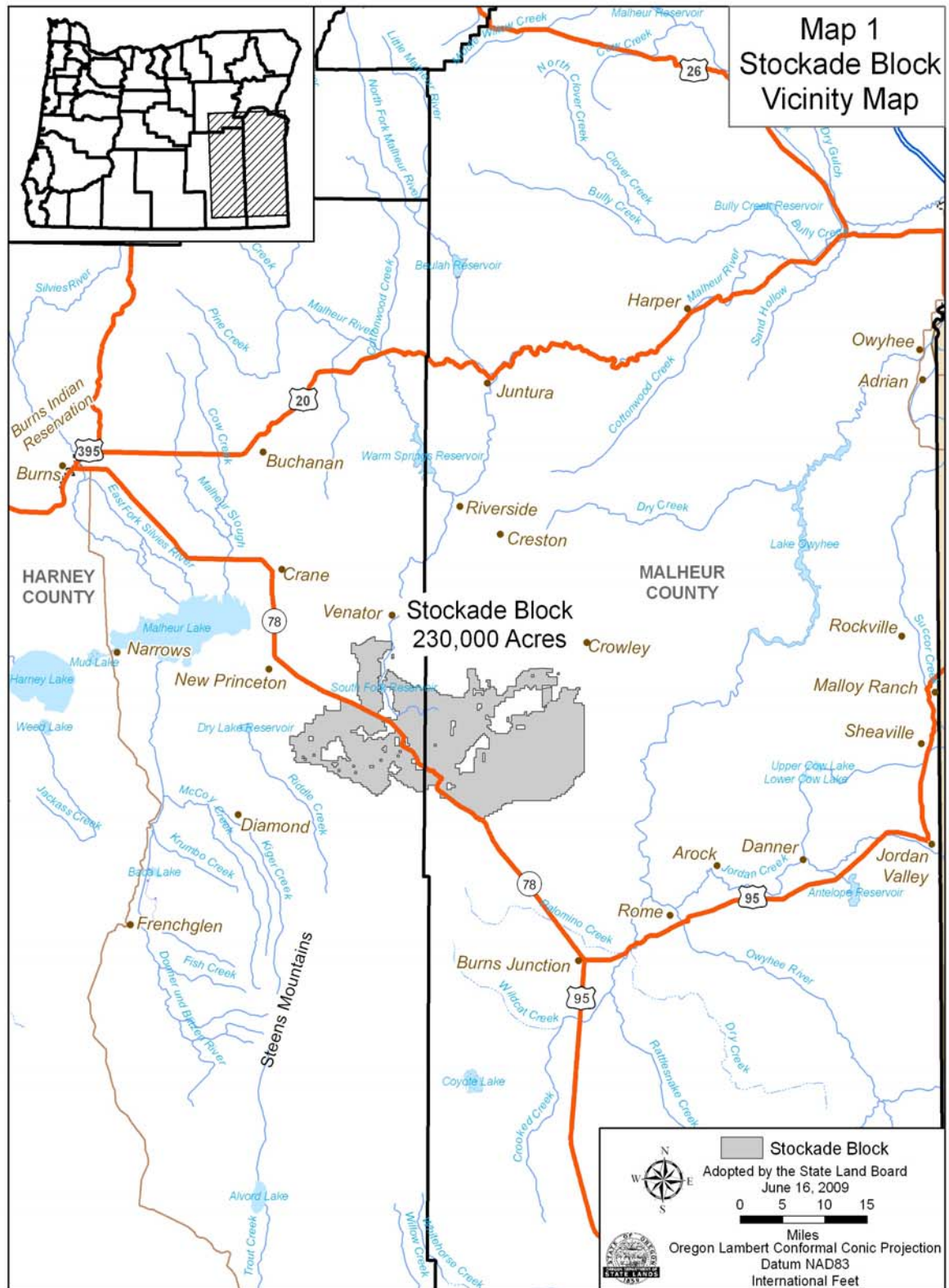
Private land in-holdings exist within the SB with the largest properties located in the Barren Valley area, comprised of dry lakebeds currently farmed for forage

and grazed (the primary farming and ranching activities in the area). BLM maintains the sub-surface mineral rights on the traded lands within the SB; DSL does not own the majority of the mineral rights. DSL owns a minor fraction or approximately 20,000 acres (~ 9%) of the mineral rights within the borders of the Stockade Block.

BLM is the predominant landowner surrounding the Block. Two BLM Districts manage the surrounding BLM lands with the district boundary line dividing the Block in half – the Vale BLM District manages the east side surrounding lands while the Burns BLM District manages the west side surrounding lands. The Vale District relies on their *Southeast Oregon Resource Management Plan* for management guidance of BLM lands, while the Burns District uses the *Three Rivers Resource Management Plan*. Various BLM Special Management Areas/ Wilderness Study Areas (WSAs) are located to the south and west of the SB including the Congressionally-designated Steens Mountain Cooperative Management and Protection Area.

Although the BLM is by far the single largest adjacent property owner, there are twenty-nine (29) private property ownerships of varying sizes adjacent to the SB. The SB is leased, primarily for grazing, to seven (of the 29) different adjacent property owners, typically for 15-year periods with options for renewal. DSL land management staff based in Bend work with lessees, the public and agencies in conducting day-to-day management.

Some DSL documents and reports refer to an AMP as a Special Area Management Plan (SAMP) which is essentially the same as an AMP. This Stockade Block Area Management Plan (AMP) qualifies as a SAMP. All further references will be to the Area Management Plan or AMP.



Purpose and Scope

The Stockade Block Area Management Plan:

- Allocates and classifies land areas to the appropriate management classifications based on economic highest and best use and resource capability;
- Identifies strategies to generate the greatest possible revenue for the Common School Fund from land management activities that are compatible with community interests, and are consistent with Oregon land use law;
- Identifies strategies to conserve and enhance the value of the land and its resources by employing sound land management techniques to:
 - Enhance and maintain a healthy, properly-functioning ecosystem
 - Comply with applicable state and federal legal requirements
 - Meet the trust obligations of the Common School Fund;
- Ensures that short-term management decisions do not irrevocably commit or adversely affect the long-term revenue or value appreciation potential of the land;
- Identifies short and long-term implementation measures that will fulfill the Plan Vision and that are affordable, feasible and achievable within the 20-year planning period;
- Recognizes the contribution that lessees, federal, state and local government agencies, tribal governments and interested citizens can make in fulfilling the Plan Vision;
- Identifies a strategy to monitor plan implementation to assess progress towards fulfillment of the Plan Vision; and
- Provides guidance to assure that future allocation of staff and funding are efficiently directed towards the Plan Vision Implementation Program and in doing so, achieving the Plan Vision.

The preparation of the AMP also helps to fulfill one of the Department's legislatively approved Key Performance Measures (KPM). KPM #8 is **Completed Management Plans or Policies** and relates to the percent of DSL managed lands and waterways with completed area management plans or policies. The target for this KPM is to have 80% of the Department's land and water base covered by area management plans or management policies. Thus far, about 74% has been planned; completion of the Stockade Block AMP will boost the agency's performance beyond the KPM target.

Stockade Block is Common School Fund Trust Land

The paramount purpose of management of the Stockade Block is to produce income for the Common School Fund (CSF) to support Oregon's K-12 schools.

The management requirements for Trust lands differ from those of traditional or common public lands. Trust lands are specifically intended and required to be managed to generate the maximum possible sustainable income for the CSF. Public use considerations are a completely subordinate and secondary consideration for the management of Trust lands. Currently, public use is permitted on CSF Trust lands provided that such use does not interfere with or compromise income generating activities.

Management of the SB is not tax-supported. Land management expenses are paid from revenue from the Common School Fund which includes lease fees.

Public comments in response to the DRAFT SB AMP indicated confusion regarding the fundamental difference in the management objective for Oregon's CSF Trust lands in contrast to other public (federal and state) lands. The misperception conveyed in the public comments received is that CSF lands, like a state forest or state park, are first and foremost managed for multiple benefits including public use. Advice from the Oregon Attorney General allows for other uses of the SB (e.g. public recreation including hunting) but only so long as those uses do not adversely affect the potential financial contribution of the Block to the CSF over the long term.

Background

In the Oregon Admission Act in Article 4 (School Lands), the U.S. Congress granted public lands (i.e. federal) in sections 16 and 36 of every township of the state or where these sections have been sold or otherwise disposed, equivalent lands "...for the use of schools." These lands are referred to as "School Trust Lands" or "Trust Lands" or "Common School Fund (CSF) Trust Lands." Lands acquired by the state through exchange of Trust lands become Trust lands. This is the case with the lands within the SB acquired through land exchanges with the BLM.

The Oregon Constitution in Article VIII Section 5 (2) states: *"The (Land) board shall manage lands under its jurisdiction with the object of obtaining the greatest benefit for the people of this state, consistent with the conservation of this resource under sound techniques of land management."*

A 1992 Attorney General's Opinion (No. 8223) states the following:

- Oregon's acceptance of the proposition of its Admission Act, granting land to the state "for the use of schools," imposed a binding obligation on the state.

- Oregon must use Admission Act lands for schools and not for any purpose that is inconsistent with such use.
- ... the school lands granted to the State of Oregon are a trust for the benefit of public education. It is the duty of the state to dispose of them for as near full value as may be, and to create thereby a continuing fund for the maintenance of public schools. [Oregon Supreme Court: Grand Prize Hydraulic Mines v. Boswell]
- The words “with the object of obtaining” (*found in the Oregon Constitution*) do refer to purpose and intent. Yet the stated purpose, “obtaining the greatest benefit for the people of this state,” is consistent with the dedication of the Admission Act lands for the use of schools, and that use exclusively. The “greatest benefit” would mean only greatest benefit not otherwise inconsistent with the trust purposes of “use for schools.”
- ...other permissible uses [of Admission Act lands] e.g., public recreation, can be easily explained as an express authorization for such uses where no good economic use of the lands for schools could be presently found...
- “The goal imposed by Section 5(2) ... requires the State Land Board ... to use lands dedicated to the Common School Fund in such a way as to derive the greatest net profit for the people of this state.” Johnson v. Dept of Revenue (1982).
- These management responsibilities require the Board to obtain full market value from the sale, rental or use of the Admission Act lands, while conserving the corpus of the trust.
- We (the AG) have previously characterized this obligation as a duty to maximize the value of, and revenue from, these lands over the long term.
- ...the duty to “maximize revenue” does not limit the Board to “mechanical consideration” of economic factors: ...in every case the consideration must be directed to determination of the appropriate action to be taken to achieve ... benefit to the Common School Fund...
- The Board may set lands aside temporarily for the purpose of “banking” an asset while its economic value appreciates, if the Board has a rational, non-speculative basis for concluding that such action will maximize economic return to the Common School Fund over the long term.
- Also the Board may have good trust reasons for conserving resources that have little or no commercial value at the present time. With conservation of productive trust property as its goal, the Board must view the land resource as an interrelated whole. Promoting the long-term health of revenue producing resources may require conservation measure aimed at non-commercial resources such as water or soils.
- Revenues for the CSF must remain the Board’s overriding objective with respect to Admission Act lands that are retained... However, the management standard in Article VIII Section 5(2) calls on the Board to seek methods for accommodating the broader public interests, if that can be done while still maximizing revenue for the CSF.
- The Board is not required to maximize present income from the Admission Act lands without regard to other considerations. Rather, the Board’s duty is to manage the lands for the long-term benefit of the schools. Thus, the Board may sacrifice present income to preserve the property, if it determines this will enhance income for the

future. Non-economic factors may be considered only if they do not adversely affect the potential financial contribution to the Common School Fund over the long term.

- ...the Legislature cannot impose regulatory requirements on the Board's management of lands constitutionally dedicated to the CSF if to do so would interfere with the Board's exercise of its management responsibilities under Article VIII section 5(2) of the Oregon Constitution.
- The Board is not required to comply with the State ESA if compliance would unduly burden or restrict the Board's exercise of its constitutional powers to dispose of and manage Admission Act lands.
- The Board has exclusive power and authority to sell and to manage lands under its jurisdiction independent of any legislative action (AG's Opinion 1972).

The Planning Area and Public Involvement Process

The planning area encompasses about 260,000 acres, of which 230,000 acres are CSF land managed by DSL. The balance of this area is owned and controlled by private landowners, the Oregon Department of Transportation (Highway 78) and BLM. Adjacent lands not owned by the CSF are referenced in the AMP. *However, this AMP affects only land management actions regarding DSL owned and managed lands in and adjacent to the SB and in no way imposes requirements on lands not owned by DSL.*

In the fall of 2008, DSL began an effort to develop its first AMP for the Stockade Block. The area management planning effort stems from direction in the Department's 2006-2016 Asset Management Plan authorizing the development of specific area management plans for definable geographic areas. These plans aim to:

- Inventory, as appropriate, various economic, environmental and social factors;
- Guide all management activities undertaken by the Department within the subject area;
- Identify appropriate land classifications, including Special Stewardship lands;
- Establish specific land management strategies and implementation measures;
- Maximize sustained revenue to the CSF over the long term for Trust lands;
- Utilize the efforts of other agencies in developing coordinated management plans; and
- Include lessees, adjacent property owners, beneficiaries and other interested parties in the planning process.

A DSL planning team consisting of Bend-based land management staff and Salem-based asset managers developed the Vision and the planning document. Existing data and site information was used extensively. The Oregon Natural Heritage Information Center (ORNHIC) provided special species information. Team members met with BLM and Oregon Department of Fish and Wildlife (ODFW) staff and talked with other interested parties.

Following a public hearing in Burns/Hines on April 2, 2009 and the end of the public comment period on April 17, 2009, the SB AMP was revised to reflect the public and agency comments and testimony received to date. The majority of comments regarded concerns of access limitation and hunting restrictions resulting from possible recreational and hunting leases. Those expressed concerns as well as issues regarding wildlife, energy production, forage production and lessee operations were all considered and responded to in preparation of the proposed final Plan. See Appendix B for a complete summary and analysis of the public comment on the DRAFT Plan. Appendix C is the Department's response to the major issues identified by the public.

The State Land Board adopted the Stockade Block Area Management Plan on June 16, 2009.

Relationship of the Asset Management Plan to the Stockade Block Area Management Plan

The Land Board's 2006-2016 Asset Management Plan provides policy direction and management principles to guide short and long-term management of CSF land to provide the greatest benefit for the CSF and the people of Oregon. The Asset Management Plan establishes the Stockade Block as a "core asset" to be retained within the CSF real estate portfolio as Rangeland. The Asset Management Plan also sets General Strategies for managing Rangelands as follows:

- 1. Manage Rangelands to ensure sustained forage yields for livestock consistent with best management practices. Grazing levels may be adjusted, in consultation with lessees, on both Trust and Non-Trust Lands to protect Rangeland health and the long-term value of the land. Alternative uses for a leasehold may be authorized, even if the leasehold is already subject to Rangeland lease for grazing or an alternative use, if such uses are:*
 - o Not specifically prohibited by an existing lease; and*
 - o Compatible, or do not unreasonably interfere, with uses previously authorized on the same leasehold.*
- 2. To improve the Return on Asset Value (ROAV) and other performance measures for Rangelands, the Land Board and Department will:*
 - o Periodically review and, as appropriate, adjust the lease rate and formula; and*

- *Where possible, reduce expenses and contain management costs.*
- 3. Manage Rangelands to ensure long-term Rangeland health. Toward this end, the Department will:*
- *Complete rangeland condition inventories for lands under lease.*
 - *Work cooperatively with lessees to continue to implement Rangeland practices that maintain, achieve, or restore healthy, properly functioning ecosystems and maintain, restore, or enhance water quality.*
 - *Assist in Rangeland developments and practices that will maintain or improve Rangeland health, including forage yield, where consistent with Land Board investment standards and environmental objectives; Rangeland improvements must be approved pursuant to the Rangeland management plan and lease agreement. All improvements, including fencing, will be designed, constructed and maintained to avoid adverse effects on wildlife populations and on hunting, trapping and other recreational uses.*
 - *Manage Rangelands to reduce, prevent, and eradicate noxious plants/invasive species.*
 - *Update rangeland management plans, in cooperation with the lessee, for each blocked leasehold.*
- 4. Develop Special Area Management Plans (SAMPs) for selected Rangelands blocks in Southeast Oregon. Each SAMP will address the elements identified in Short-Term Priority #6 (Section V.A), as well as competing uses, mineral and energy potential, and appropriate recreational uses.*
- 5. Assess opportunities to combine Rangeland management plans with Specific Area Management Plan's to address management and resource issues at a regional or area-wide basis.*
- 6. Conduct a periodic review of the Department's Rangeland fire suppression agreement with BLM.*

The Stockade Block Area Management Plan is being completed to meet these General Strategies, particularly #4. The Plan will cover a number of issues relating to the long-term management of the Block as a productive component of the Common School Fund real estate portfolio.

Management Area Description

Land/Mineral Ownership and Management Units

- **Land and Mineral Ownership**

DSL has three different types of land and mineral ownership on the SB. Sub-surface only: these are lands that DSL previously owned but exchanged the surface rights and retained the mineral rights. Surface only lands: DSL owns the land surface and has the full right to conduct surface activities but has no rights to extract sub-surface minerals or geothermal resources. These are lands DSL received from BLM in an exchange; BLM retained the sub-surface mineral rights. This type of ownership constitutes the vast majority of the SB. Surface and Sub-

surface lands: DSL has full and exclusive ownership of both surface land rights and sub-surface mineral rights (see Map 2- Land Ownership).

DSL Ownership Type	Acres
Sub-surface only	6,390
Surface only	215,246
Surface and sub-surface	12,943

• **Water Rights**

There are 25 water rights associated with the SB, all of which are for the purpose of livestock and wildlife use and in the name of the State of Oregon/Department of State Lands.

Permit #	Purpose	Capacity	Type	Landowner	Name
R10651	L/W	0.43 af	Pit-type	DSL	Phoebe Reservoir
R10676	L/W	1.0 af	Reservoir	DSL	Wagon Track Reservoir
R10700	L	1.0 af	Reservoir	DSL	Reeds Basin Reservoir
R10701	L	0.6 af	Reservoir	DSL	Pollock Draw Reservoir
R10302	L/W	1.62 af	Pit-type	DSL	Barren Valley Pit Reservoir
R10650	L/W	0.65 af	Reservoir	DSL	Obenchain Reservoir
R10290	L/W	0.5 af	Reservoir	DSL	Post Camp 2 Reservoir
R10649	L/W	0.7 af	Pit-type	DSL	Turnbull Reservoir
R10648	L/W	0.34 af	Pit-type	DSL	Seventy Eight Pit Reservoir
R10689	L/W	0.5 af	Pit-type	DSL	West Split Pit Reservoir
R10683	L/W	0.6 af	Pit-type	DSL	East Split Pit Reservoir
R8796	L/W	2.7 af	Reservoir	BLM	Duck Butte Reservoir
R28261	L	0.01cfs	Spring	Private	Summit Springs Reservoir
*R10258	L/W	0.05af	Reservoir	DSL	Cousin Tom's Reservoir
*R9803	L/W	0.1af	Reservoir	DSL	Pothole Waterhole#1
*R9802	L/W	0.1af	Reservoir	DSL	Pothole Waterhole #2
*R9759	L/W	0.1af	Reservoir	DSL	Seepy Spring Reservoir
*R10274	L/W	0.1af	Reservoir	DSL	Saddle Waterhole #1
*R10251	L/W	0.1af	Reservoir	DSL	Chloride Waterhole
*R10269	L/W	1.5af	Reservoir	DSL	Sedge Reservoir
*R10247	L/W	0.1af	Reservoir	DSL	Downpour Reservoir
*R10248	L/W	1.0af	Reservoir	DSL	Sandpiper Reservoir
*R10250	L/W	0.7af	Reservoir	DSL	Sodium Reservoir
*R10249	L/W	0.5af	Reservoir	DSL	Big Gulch Reservoir
*R10271	L/W	0.1af	Reservoir	DSL	Sidekick Reservoir
*R10272	L/W	0.4af	Reservoir	DSL	Saddle Waterhole #3
*R10273	L/W	0.1af	Reservoir	DSL	Saddle Waterhole #2

af=acre-feet cfs=cubic feet per second L=Livestock W=Wildlife

* Currently these water rights are in the name of the Bureau of Land Management. File documentation shows these rights were transferred to the State of Oregon in 1988. Due to the backlog in the Department of Water Resources, they have not yet been transferred.

Permit # 28261 is located on an in-holding within the SB. Livestock grazing operations on the SB utilize this water right.

- **Management Units**

The AMP identifies seven management units within the Stockade Block. Each unit coincides with the current forage lease areas. The units (and acres) are: Anderson Valley (3,179 acres), Lambing Canyon (5,561 acres), Little Riddle Mountain (9,216 acres), Saddle Butte (67,295 acres), Stockade (106,245 acres) and Virginia Valley (7,960 acres) (see Map 3).

Stockade Block History: Historical and Cultural Uses

The earliest non-Native American recorded history for the Harney and Malheur counties region dates from the early 1800s when the first fur trappers and traders appeared around 1826. Wagon trains on their way to the Willamette Valley travelled through the area in the 1840s and 50s, but permanent settlers and homesteaders did not locally establish themselves until after 1860. Until this time of pioneer settlement, the SB area was the domain of the Paiute tribes, a sub-tribe of the Shoshone. Sporadic conflicts with native peoples discouraged pioneer settlement and resulted in the establishment of Fort Harney in 1867 to offer protection from Indian raids. Other primary factors influencing (encouraging) pioneer settlement include the Homestead Act, the Desert Land Act, and the Stock Raising Homestead Act.

The Stockade Block has been used since pioneer settlement time primarily for sheep and cattle ranching although game hunting and some mineral extraction activities have occurred as well. A unique place that is surrounded by but not within DSL ownership is the Malheur Cave located along the upper reaches of the Malheur River. This geologic and cultural feature is home to unique animal and insect species. Malheur Cave was likely used by native peoples. It is currently owned by a fraternal organization.

There is considerable evidence that native peoples historically roamed throughout the SB. Parts of the SB are used by native peoples for food gathering (grubbing) and possibly for ceremonial activities.

Many of the place names in and around the SB region are attributable to pioneer families and notable individuals as documented in the 6th edition of *Oregon Geographic Names* (McArthur). Many places became named because they were designated as US Postal Offices and thus were required to be officially named. An alphabetical sample review of such names includes: Anderson Valley, Harney County, named for G. W. "Doc" Anderson who lived there; the Anderson post office (PO) was established in 1908. Barren Valley, Malheur County, was explored, mapped and named by a US Army exploration team in the early 1860s that named this dry lakebed for its physical appearance. Cord, Malheur County, located in the middle of the Barren Valley along the historic Willamette Valley and Cascade Mountain Wagon Road, was a rural PO established in 1897 and closed the last day of 1917. Crowley Creek, Malheur County, was named for G.B. Crowley who with his son James Crowley settled along its banks in 1874; the Crowley PO was opened in 1911 and closed in 1935. Folly Farm, hugging the

boundary of Harney and Malheur counties, was so named when J.H. Neal attempted to irrigate farmland in adverse conditions resulting in being called Neal's Folly which eventually became Folly Farm; the PO at Folly Farm was established in 1909 but later relocated closer to Highway 78. Mooreville, like Cord, is in Malheur County and located in the middle of the Barren Valley along the historic Willamette Valley and Cascade Mountain Wagon Road, was named for a local family with a rural PO established in 1912 and closed in 1919. Riddle Creek and Mountain, Harney County, were named for Stilley Riddle, an early settler from a pioneer family. Turnbull Peak, Lakebed and Mountain, Malheur County, are named for Tom Turnbull, an immigrant from Scotland in 1883, who became a successful sheep rancher in the Barren Valley and Folly Farm areas. Venator, the name of a historic town and active reservoir north of the SB, was named for Alpheus Venator, a native of Linn County who settled in Harney County in 1872, established a stock ranch in 1884 resulting in the surrounding area being named Venator; the PO which was established in 1895 was later moved northward 2 ½ miles to a station on the Union Pacific Railroad and eventually closed in 1959. Virginia Valley, Harney County, was named by two German immigrant sisters (Augusta and Nena Haarstrich) who filed for homesteads there in 1907 after an initial stay in the state of Virginia.

The only noteworthy historic trail in the SB is the Willamette Valley and Cascade Mountain Wagon Road which enters the SB off of Highway 78 near the South Fork of the Malheur River (near Malheur Cave) and continues eastward to the Barren Valley where it follows the valley northeasterly until Burnt Flat where it turns north toward Fort Harney (northeast of Burns). This section of the wagon road is also known as the Willamette Valley and Cascade Mountain Military Road because it linked Fort Harney to the north with Fort McDermitt to the south. This road served both local ranchers and the military. For the most part, wagon roads and military routes followed established and well-used Indian trails.

Physical Characteristics

The Stockade Block is situated between Burns to the northwest and Burns Junction to the southeast along Oregon State Highway 78. It stretches approximately 35 miles from the western boundary to the eastern boundary and 17 miles from the southern boundary to the northern boundary. The greater Stockade Block planning area contains approximately 260,000 acres total with approximately 230,000 acres (88%) owned by DSL and the remaining 30,000 acres (12%) belonging to the in-holding property owners.

Situated in a unique geological area, the Block is set among three major Oregon geological regions: the High Lava Plains, Basin and Range, and the Owyhee Uplands. This area exhibits some of the most recent volcanic activity in the continental United States (*High Lava Plains Project. "Geophysical and Geological Investigation". 2005. Carnegie Institution*). The volcanic activity has left the SB marked with fault lines.

Elevations in and around the SB vary by as much as 2,400 feet with Riddle Mountain in the southwest at 6,241 feet in elevation while the South Fork of the Malheur River has an elevation of 3,850 feet above mean sea level.

The SB has very diverse physical characteristics and is uniquely representative of three different mountain ranges: the Steens Mountains to the south, Stockade Mountains to the north and the Sheepshead Mountains to the southeast.

A portion of the SB lies on the northwest edge of the Great Basin, which is characterized by internally drained basins, low basaltic ridges, terraces and isolated buttes. Soils are wide ranging from deep loam to deep clayey soils in the basins to shallow clayey soils on the terraces and fans. A thick hardpan is present throughout.

The remaining portion of the SB lies within the Columbia Basin which is typically more volcanic in nature and results in fault block mountains and buttes and basins. Precipitation in this region drains through the Malheur and Owyhee Rivers into the Snake River. Soils are very similar to the Great Basin soils with the exception of the increased rockiness due to the volcanic nature in some regions.

Seismic Activity and Fault Zones

According to more recent information available from the Oregon Department of Geology and Mineral Industries (DOGAMI), there has been very little recent seismic activity of any substantial magnitude within the SB area. This information is based on seismic readings and on the ground observations dating back as far as 150 to 200 years ago. However, the SB lies at the northern extent of the Steens Fault Zone. The Steens Fault Zone “forms the longest, most prominent topographically fault bounded escarpment in the Basin and Range of Southern Oregon and Northern Nevada” (*Logs and Scarp Data: Steens Fault Zone, S.F. Personius, et al, 2006, USGS Web site*). The Steens Fault Zone is a west-tilted fault zone broken up into six sections: the Crowley, Mann Lake, Alvord, Fields, Tum Tum and Denio.

The SB is within the Crowley section of the Steens Fault Zone. Originally, the Steens Fault Zone was composed of only five sections until more recent mapping included a sixth section, the Crowley section, which is characterized by small basins filled with Quaternary sediment. The Crowley Section Faults are believed to have had recent earth-deforming earthquake movement in terms of geologic time (i.e. 700,000 years ago) (*Steens Fault Zone, S.F. Personius, 2002, USGS Web site*). However, the Alvord Section south of the SB is the most active section in the Steens Fault Zone. In fact, the most recent earth-deforming earthquake in this region occurred less than 15,000 years ago.

DOGAMI Mineral Resources Study

In 1996, the DOGAMI conducted a study of the mineral resources of Lake, Harney and Malheur Counties. The purpose of this study was to determine the potential for the future discovery and commercial development of deposits of metallic and industrial minerals, geothermal resources and oil and gas underlying state-owned land within these three counties.

In general, the geology of the Stockade Block and the surrounding area is not particularly favorable for the occurrence of most types of mineral deposits. To date, relatively few occurrences of metallic minerals, or any indications of oil and gas have been found within the area. The data regarding geothermal potential (based on a limited number of well temperature measurements) does not suggest the occurrence of any significant geothermal resource within the Stockade Block. Nevertheless, the report was somewhat more optimistic regarding the discovery of industrial mineral deposits (such as cinders, pumice, building stone and perlite) and metallic minerals (such as gold and mercury).

More specifically, the DOGAMI study indicated that:

- The center and western portions of the Stockade Block may have medium potential for the discovery of possible geothermal resources.
- Some potential may exist through much of the northern half of the area for the discovery and development of industrial mineral deposits consisting of cinders, pumice, building stone and perlite.
- Some potential may also exist for the discovery of gold and mercury deposits within the central part of the area.

With regard to geothermal resources, the lack of existing transmission infrastructure in the area or population to use geothermal heat to produce electricity or for residential or industrial use makes it unlikely that this resource will be of significant value in the near future.

With regard to industrial mineral occurrences (particularly cinders and pumice), the remoteness of the area and the availability of other identified deposits of these materials closer to possible markets makes it unlikely that these occurrences will become significant commercial mining operations.

With regard to metallic mineral deposits, despite DOGAMI's relatively negative view of the potential of the Stockade Block for most metals, the possibility exists that further exploration of this area may lead to the discovery of commercially developable metal deposits located at depths below the flows of basalt, dacite and andesite. Several mining companies have conducted extensive exploration in southeastern Oregon primarily for what are termed "Carlin-Type Deposits" of gold based on the premise that the geologic setting hosting low-grade gold

deposits in northern Nevada extend into this state. One such deposit of gold with associated silver was discovered at Grassy Mountain, which is 22 miles southwest of Vale and 35 miles northeast of the Stockade Block.

Soils

Soils surveys are complete for the Harney County portion of the SB. The Natural Resources Conservation Service (NRCS) started the soil survey in 2007 for Malheur County with completion not expected for several more years.

Climate Considerations for the Stockade Block

The Stockade Block, part of the Northern Basin and Range Ecosystem, is predominantly a rangeland environment dominated by sagebrush plant communities. Weather patterns and climatic conditions vary widely throughout the SB largely as a result of recurring changes in elevation and rain shadow effects. Temperature and precipitation are the two dominant weather parameters influencing vegetation/plant communities in the SB. Regardless of specific geographic factors, there are various unifying factors that exert climate influences somewhat consistently throughout the SB.

The SB is divided almost equally between Harney County on the west side and Malheur County on the east side. Harney County has been placed, by the National Climatic Data Center, in “Climate Division 7 - South Central Oregon” which extends from the east slopes of the Cascade Mountains eastward to the east edge of Harney County. Malheur County is placed in “Climate Division 9- Southeast Oregon” which includes all of Malheur County. Both of these climate divisions or zones cover enormous areas with differing topography and weather recording station coverage; these weather stations are typically located near active agricultural areas, research facilities, commercial farms and ranches and select public use facilities. As such, no weather stations are located specifically on or adjacent to the SB with the closest recording stations located at both Burns Junction and Rome to the southeast and Riverside to the north with the data from Burns Junction and Rome published.

Although the SB includes both Climate Divisions or Zones 7 and 9, it is believed that Climate Division 9 is more representative of the overall climate conditions on the SB. Both climate divisions or zones are very similar in rainfall and temperature ranges with variations largely attributed to elevation factors with taller mountains receiving focused rainfall. A noteworthy difference between Climate Zones 7 and 9 is that Zone 7 lands receive their highest monthly precipitation in the winter months with a secondary maximum during late spring and early summer. Unlike most of Oregon, annual precipitation in Zone 9 is distributed rather evenly throughout the year. Although winter months tend to have the highest total precipitation, the winter rainfall contributions in Zone 9 tend to be much lower than areas farther west. The weather recording station in Rome reports that their highest precipitation values occur during late spring.

Climate Zone 9 is characterized by large annual temperature variations. Summers are quite warm with daytime highs averaging in the high 80s or low 90s from June through September. Summer nights are cool due to the generally clear skies and dry air. During winter months, average highs are mostly in the 30s with lows in the teens. Occasionally, very cold air reaches this region from the north, causing lows to drop below zero degrees Fahrenheit. For the data collection period from 1971-2000, Burns Junction experienced an average annual rainfall of 8.67 inches while Rome measured an average of 8.28 inches annually. Burns Junction averages 10.8 inches of annual snow while Rome averages 11.8 inches of snow—both recording stations report December and January as the highest snowfall months with substantially lesser amounts in February and November.

Precipitation recording categories are the same for Climate Zones 7 and 9. Maps projecting average annual rainfall in the SB indicates the following precipitation:

- 5-8" - Barren Valley (dry lakebed areas), Malheur Cave, South Fork Malheur River Valley, Virginia Valley
- 8-12" - Saddle Butte, Duck Pond Ridge, Round Mountain
- 12-16" - Riddle Mountain, Lambing Canyon, Indian Creek Butte, Duck Creek Butte, Stockade Butte
- 16-20" - Sheepshead Mountain

One of the most important considerations pertaining to climate conditions regards the growing season that is measured in "growing degree days." The growing season is likely one of the most significant factors influencing agricultural production opportunities on the SB. The growing season is typically between April and October with late or early frost influencing specific growing seasons; some higher elevation areas may have their growing season (number of days between frosts) restricted to less than 100 days. Interestingly, Burns Junction has a more favorable "degree day" measure than Rome although these two climate recording stations are located relatively close.

Major Plant Communities

The following plant communities are found within the SB. DSL staff have mapped the presence and extent of these plant communities (see Map 4).

- **Non-Native Rangelands**

A non-native rangeland plant community is one that has been created by physically converting (for livestock grazing) from a sagebrush steppe plant community to one dominated by non-native grasses, typically crested wheatgrass. Currently, there are approximately 7,300 acres of this plant community type in the Anderson and Virginia Valley area. These areas were seeded following a wildfire in the mid-1980s and therefore are dominated by crested wheatgrass and native forbs. Additionally, portions of the North Steens unit, located south of the private lands on the southern extent of Virginia Valley Road, were aerially seeded to crested wheatgrass in the mid-1980s following a wildfire. In these latter areas, crested wheatgrass is co-dominant with native

grass species. Refer to Table 5 for non-structural improvements for approximate acreages for each project area.

- **Juniper Woodland Communities**

Western juniper, a native component of the Northern Basin and Range Ecosystem, is typically found on the upper reaches of the mountains in the rocky outcrop areas where historic wildfire events could not reach due to lack of fuels. Following pioneer settlement of the area, wildfire suppression has allowed western juniper to encroach onto the tablelands, valley bottoms and riparian areas. Currently, the SB has 80,500 acres of western juniper present in varying degrees of density and composition. As western juniper spreads from its wildfire constrained historic range, other surrounding native vegetation decreases due to increased competition for water and available nutrients. With western juniper encroachment into riparian areas, stream bank destabilization begins due to the loss of aspens and willows.

- **Aspen Stands**

The known SB aspen stands are found in the Camp Creek watershed area, typically located in the upper reaches around some of the springs/seeps on the north slopes. Historically, many of the springs/seeps on the northern slopes had abundant aspen stands. Because of competition by western juniper, many of these aspen stands have disappeared. Aspen stands currently occupy approximately one-hundredth of one percent of the SB or approximately 25 acres.

- **Sagebrush Steppe**

The sagebrush steppe plant community occupies approximately 142,125 acres of the Stockade Block. It is characterized by open areas with few trees, dominated by sagebrush and grasses/forbs in the understory. In addition to big sagebrush, numerous other shrub species may be present including: horse brush, spiny hopsage, rubber rabbitbrush, green rabbitbrush and bitterbrush.

The most dominant sagebrush species is Wyoming sage that is typically found on the bottomlands and lower portions of slopes. Soils associated with this sagebrush species are typically shallower than that associated with big sagebrush, which occupies deep, fertile soil types. Areas of mountain sagebrush, low sage, and rigid sagebrush may also be found in the sagebrush steppe plant communities of the SB.

- **Riparian Corridors**

There are three primary riparian corridor “drainages” in the Stockade Block consisting of Camp Creek, Duck Creek and the South Fork of the Malheur River drainage. Water is present in most years through late spring and early summer. For the remaining months, these drainages are dry except for some isolated pooling (in normal precipitation years). Additional suspected riparian areas may be located along sections of Indian, Lambing Canyon and Quail Creeks which

will be investigated during vegetation inventories of those areas. Riparian vegetation in the SB is typical of the Northern Basin and Range Ecosystem with the exception of the advanced western juniper encroachment in the Camp Creek and Duck Creek drainages. It is believed this heavy western juniper encroachment (due to the suppression of wildfire which historically limited and constrained juniper habitat) has led to reductions in hydrologic functions in the streams. Rushes/sedges are typical riparian vegetation species in the SB along with abundant pockets of coyote willow. Riparian corridors currently occupy approximately one-hundredth of one percent of the SB or approximately 25 acres.

- **Wet Meadows**

Wet meadows are limited due to the steep upland slopes adjacent to the riparian areas. The few existing wet meadows have abundant western juniper encroachment present. Typical wet meadow vegetation includes sedges, rushes and other riparian vegetation types. Wet meadows currently occupy approximately one-hundredth of one percent of the SB or approximately 25 acres.

- **Invasive Weeds**

Invasive weeds have taken hold in several limited areas within the SB. Species present include perennial pepperweed, medusahead rye, toadflax and whitetop (see Map 7).

Access (Roads, Tracks and Trails)

Vehicle access on and to the Stockade Block range from the paved and well-maintained State Highway 78 to off-road jeep trails, only accessible using high-clearance 4-wheel drive vehicles. DSL has not designated a “system” of roads and trails on the SB.

There are three main county roads that lead directly through the Stockade Block: Anderson Valley Road, Virginia Valley Road and Crowley Road stretching approximately 25 miles. The county roads can be traversed by most vehicles under dry weather conditions.

From the main county roads there are multiple two-track roads and jeep trails that extend into the SB. The two-track roads are not maintained or marked. These roads are typically only passable using 4x4 vehicles and ATVs. DSL staff, lessees and hunters mainly use these roads.

The road system crossing the SB not only crosses DSL land but also private lands. Unrestricted access within the SB is not always readily available to the public. DSL has been granted permission by some private landholders to cross private land to access the SB.

Norman Ranches Road branches off of Highway 78 (near the western edge of the Block) and passes through private land to Malheur Cave and beyond to the SB. Through an easement to DSL, the public has the right to use the road in order to access the SB; however, the public can only use the road from August 15th to December 15th.

There are a few interior SB access roads that cross private land that do not allow for public access.

Current Uses

Business Activities

Currently the dominant leased use of the SB is for livestock grazing. The entire Block is leased to seven lessees; all the lessees own land adjacent to the SB. The leased land is an integral part of each lessee's ranching enterprise. A Special Use Permit was issued in 2008 to allow wind energy testing in the Lambing Canyon unit. There are 23 easements on the SB: seven are utility easements, seven are gravel site easements, three are fence easements and six are road easements (in addition to the numerous dedicated public roads). Additionally, there is a Special Use Lease issued to ODOT for a gravel pit and power pole on Crowley Road (see Map 5).

Public Recreation Use

The majority of the recreation use in the SB consists of dispersed camping and hunting during the months of August through December. The primary game species sought by hunters are: antelope, mule deer, elk and chukar. Off-Highway Vehicle (OHV) use normally increases during the various hunting seasons in the fall. Some horseback use occurs in association with hunting. Currently, there are no improved facilities for recreation or public use.

The Riddle Mountain section of the Desert Trail traverses through Camp Creek, Neal's Lake, Quail Creek and Lambing Canyon in the southern most portion of the Stockade Block. The Desert Trail is a series of hiking corridors extending from Mexico to Canada but not continuously connected. Recently, there has been an interest expressed, by the Oregon Desert Trail Association (DTA), in extending the Riddle Mountain section north through the SB to Venator. DSL has no information as to the amount of public use of the Desert Trail. DSL has a trail management agreement with the DTA.

Another route of the Desert Trail, nearby but not on the SB, follows the east side of the Steens Mountains northward to the Sheepshead Mountains where it turns northeast continuing south of Saddle Butte then northward toward Cedar Mountain and continuing eastward to Lake Owyhee.

Adjacent Land Ownership and In-Holdings

Beginning in the early-1970s and finally concluding in the mid-1980s, DSL and the BLM exchanged several hundred thousand acres in eastern Oregon. The land exchange allowed DSL and the BLM to block up fragmented properties, creating what is now called the Stockade Block. A few private and BLM in-holdings remain.

- **In-Holdings**

There are approximately 32,000 acres of land within the Stockade Block that are owned privately, by ODOT or BLM and are considered “in-holdings” by DSL. The majority of these properties belong to private landowners who are also DSL lessees (see Table 8 in Appendix).

- **Adjacent Lands**

Adjacent to the SB are private and BLM-owned lands with the majority of the surrounding property owned by the BLM. Much of the surrounding properties owned by the BLM are managed as Wilderness Study Areas (WSAs).

Fish and Wildlife

The most noticeable wildlife species on the Stockade Block are the big game animals found throughout the area. These include antelope, mule deer, elk and big horn sheep. Other common rangeland wildlife such as coyotes, bobcat, cougar, black-tailed rabbit, lizards, common songbirds and raptors exist in varying populations. Upland game birds such as chukar, sage grouse, doves and California quail are also found throughout the area.

- **Big Game**

Antelope comprise the majority of the big game animals and can be found in varying populations throughout the area. They seasonally tend to favor the lower basin areas near the private irrigated agriculture fields.

Mule deer are second in population to antelope of the big game animals in the SB and there has been a noted decrease in population in recent years. Deer also tend to congregate in areas around the private irrigated agriculture fields.

Elk generally are found in the upper elevation areas rather than the lower basin areas. The SB has been cited as important winter range for elk, especially during the month of March with the early spring green-up of forage.

Big horn sheep are rather uncommon but have been sighted mainly on and around the Saddle Butte area. Male big horn sheep tend to favor the Saddle Butte area while females tend to populate the Owyhee River areas outside of the SB boundaries.

- **Upland Game Birds**

Chukar is an introduced upland game bird that can be found in the SB on rocky hillsides and the lower basin areas.

Western greater sage grouse have been sighted near or around Lambing Canyon, Stockade Mountain and Buttes, Folly Farm Flat, Saddle Butte, Opal Valley and Crowley Reservoir. No sage grouse leks (strutting grounds) or nesting sites have been found or identified within the SB although various leks have been found within a few miles on surrounding properties to the north, east and south, most notably to the immediate south in Folly Farm Flat.

- **Fish**

To date, limited aquatic surveys have been conducted on the SB. Most effort has focused on the South Fork Malheur River. There are three important tributaries to the South Fork Malheur River that originate on the SB: Camp Creek, Indian Creek and Deadman Creek. These three creeks, as long as they remain perennial, have the greatest potential to support fish life. Perennial waterways in this area may support native fish species such as redband trout, speckled dace, bridgelip sucker, redband shiner, long nose dace, and northern pike minnow and also non-native species such as bass, blue gill and yellow perch. Of the SB drainages that eventually drain into the Malheur Lake Basin, only Lambing Canyon and Quail Creek have any potential to sustain fish life. It is believed that none of the streams that drain into the Owyhee Basin have any possibility of sustaining fish life due to the intermittent nature of those drainages.

Threatened and Endangered Species

As part of the preparation of this Area Management Plan, the Department investigated the status of federal and/or state listed threatened and endangered (T & E) plant and animal species (or otherwise identified as being of special significance or interest) found in the SB. To accomplish this, the Department requested an information search by the Oregon Natural Heritage Information Center (ORNHIC). The ORNHIC computer database includes all official recordings, to date, of documented field sightings of known or suspect T & E species and other sightings of rare and unusual plant and animal species of interest. This data is compiled from the field notes of fish, wildlife and plant professionals and experts typically employed with a state or federal natural resources based agency. The ORNHIC data is confidential and does not reveal exact sighting locations but rather refers to a Section (640 acres) or even an entire Township (36 square miles) for particularly rare species sightings (see Map 8 – Possible Management Constraints).

The ORNHIC report for the SB includes numerous listings of very rare, important and sensitive species found in Malheur Cave located on private land near the South Fork of the Malheur River and essentially surrounded by the SB. Malheur Cave includes a long underground lake creating a unique habitat supporting unique vertebrate and invertebrate animal species. Although the cave might

extend underground to SB lands (the cave is reported to be over ¼ mile long), this cave is owned and managed by a fraternal organization and DSL has no right of entry or otherwise any responsibilities (or privileges) regarding the use or management of the cave.

It is noteworthy that an ORNHIC database search includes identified “special species” sites or sightings within a couple of miles of a specific subject property which is an acknowledgment that the range of an animal noted in any listing is typically well beyond the observation point or location and that wildlife does not differentiate between multiple, adjacent property ownership of a single habitat or range. Additionally, ORNHIC data includes species that have not officially been listed as T & E but are potential candidates for such listing. Greater sage grouse is a good example of an ORNHIC listing of a possible candidate although not yet listed T & E species. In the circumstance of the sage grouse, such information can be used to proactively protect remaining habitat thereby postponing or even avoiding such future listing. This long-term approach is especially strategic in a circumstance as that with the SB and sage grouse sightings—no leks or nesting sites have actually been documented as occurring within the SB but many have been seen, documented and located just outside of the SB to the north, south and east; the ORNHIC database includes numerous consistent annual sightings of sage grouse in Folly Farm Flats which borders the SB on two sides with many sightings less than a mile from the SB.

The following is a common name list of ORNHIC identified sensitive plant and animal species sites found in or near the SB, species status and includes possible (recommended) SB mitigation actions:

- Site 1: Western Burrowing Owl – “concern”; no action required
- Site 2: Swainson’s Hawk – “sensitive-vulnerable”; no action required
- Various Sites: Greater Sage Grouse – many locations; “concern & vulnerable”; based upon ODFW recommendation, protective buffers will be established for each recorded site (usually a lek or nesting site)—for meteorological (MET) and wind power towers a 3-mile buffer and a 2-mile buffer for transmission corridors
- Site 3: Barren Valley collomia – important “species of concern and candidate for listing,” this is a top ranked species for protection; “this species was first reported in 1983 and then surveyed but not found in 1985 & 1989. If there is any activity in the area, this species needs to be re-surveyed. If any plants are found, disturbance activity should be avoided.”
- Site 4: Rose’s lomatium – not T & E listed but identified as “critically imperiled because of extreme rarity” by the State of Oregon and Oregon ranked as “threatened and endangered throughout range.” This rare plant species has not been seen since 1896 and the original locality information is vague. This species should be on the field botanist’s short list of plants

to keep an eye out for in this general area, but no specific recommendation or suggestion made.

- Site 5: Crooked Creek springsnail— not T & E listed but globally and state ranked as critically imperiled and as a rare species throughout its range. Specimen collected at a privately owned spring which is adjacent to SB ownership. If within DSL control, the spring should be protected.
- Site 6: Biennial stanleya—not T & E listed but identified as “critically imperiled because of extreme rarity” by the State of Oregon and Oregon ranked as “threatened and endangered throughout range.” This specific site is identified as one with a large population of highly ranked species that should not be disturbed. Livestock should definitely be kept out of this (field verified) area located approximately mid-way between Turnbull Peak and Saddle Butte. A botanical field survey during a period of distinction should be undertaken to identify areas for protection.

Wildfire History (DOES NOT INCLUDE PRESCRIBED BURNS)

Historically, wildfire events in this area of sagebrush steppe occurred in 50 to 100-year intervals. Due to fire suppression activities in the post-pioneer settlement era, the historically recurring wildfire events no longer exist. Recent management history shows that wildfires have occurred irregularly throughout the SB. The table (Table 2) below shows known wildfires that have occurred within the SB area since 1980. Small spot fires (less than 10 acres) have occurred throughout the SB and have not been included in the inventory below.

Fire Name	Location	Year	Acres
Crowley Road Fire	Crowley Road	1980	827
Top of Grade Fire	Top of Grade Pasture	Mid-1980s	1307
Beaver Table Fire	Beaver Tables	1985	3500
Virginia Valley Fire	Virginia Valley	1985	4000
Saddle Butte Fire	Saddle Butte	Mid-1990s	2500
Sheepshead Fire	Turnbull Pasture	2001	3195
Potluck Draw Fire	Reeds/Pollock Pasture	2001	470
Big Gulch Fire	NE Pasture	2002	787
Baker Pass Fire	Baker Pass	2004	39
Dick Butte Fire	Dick Butte	2005	39
SE Pasture Fire	SE Pasture	2005	297

Current Management Situation

Current Authorized Uses

- **Easements**

There are approximately 23 easements on the SB for various purposes including seven utility, seven gravel site, three fence and six road easements (in addition to the numerous dedicated public roads).

There are various utilities crossing over-head and buried along roadways serving the surrounding farmsteads and communities. Harney County Electric power lines extend from Highway 78 along both Anderson Valley and Virginia Valley Roads at the southwest corner of the Stockade Block. Harney County Electric also has power line easements that follow Crowley Road. Along Crowley Road, Oregon-Idaho Utilities is in the process of establishing communication lines, providing the area with telephone and Internet access. U.S. West Communications currently has telephone easements along Virginia Valley Road and in the northwest corner of the Stockade Block.

There are seven gravel pit and gravel stockpile site easements that are used by the local community, state and federal agencies on the SB. These gravel site easements are encumbrances acquired through the land exchange. They are pre-existing uses that are not regulated by DSL.

The various easements on the SB are all perpetual easements, which means that they have an unlimited duration or are active until the easement is not in use for a period of time. According to current administrative rules, DSL will, in most circumstances, issue easements for a maximum of 30 years.

- **Special Use Permit: Wind Energy**

A three-year Special Use Permit has been issued to Columbia Energy Partners, Inc. (CEP) for wind energy exploration. In order to gain a better understanding for the potential of wind energy, two temporary meteorological towers (MET towers) have been placed in the SB: one in the North Steens Unit and one in the Little Riddle Mountain Unit.

Each 200-foot tall MET tower is located to gauge the wind speeds to provide placement guidance for future wind farm sites. MET tower 1 is located approximately two miles northeast of Lambing Canyon. MET tower 2 is located at the summit of Little Riddle Mountain approximately 11 miles to the west of MET tower 1.

The three-year permit for these MET towers will allow CEP to gather enough data to determine the feasibility of installing a larger wind farm on the SB and/or surrounding property. A Special Use Lease will be needed to develop the wind farm. If a wind farm were to be developed, it would provide electricity to serve

local and state demand (in addition to meeting the state alternative energy goals).

There were no major siting issues for the MET towers; however, there are numerous topics of concern with the potential placement of wind farms on the SB. A discussion of wind farm related issues is further detailed in the Land and Financial Stewardship Opportunities section of the Plan.

- **Forage Leases**

The Department’s forage lease policies require that rangeland used for livestock grazing be managed to prevent human-induced loss of ecosystem health. Towards this end, the Department assists in implementing forage leasehold improvements and practices that maintain, achieve or restore healthy, properly functioning ecosystems and maintain, restore or enhance water quality.

Ecosystem health is the degree to which the integrity of the soil, vegetation, water and air, as well as the ecological processes of rangeland ecosystems, are balanced and sustained.

There are currently eight forage leases and seven Leasehold Management Plans (LMPs) for the Stockade Block. Together, these documents provide the Department’s management guidelines for grazing on each leasehold area. The table below (Table 3) shows the current leases and LMPs:

	Lease Number	Lessee	Acres	AUMs	Expire	LMP	Grazing Receipts (Past 10 yrs)
1	FL-16371	Otley Brothers Inc.	560	41	2015	No	\$1,894.61
2	FL-16535	Martin Andre	67,295	2,590	2020	Yes	\$121,726.73
3	FL-16536	Tree Top Ranches	106,245	8,400	2018	Yes	\$397,898.75
4	FL-16537	John Atkinson & Ronald Atkinson	5,561	500	2020	Yes	\$25,173.92
5	FL-16538	Jenkins Ranches	8,656	807	2015	Yes	\$37,708.58
6	FL-16539	Lou Davies	7,960	1,500	2020	Yes	\$76,381.56
7	FL-16540	Tree Top Ranches	28,097	2,926	2020	Yes	\$127,835.66
8	FL-16541	Livingood Ranch	3,179	611	2020	Yes	\$27,481.59
Totals			227,553	17,375			\$816,101.40

NOTE: Each lease is valid for a term up to 15 years and includes an option for renewal.

The forage lease is the contractual agreement with the lessee for grazing on state lands. The lease governs the use of the leasehold and establishes leasehold boundary, acreage and base AUMs. An AUM or “Animal Unit Month” is described as the amount of forage a 1000-pound cow and un-weaned calf can

consume in a month. One cow/calf pair equals one Animal Unit or AU. Revenue from forage leases are based on a price per AUM as determined by the Department's grazing fee formula established in administrative rule.

The forage leases require the lessee to report the occurrence of any known wildfires on or adjacent to the leasehold to the DSL Eastern Region Office as soon as possible. The lessee should also be available to make a reasonable effort to contain or suppress the fire if requested by the Department.

The forage lease also requires that the lessee control noxious weeds, plant pests and diseases on leased premises as directed by the local county weed control district, the Oregon Department of Agriculture and/or any other similar government agency authorized for such programs.

Forage Leasehold Management Plans (LMP)

There are seven LMPs on the SB. Four were written in the mid-1990s with the remaining three written in 2002. LMPs are written for leaseholds where specific management goals need to be met.

An LMP is a multi-year plan to guide the livestock grazing activities on a specific leasehold in relationship to other uses and resources, such as recreation uses, cultural resources, watershed resources, vegetation resources and fish and wildlife habitat. Each LMP outlines specific management objectives, identifies all leasehold resources and improvements, sets grazing schedules, allocates AUMs per pasture and leasehold, and identifies issues and concerns to be mutually addressed by the lessee and the Department. Each LMP is unique to the specific leasehold and the operation of the lessee. Over time, these LMPs are updated following significant changes in the operation or following the rangeland analysis process. Within each LMP an annual operating plan, or AOP is developed for each grazing year in consultation with the lessee to meet the objectives of the LMP. An AOP allocates specific grazing activities based on climatic variations and improvements planned for that year.

Structural Range Improvements

Structural improvements are an important aid in facilitating effective management of grazing livestock. The strategic placement of improvements helps to distribute livestock use across the pasture and to ensure that a pasture is being utilized in a manner that supports and contributes to a healthy functioning ecosystem. The Department retains ownership of all range and grazing related structural improvements unless otherwise noted in the lease or LMP. The lessee is responsible for the maintenance and upkeep of all improvements. The table below (Table 4) is an inventory of all known structural improvements in the Stockade Block.

Structure	Unit
Fences (boundary and interior)	334.4 Miles
Reservoirs and Waterholes	128
Wells	25
Springs (improved and unimproved)	21
Water Pipeline	56.25 Miles
Cattle guards	11
Corrals	5

NOTE: Information on improvements is based on inventories in lease files and LMPs.

Non-Structural Improvements

The following non-structural improvements have been completed in the Stockade Block since the mid-1980s. Much of this information has been collected from the existing LMPs. Exact dates and locations are unknown at this time.

Location	Activity
North of 78 - Tree Top Ranches	1,000-acre seeding 14,500-acre prescribed burn
Andre leasehold	4,015-acre seeding
Virginia Valley (Davies)	5,520-acre seeding 1980, 1986
North Steens - Tree Top	600-acre seeding
Ramsay	940-acre seeding
Various Western Juniper clearing	250-acres 2006-2007 (lop and scatter)

With the exception of the Andre leasehold seeding, the remaining seedings were associated with wildfire activity. During this period, lands reseeded were converted to crested wheatgrass. In some cases dry land alfalfa was included in the seeding mixes.

Beginning in 2003, a noxious weed abatement spraying program was initiated which has treated numerous acres on the west side of the SB. Approximately 50 acres of perennial pepperweed was sprayed near Malheur Cave, and approximately 100 acres of isolated patches of medusahead have been treated.

Mineral and Geothermal Resources

As discussed above, the Block was created through large area land exchanges with the BLM. These exchanges typically involved transferring the surface land rights but not mineral and geothermal sub-surface rights. Consequently, except for those areas within the Block previously owned by DSL, the majority of the mineral and geothermal sub-surface rights within the Block are owned by the BLM. Therefore, the area identified as DSL Surface Interests on Map 2 are also areas of BLM mineral and geothermal sub-surface rights unless otherwise noted on the map. This type of shared ownership is often referred to as a split estate.

According to BLM sources, the BLM has one lessee with a mineral interest in kaolinite on the Stockade Block. The BLM management plans for this Resource Area do not open its mineral right land to mining. Rather, this split estate land is closed until a BLM land use planning decision restores the land to mineral entry, which can occur during a Plan revision. Revision of the BLM *Three Rivers Resource Area Management Plan* (Burns BLM District) may be completed by 2015. No revisions are planned for the *Jordan Resource Area Plan* (Vale BLM District) so that area is closed to mining claims indefinitely.

The BLM Burns District has had no requests for mineral materials mining in the Stockade Block outside of the specific BLM sites designated for mineral materials removal and excluded from the prior land exchange. The BLM Burns District has had no requests for leasing in that area in the past 20 years and no leasable mineral exploration has ever been done in that area. The BLM Vale District office indicates that the current mineral lessee (for kaolinite) will likely express interest in having additional split-estate land on the SB made available for kaolinite extraction. The Vale District also reports that they have denied two other mining claims for kaolinite in the SB.

The BLM reports that within the next 30 years, it is reasonable to expect that the current kaolinite lessee or their successors will aspire to develop a kaolinite quarry over an area of approximately one square mile in the Three Rivers Resource Area of the Burns District. There are no population centers in the area and ODOT has rock sources elsewhere so it is reasonable to expect that there will not be other claims for BLM sub-surface mineral rights on the Stockade Block. The area has moderate to high potential for geothermal resources for direct heat uses (not electrical generation) but with no population center it is unlikely that direct heat uses will be developed in the area.

The BLM has stated that it will consult with other non-federal surface landowners on a case-by-case basis after interest in the federal mineral estate or leasing is shown and will consider site specific surface estate values and socioeconomic uses before opening any other split estate land with federal mineral estate to locatable mineral entry. BLM will probably put that same language in the *Three Rivers Resource Area Management Plan*.

Current Management Activities

Rangeland Analysis

Following the completion of the Stockade and Burns Exchanges and up to 2002, DSL periodically conducted a review of range conditions utilizing various methods including photo documentation. These methods did not offer a systematic approach to the inventory of range resources and the subsequent development of leasehold management plans. As a result, in 2002 DSL sought

technical assistance from USDA's Natural Resource Conservation Service (NRCS) for help in developing a rangeland analysis process that could be employed on all DSL lands leased for grazing including the SB. Since that time the Department has used the NRCS-recommended approach to conduct all rangeland analysis work.

The rangeland analysis process is labor intensive, as it requires both office and field work to plan the study areas, collect the data and process the information. Steps include the initial determination and mapping of the discrete inventory areas (based on soils and plant communities) usually called ecological site units (ESU); the collection of field data from each ESU; the after-collection processing of the field data including re-mapping and the analysis of the data to distill management implications. The work is aided by the use of computerized geographic information system mapping and field data logging and location assistance provided by global positioning system units equipped with data collection capability. Bend-based staff act as field teams to collect the fine-scale vegetative data during the optimal growing seasons. Much of the fieldwork requires identification of vegetation species (plant composition, growth stage, and estimation of dry weight and plant production) and recording the condition of physical aspects of the site. Pre-collection and post collection processing takes place in the Bend office.

The rangeland analysis is used, together with other management actions, to maintain or restore healthy, properly functioning ecosystems. The data derived is used to create a "baseline" of information on vegetation, soils, available forage for livestock and wildlife use and overall ecosystem health. This baseline becomes the starting point for determining trends and changes in the leasehold over time. Each site is evaluated based on the current condition's closeness to the historic plant community and the capability of the site. In addition, the data, once processed, is used to determine the amount of forage available for livestock production and other beneficial uses (e.g. soil stability, mineral cycling, water cycling and wildlife habitat). Determining trend may require several seasons of data collection and post-collection processing.

DSL uses the information collected from the rangeland analysis to develop leasehold management plans. The leasehold management plans guide livestock use on the leasehold by stipulating livestock stocking rates, season of use, plan improvements, etc. Through the rangeland analysis process, DSL can also identify areas of specific management concerns (i.e. invasive weeds, erosion, western juniper encroachment) and use the information to implement management actions to correct these concerns.

To date, approximately 38,000 acres have been surveyed in the Virginia Valley/Camp Creek area located in the southwest portion of the Stockade Block. Following the initial rangeland analysis in 2002, an additional 26,000 acres of rangeland data was collected in 2005 and 2008 in the northwest corner of the SB

and in Lambing Canyon. Currently, there are approximately 10,000 acres of rangeland remaining to be surveyed and analyzed in the Harney County portion of the SB. Post-collection processing is needed for the most recent data.

It is expected that the Harney County portion of the SB will be completed in the next few years. Future range analysis work in the eastern portion of SB will be initiated upon completion of the soil survey for Malheur County.

Managing for a Healthy, Properly Functioning Ecosystem (Ecosystem Health)

According to the 2000 Oregon State of the Environment Report, most healthy rangelands are capable of supporting commodity production and at the same time retaining the components of naturally functioning landscapes. The report also points out in its Summary of Current Status and Health of Oregon's Rangelands that:

- Lack of fire has increased the amount of sagebrush-dominated stands and encouraged western juniper invasion, both beyond the historical range of variation.
- The major risk to rangelands is the continuing invasion of exotic plant species, which have replaced native vegetation.
- There is little monitoring to measure success or failure of grazing programs and range rehabilitation.

Current management of the SB is aimed at maintaining and enhancing a , healthy, properly functioning ecosystem based on the plant communities present within the SB. A healthy ecosystem is considered to be properly functioning where the integrity of the soil, vegetation, water, and air is balanced, sustained and resilient to natural disturbances and changes in environmental conditions over time. Healthy, properly functioning ecosystems have a diverse assortment of grasses-forbs-shrubs/trees-rushes/sedges and other naturally occurring plant species. There may be a small percentage of non-native plant species present within a healthy functioning ecosystem. Noxious weeds are absent or controlled and contained within healthy functioning ecosystems. Vegetative species typically described as invader species may be present in small percentages within healthy functioning ecosystems.

The following describes management activities for the five dominant healthy functioning plant community ecosystems found in the SB:

- **Non-Native Rangelands**

The crested wheatgrass seedings are managed for maximum forage output while being sustainable over the long-term. In the future, additional areas may be sought for conversion to crested wheatgrass seedings.

- **Western Juniper Woodlands**

Native western juniper has invaded the sagebrush steppe plant community (mostly due to lack of wildfire) in various portions of SB. Juniper is very competitive for soil moisture and nutrients. Sagebrush steppe associated species generally disappear (even sagebrush) and with the loss of understory vegetation, results in a loss of cover and forage for a wide variety of biota from butterflies to mule deer. However, some of the best diversity in the sagebrush steppe occurs at the mid-successional levels where juniper exists along with a diverse understory. These transitory phases will degrade to a near monoculture of juniper with a lack of fire.

Current management of juniper woodlands is focused on clearing western juniper from areas dominated by younger/mid-age (western juniper) trees in order to restore native plant communities, hydrologic functions and enhance wildlife habitat.

- **Aspen Stands**

Currently no efforts have been expended on specifically managing aspen stands. Further field inventories are needed to determine the status of aspen stands within the SB. These stands will be managed to promote future establishment and growth of younger trees. Encroaching western junipers will be cleared and prescribed burning may be considered.

- **Riparian Corridors**

In 2002, Governor John Kitzhaber issued a Statewide Riparian Management Policy with the expectation that each agency with responsibilities that relate to riparian areas would carry out the policy. The goals of the policy are:

- To protect and restore riparian functions in watersheds across the state of Oregon; and
- To achieve clean water and high quality, productive riparian and aquatic habitats to support self-sustaining populations of native fish species.

Among the provisions of the policy are several that relate to the few riparian corridors present on the SB. These provisions are:

- Promote the protection of properly functioning riparian corridors; and
- Promote the restoration of degraded riparian areas.

Although riparian corridors are scarce, management promotes site functions and the re-establishment of riparian woody vegetation where possible. This includes the removal of western juniper, when practical, and the planting of willow species.

Salting, supplementation and livestock watering is done away from the riparian areas, in order to draw livestock away from riparian areas.

Properly functioning riparian corridors offer the following benefits: sediment filtering; bank stabilization; water storage and release; aquifer recharge; high wildlife diversity; high forage production; shade; and cooler water.

- **Sagebrush Steppe**

All sagebrush steppe plant communities are managed to promote the specific site capabilities of each unique setting or area within the leasehold. Green striping may be performed in some of the large expanses to protect portions from wildfire. Green striping entails mowing wide “strips” in a pattern, typically adjacent to existing roads that will slow down a wildfire. These strips may typically be planted with fire resistant vegetation. Following a wildfire, reseeding of the existing sagebrush species may be limited to islands of plantings within the larger burn areas.

As stated earlier, western juniper has invaded the historic range of the sagebrush steppe plant community on the SB due to a lack of fire. Without fire, sagebrush increases and maintains dominance through competition that causes the depletion of understory vegetation. Again the lack of understory to provide structure for cover and forage for various animals and livestock results in a decline in diversity and productivity.

One caution should be noted with the reintroduction of fire for rangeland management in the sagebrush steppe. Where weeds (especially non-native ones) have invaded or have the potential of invading, fire may actually enhance their opportunity to gain dominance. Frequent fire helps to perpetuate the weeds.

Invasive Weeds

The major risk to healthy functioning rangelands is the continuing invasion of exotic plant species, which have replaced native vegetation. According to the *2002 Oregon State of the Environment Report*, “*In all ecosystems, (of the Northern Basin and Range Ecosystem) weeds and other nuisance species may threaten native communities and alter fire cycles. As we try to reintroduce natural disturbance to ecosystems, the threat of weed invasion increases if seed sources are present.*”

The detection and abatement of invasive weeds has been a high priority on the SB. Continued coordination with lessees and the local weed abatement programs is essential to reduce infestations.

Wildlife Management: Responsibilities and Coordination

The *Asset Management Plan* under “*Principles for Management of Unique Natural and Cultural Resources*” states the following: “*In recognition of its stewardship responsibilities, the Land Board will use appropriate measures and partnerships that are consistent with Trust and Non-Trust land objectives to conserve...riparian resources; wetlands; wildlife habitat; and sensitive and*

threatened plant, animal and aquatic species.” Also in the same section, the Asset Management Plan states: “The Department will participate with the Oregon Department of Fish and Wildlife in the appropriate elements of the State Wildlife Conservation Plan.”

These policy statements create an obligation towards the management of wildlife habitat that affects the management of the SB. Balancing these obligations with the Trust obligations requires trade-offs.

Currently, the conservation of wildlife habitat is largely being addressed through the implementation of Leasehold Management Plans on each leasehold that retain a percentage of the annual available forage for wildlife habitat, soil stability, mineral and water cycling, and plant vitality and reproduction.

Recreation Use Management

The Stockade Block area is open and available for public and recreational use. DSL staff occasionally monitors the camping that occurs across the area. There are currently no use or access restrictions on recreation use on the Block. Recreation and other public uses are considered when making management decisions, especially if a decision may involve the closure of areas of state land to general public access and use. A forage lessee may request that an area be closed to public entry. Most public use closures or recreation use restrictions must be implemented by administrative rule. Emergency closures or restrictions may be enacted by the DSL Director following public notice of the intended action.

At this time, there is no documentation of commercial hunting guides or outfitters currently conducting activities on the SB.

Wildfire Management

An April 2006 study (based on 20 years of data) of statewide wildfire potential by the Oregon Department of Forestry revealed the following for the Block and surrounding area:

1. Most of the Block exhibits a low risk of ignition of wildfire from human or lightning-caused wildfire; however some isolated areas (e.g. mountain and ridge tops) show moderate risk; and
2. There is a moderate amount of fuel available in the Block and the surrounding area to contribute to wildfire combustibility and spread.

The current wildfire management strategy for the Stockade Block area involves both the lessees and the BLM. The leases and LMPs for these leaseholds require the lessee to report the occurrence of any known wildfires on or adjacent to the leasehold to the DSL Eastern Region Office as soon as possible. The lessee should also be available to make a reasonable effort to contain or suppress the fire if requested by the Department.

The Department has not designated any area of the SB as a “let it burn” area.

Since 2001, the Department has operated under a cooperative agreement with the BLM for fire suppression and fuels management. As of May 2007, the Department and the BLM have a specific Fire Suppression Agreement. In this agreement, the BLM agrees to provide initial attack, extended attack and large fire management, if resources are available, for selected state lands including the Stockade Block. The Department agrees to reimburse the BLM for actual and reasonable costs incurred during each suppression response. This agreement is reviewed annually and is valid for a term of five years.

In the event that reseeding after a wildfire is deemed necessary, the Department has utilized the most effective and economical seed mixture and practices.

Other Activities

Currently, the Carnegie Institution of Washington, D.C. has a Special Use Permit on the Stockade Block for a Temporary Broadband Seismic Station that will expire in the summer of 2009. The seismic station is part of a multi-state scientific study covering Oregon, Nevada and Idaho evaluating crustal and upper mantle structure beneath the High Lava Plains of eastern Oregon, interpret the imaged structure with input from geochemical, geochronologic, and petrologic data on the young surface volcanism, and combine these observational datasets with geodynamic modeling to understand why this minimally extended part of the Basin and Range has been the most volcanically active region of North America in the late Cenozoic. The seismic stations are used to capture seismic measurements of the Earth’s crust in order to gain a better understanding of the volcanic activity in the region over the past 20 million years. Additionally, the model will give researchers baseline data to help determine what minerals make up the Earth’s crust within the High Lava Plains.

Land Valuation, Annual Income and Expenditures

Land Valuation

The Land Board’s *Asset Management Plan* considers the Stockade Block as a “core” asset of its real estate portfolio. Nonetheless, knowing the current market value of the land is an important aspect of the AMP.

A routine activity included in the preparation of Area Management Plans is to establish a rough estimate of the market value of the land. In the preparation of this AMP, an actual appraisal was not conducted, but rather knowledgeable eastern Oregon realtors and appraisers were queried about current sales activity for lands similar in character and use as the SB. This work resulted in the following discussion of current market conditions and estimated value. As an asset of the Common School Fund, the land value along with the revenue produced from the land has a bearing on management decisions.

Current Market Conditions

With the current economy (March 2009), real estate buyers have taken a “wait and see” attitude with few sales actually being finalized. The real estate market in Malheur and Harney counties has been relatively stable, although in the previous five years, prices for large acreage ranch type properties have edged higher. There has been a marked increase in the number of buyers of large acreage ranches in the western United States. With the lack of current sales information however, it is difficult to predict the impact of today’s economy on price.

Estimating Current Land Value

The price per acre for large ranches goes down as the size of the ranch increases. The Stockade Block has close to 230,000 acres and would be considered very large by anyone’s standards. If the Stockade Block were to be sold in one block, local realtors have indicated that a value of \$125 to \$150 per acre or \$28.5 to \$34.2 million could be expected with an anticipated market time of several years.

Realtors and appraisers experienced with large ranch tract sales in central and eastern Oregon have said that 10 to 20 tracts with roughly 10,000 to 20,000 acres per tract would sell in the range of \$200 to \$250 per acre, giving the Stockade Block an overall value range of \$45.6 million to \$57 million. It would also require some investment in infrastructure for roads, utilities and wells. The marketing time may also be extended up to ten years.

Coordination and Cooperation with Others

The Department often corresponds with the general public, local, state and federal government agencies as well as its lessees on actions pursued and decisions made. Forms of communication have included general written correspondence; radio, television and newspaper releases and legal ads; noticed and advertised public meetings and hearings; and personal contacts.

Communication with the Burns Paiute Tribe, the Confederated Tribes of the Umatilla, and the Grand Ronde Indian Reservations has occurred during project planning as well as when issues surface that may directly affect a particular tribe (i.e. development of rangeland management plans).

Local government officials have been well informed and have been supportive of Department actions due to frequent communications including phone contacts and personal meetings for proposed activities with representatives from each county.

Partnerships with lessees have been on-going to ensure contract obligations are understood and met. Lessees participate in LMP compliance and administrative

inspections to enhance the knowledge and understanding of Department requirements.

The Department has communicated with the BLM regarding project level activities (i.e. juniper thinning) to enhance a watershed approach in resource management efforts. Since 2001, the Department has operated under a cooperative agreement with the BLM for fire suppression and fuels management.

Other federal and state partnerships exist such as working with the federal Natural Resource Conservation Service and various colleges and universities (including field station and extension service staff) to stay current on rangeland analysis and management protocols. The Department has also relied on various state agencies for their expertise when managing DSL lands including the Oregon Department of Fish and Wildlife, Oregon Department of Forestry, the Department of Geology and Mineral Industries, and the ORNHIC.

Evaluation of Land and Financial Stewardship Opportunities

In this section of the AMP, reasonable and prudent actions or opportunities are evaluated with an eye towards including the most viable and feasible into the Plan's *Vision* and Implementation Plan. The actions or opportunities are confined to those that meet the Plan's Purpose and Scope as well as the Land Board's objectives for management of Common School Fund Trust lands as described in the 2006-2016 *Asset Management Plan*.

Industrial, Commercial and Residential Uses

These uses are largely prohibited under the current Exclusive Range Use (ERU) and Exclusive Farm and Range Use (EFRU-1) zoning under the Malheur and Harney County land use plans, respectively. It is unlikely that, other than uses associated with renewable energy, mineral or utility developments, these uses will occur on the SB during the planning period.

Convert Rangeland to Agriculture

Some adjacent landowners to the SB have converted rangeland to agricultural use as irrigated hayfields. From a revenue perspective, this use could provide annual income superior to forage leases. Preliminary research indicates that some potential for agricultural use exists at moderate levels within the North Steens and Saddle Butte units and at low potential levels within the Anderson Valley, Virginia Valley and Stockade management units (see Table 7).

To be feasible, financially speaking, the costs of conversion (including land clearing, site preparation, seeding and water development) must be able to be offset by the potential income. These costs could be borne by the current forage

lessee (whose lease would be converted to a Special Use Lease for agriculture for the area put to the new use), a new lessee or by DSL. If DSL were to undertake the investment, the annual lease rate would be set to obtain a financial return commensurate with the risk assumed and the Common School Fund's share of the costs.

The practicality needs to be fully assessed, as well. Concerns revolve around the following factors:

- Soil capability
- Groundwater availability
- Growing season
- Forage lessee interest
- Potential to attract new lessee
- Market demand
- Impacts to wildlife and wildlife habitat

Assuming that these factors can be satisfactorily addressed, the potential for irrigated agriculture as a use of the SB would increase the revenue derived from this CSF asset.

Improve Rangeland to Increase AUM Capacity

About 17,375 AUMs utilize the forage on the SB under eight leases covering the entire Block. Each of the seven lessees own land adjacent to the SB and have integrated the leasehold into their stock-raising operation. The CSF obtains revenue from these lessees based on the AUMs assigned to each leasehold. The annual stocking rate (AUMs) is derived from the Leasehold Management Plan and set by DSL to reflect the physical carrying capacity of the leasehold. If the capacity of the SB's best rangelands were increased to allow for more AUMs, the annual revenue to the CSF might increase as well (assuming that increased costs to obtain the AUM increase do not result in a reduction in net revenues).

There are a number of actions that could be taken to increase the forage capacity of the land:

- Convert sagebrush steppe to non-native range seedings
- Remove western juniper from areas where forage recovery is likely
- Rehabilitate "old" seedings to reinvigorate them
- Develop water in areas of good forage and low grazing use
- Control noxious weeds that have rendered areas unusable for forage production

A concern that needs to be carefully considered prior to engaging in any action is whether or not the amount of increased AUMs will result in a justifiable increase in annual lease payments. In addition, there is concern that these actions could affect the wildlife and wildlife habitat. However, any of these actions might be justifiable if they provide benefits aimed at protecting the value of the land base.

Lease for Renewable Energy Production

- **Wind**

The *Asset Management Plan* directs DSL to: “*Investigate and promote the development of renewable energy resources on CSF lands.*” Recent high fuel prices, dependence on foreign oil, concerns for greenhouse gas emissions and state and federal energy policy have driven an increased interest in producing “clean” electricity from wind and solar developments. The recent issuance of a Special Use Permit for wind energy study in the Lambing Canyon and Little Riddle Mtn. management units is an indication of the renewable energy potential of the SB. The Land Management Considerations map (Map 7) shows areas of Good to Excellent wind potential primarily in the Lambing Canyon, North Steens, Little Riddle Mtn. Units and just east of Duck Creek in the Stockade Unit.

On-site testing for wind potential at Lambing Canyon and Little Riddle Mtn. is just underway. DSL is unaware of any other candidate sites currently under consideration. Though there are utility grade facilities coming on-line nearby, there remains much that is unknown about the wind potential in the SB.

The commercial development of wind farms within the SB could provide considerable revenue to the CSF. Under current Special Use Lease rules, in addition to installation fees of \$3,000 times the nameplate capacity of each turbine placed on CSF land, annual rent would be based on between 2.5% to 4% of the gross revenue. Even one turbine would provide a boost to the income stream of the SB.

There are concerns associated with the development of wind farms. Among them are:

- Unknown wind potential
- Impact to existing forage lessees
- Impact of access road development/maintenance
- Distance to power lines
- Impacts to wildlife and wildlife habitat
- Impacts to public recreation use/loss of public access

- **Solar**

According to energy experts, the West offers great potential for solar energy production. Currently, most activity is focused in the more arid desert southwest U.S. with utility grade facilities located in the southern California desert areas. Some state Trust lands in New Mexico are under lease for solar energy production. The same policy, economic and environmental concerns that are driving the interest in wind energy are pushing the current interest in solar.

The SB holds some aspects in common with these locations such as dry arid climate, low precipitation rates and therefore few cloudy days and, of course,

wide open spaces. No study has been done of the solar energy potential or the feasibility of siting a utility grade solar energy production facility on the SB.

Assuming a solar facility is feasible, the revenue stream could be attractive.

There are concerns associated with the development of solar energy facilities. Among them are:

- Unknown solar potential
- Impact to existing forage lessees
- Distance to power lines
- Impact of access road development/maintenance
- Impacts to wildlife and wildlife habitat
- Impacts to public recreation use/loss of public access

Lease for Communication Sites

There are several hilltop locations within the SB that could be developed as communication sites, depending on demand. Among these are: Round Mtn., Little Riddle Mtn., and Duck Creek Buttes. Special Use Leases for communication sites contribute about \$11,000 annually statewide to the CSF from sites on Rangeland and Forestland.

There are concerns associated with the development of communication sites. Among them are:

- Unstudied potential
- Market feasibility and opportunity-driven by others
- Demand is low
- Impact to existing forage lessees
- Impact of access road development/maintenance
- Distance to power lines
- Impacts to wildlife and wildlife habitat

Issue Road and Utility Easements

The development and location of public and private roads, power lines, pipelines and similar linear facilities on the SB could result in additional one-time revenue to the CSF from the sale of easements. The sale of easements is not a business activity that can be predicted since they are dependent on the needs of others. Typically, the Department grants such requests with few restrictions and values the issuance based on the value of the land.

Lease for Recreation Uses

Big game and upland bird hunting is a popular recreation activity of the area encompassing the SB. Currently, the public enjoys unlimited access to the CSF Trust lands of the SB for all types of recreation. There are no developed recreation facilities such as parking areas, designated trails (OHV or non-motorized), day use areas or campgrounds. Hunters typically dry camp at their

“favorite” sites close to their preferred hunting areas. Charging hunters for the use of and access to hunting lands is a popular business activity on private ranch and farmland. In addition, professional hunting guides provide services for hire on nearby and adjacent federal lands. No revenue from public hunting or professional guiding services are paid to the CSF from hunting or any recreation use of the SB.

The Department polled a number of the school Trust land managers in other western states and found a wide range of approaches to public access, recreation use and leasing for recreation (see Appendix D). Of the states surveyed, several (New Mexico, Arizona, Colorado, Nebraska and Oklahoma) considered their Trust lands to be closed to public use unless designated as open and then only by a permit or lease. Annual permits ranged in cost from \$10 to \$75. A number of states issue leases for guides and outfitters. Some states have arrangements with their respective Parks or Fish and Wildlife agencies to lease land for general or wildlife-related recreation. Utah and Montana take a portion of statewide fees (Utah about \$300,000 from OHV fees; Montana about \$870,000 from hunting and fishing licenses) for land management.

By and large, the Pacific Northwest states of Washington, Oregon and Idaho represent the exception. None of these states charge the public for general recreation use, although all would charge for commercial recreational use of Trust land. Idaho brought in about \$8,800 in FY08 from guides and outfitters; neither Oregon nor Washington reported any similar income.

Leasing hunting rights (either exclusive or non-exclusive) offers another potential income-producing use of the land. Leasing hunting guide service rights is another possibility. No such leases currently exist on CSF land. However, leasing for general recreation (non-hunting) guiding services either exclusive or non-exclusive is another opportunity. Such activities as guided tours of natural and cultural resources, hiking, mountain biking or OHV trail use are all possibilities but with unknown markets. Lessees might be allowed to construct overnight accommodations or temporary facilities to serve their clients.

Lessees could be selected based on competitive bids with annual lease payments based on percentage of gross receipts or flat fee per season of use; or a combination. The real cost and economic benefit of these arrangements need to be carefully researched before they are implemented.

Not surprisingly, during the review of the DRAFT Plan, a proposal for leasing of hunting rights met with considerable opposition from hunters and their organizations. Based upon the volume of public comments received opposing leases for exclusive hunting leases or fee hunting, it is unlikely that these revenue opportunities will be implemented at this time.

There are concerns associated with leasing for recreation uses. Among them are:

- Unstudied potential
- No current knowledge of the need or market demand for services
- Impact to existing forage lessees
- Impacts to public users if limited access is imposed
- Impact of developed facilities including access roads/trails

Sell Rangeland Management Carbon Credits

According to a research paper completed in 2008 by a team of agricultural researchers associated with western universities (including those from Oregon State University located at the Eastern Oregon Range Experiment Station in Burns) and the USDA's Agricultural Research Service, rangelands generally accumulated carbon on an annual basis. The study revealed that in the northern hemisphere, rangelands are a potentially important terrestrial carbon sink, although yearly weather patterns control carbon cycling in these ecosystems.

With worldwide interest in curbing greenhouse gases (GHG) and with new economic/regulatory markets emerging around cap and trade mechanisms, using rangeland resources to sequester carbon and then selling the carbon credits or offsets to others is a realistic, but slow developing revenue option for the SB.

The Chicago Climate Exchange (CCX) is the world's first and currently North America's only active voluntary, legally binding integrated trading system to reduce emissions of all six GHGs with offset projects worldwide. The CCX has been operating since 2003. It issues tradable Carbon Financial Instrument (CFI) contracts to owners of aggregators of eligible projects on the basis of sequestration of carbon in rangeland environments. CFIs are sold on the exchange in a manner similar to the way stocks are sold on the New York Stock Exchange. The CFI is referred to as Rangeland Soil Carbon Management Offsets. The current value (Spring 2009) of Rangeland Soil Carbon Management Offset is \$1.45 per metric ton.

CCX has the following basic specifications for a qualifying Rangeland Soil Carbon Management Offset project:

- The project must occur in an approved geographic area.
- The project must have a minimum contractual period of 5 years.
- For non-degraded rangeland to comply, it must be managed to increase carbon sequestration through grazing land management that employs sustainable stocking rates, rotational grazing and seasonal use.
- For restoration of previously degraded rangeland (as of 1998 using NRCS definitions), carbon sequestration can be allotted to such lands where sustainable stocking rates, rotational grazing

and seasonal use grazing practices have been initiated on or after January 1, 1999.

- Offsets are issued at the standard rates depending on project type and location. Rates vary from 0.12 to 0.52 metric tons of carbon dioxide (CO₂) per acre per year.

While the management of grazing on the SB's rangelands appear to qualify as an eligible Rangeland Soil Carbon Management Offset project, credits are currently NOT available because Harney and Malheur County are not designated land resource regions acceptable to CCX.

However assuming that the SB was in an eligible area and that the SB's grazing management project qualified, the potential estimated value of the CFIs could range from \$40,020 (0.12 metric tons of CO₂ per year X 230,000 acres X \$1.45) to \$173,420 (0.52 metric tons of CO₂ per year X 230,000 acres X \$1.45).

There are a number of factors regarding this opportunity that require study and consideration. Among them are:

- Determining how/when Harney/Malheur County area will be declared an eligible area
- Understanding the risks and rewards from selling CFIs
- Impact to current lessees
- Cost of third party verification

Acknowledging that Harney and Malheur counties are not currently identified as eligible counties to participate in this carbon credit program, this additional revenue opportunity is proposed for monitoring. Participation in such a program in the future, when the counties become eligible, could be an important future revenue source and thus this option should be regularly reconsidered during future Plan updates.

Acquire Certain In-Holdings via Purchase or Exchange

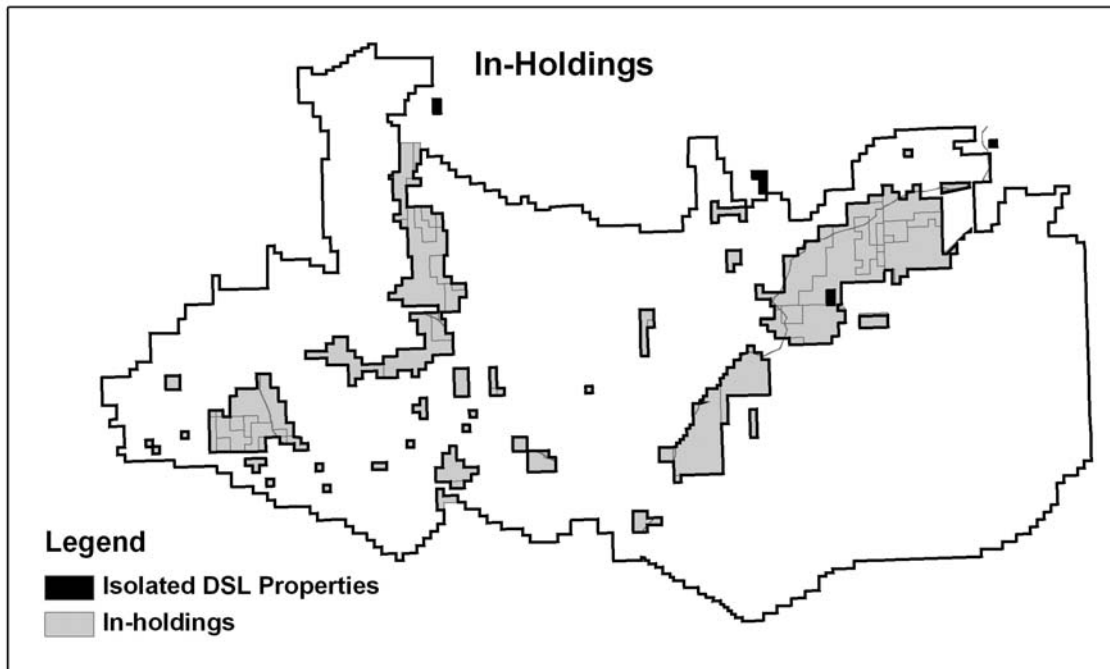
There are several isolated land parcels located throughout the SB that are not owned by DSL. These are referred to as "in-holdings" and they range in size from 40 acres to several hundred acres. In-holdings can present management challenges or opportunities, depending on their use, the motivations of the landowner and the physical characteristics of the land including access. Parcels that offer water, provide legal access to the SB or have income generating potential could be considered to have high potential for acquisition and addition to the SB.

Some parcels of DSL land are "in-holdings" within private land ownership.

Concerns associated with acquiring in-holdings include:

- Willingness of the "in-holder" to participate in sale/exchange.

- Priority for transfer (i.e. which properties represent the best opportunities).
- Resistance to transferring private land to public (CSF) ownership.



Carefully Manage Investments and Expenses; Protect the Income

The Stockade Block makes up 36% of the CSF land base classified as Rangeland. Demands for rangeland analysis, invasive weed control, lease administration, range improvements, and a wide variety of other demands, both predictable and unpredictable, can quickly overwhelm the Department's fiscal resources. Current management activities are based on the assumption that annual revenues exceed SB management and operations expenses. The real estate value of the SB has increased over the years making it a viable investment for the CSF (i.e. capital appreciation).

In order to protect the Common School Fund investment and the annual income from leases, the Department needs to:

1. Implement project planning including rangeland management plans, to ensure that priorities are set and the most important tasks are accomplished;
2. Exercise due diligence; evaluate potential financial returns and risks on new ventures prior to commencement; and
3. Recognize the Stockade Block as a real estate investment offering an opportunity for return through capital appreciation.

Engage in Sound Techniques of Land Management to Conserve the Land While Producing Revenue

The Department's original interest in aggregating the lands that are now the SB stem from its belief that the Block could be a highly productive, manageable investment. Twenty-five years later, that motivation still holds.

A principle for managing CSF lands comes from the Article VIII, Section 5 (2) of the Oregon Constitution:

“The board (*The State Land Board*) shall manage lands under its jurisdiction with the object of obtaining the greatest benefit for the people of this state, consistent with the conservation of this resource under sound techniques of land management.”

Past and future efforts to do such management actions (e.g. rangeland analysis, noxious weed control, juniper removal, water and range improvements) are clearly within the scope and obligation of “sound techniques of land management” for CSF investment. Additional actions such as investigating potential renewable energy sites/uses or inventorying for special species also fit within the directive of Article VIII, Section 5 (2).

Management actions based on established objectives, inventory, monitoring and assessment followed by adjustments to achieve the management goals are standard practice for land managers. Reliance on the federal Natural Resource Conservation Service rangeland analysis process assures that this work is scientifically sound, legally defensible and useable by the Department and its partners.

These actions take on financial significance when conducted to increase or protect the income flow, add to the value of the land or conserve the utility of the land.

Responsiveness to Global Climate Change and DSL's Sustainability Plan

Climate change is predicted for Oregon and various efforts are underway throughout the state to prepare communities, regions, agencies and programs to effectively respond to and plan for the dynamic implications of climate change.

The Stockade Block is part of the Northern Basin and Range Ecosystem that is predominantly a rangeland environment dominated by sagebrush plant communities. Drought is a natural and consistent characteristic of the sagebrush steppe ecosystem and, consequently, climate changes resulting in more frequent and/or extensive periods of drought will be difficult to isolate and document.

Additionally, definitively assigning changes in the landscape to long-term climate changes will require long time periods of monitoring, inventory and analysis.

Plant and animal species' geographic ranges and distribution are directly determined by climate conditions such as temperature and rainfall along with ecosystem factors such as topography, slope, aspect, elevation, soils, geology, surface water and wet environs, etc. All of these factors, taken together, shape habitat and species distribution as well as competition, predation and other species interactions. Climate changes may shift suitable habitat ranges to higher elevations or latitudes (pole-ward). Climate changes may alter a species' phenology such as nesting times or timing of migration.

Climate change has the potential for both positive and negative affects for biota through changes in sagebrush habitat. Climate change may facilitate, impede or reverse exotic species invasion currently challenging sagebrush plant and animal communities. Climate changes resulting in higher temperatures and/or decreased rainfall may influence the frequency and extent of wildfires. Climate changes may also result in changes to the length of the snow season and the depth of snow accumulations - all of which may impact a species' distribution and vitality.

Additional factors to consider when projecting consequences of climate change include: the effect of elevated CO₂ on a species' water use efficiency, differing sensitivity of different life stages, species life span, and the migration of impacted species into or out of different marginal habitats. It is generally believed that animal species with localized seasonal migration patterns may be better able to adapt to changing conditions than long-range migrants by responding in a real-time fashion to real-time ground conditions that better enable them to feed, breed, nest, and raise their off-spring in sync with local environmental conditions.

In December 2008, the Land Board adopted DSL's 2009-2015 Sustainability Plan that includes a section pertaining to rangeland resources. The primary management option to effectively respond to documented climate change is an adjustment to rangeland management plans to modify the grazing allocation or AUM, either increasing or decreasing it, in order to achieve a healthy, properly functioning ecosystem in a (now) modified climate environment while maintaining long-term maximum revenues for the Common School Fund. Additional adaptive management activities may include acceleration or modification of the on-going programs of juniper eradication and invasive plant treatment to assist a challenged and changing ecosystem.

It will take decades to manifest, document, analyze and respond to climate change impacts in the Stockade Block. The predominantly sagebrush steppe biome that comprises the SB will likely be slow to respond to climate changes because this is a low-rainfall environment well adapted to drought conditions. Consequently, permanent climate regime changes will likely take at least 20-30

years to result in empirical ecologic transition in plant communities with a likely faster response in fauna. Given that the Stockade Block Area Management Plan is for a 20-year time period, climate change induced changes to flora and fauna will likely be apparent (if they actually manifest) and thereby addressed in the next Plan update.

Land Use Compatibility

The Department has a State Agency Coordination (SAC) Program that was updated and adopted in 2006. Under Oregon planning law, all state agencies whose actions and programs affect land use must adopt and submit agency coordination programs to the Land Conservation and Development Commission (LCDC). The primary purpose of this coordination program is to assure that state agency programs and actions related to land use, to the extent legally permissible, comply with statewide planning goals and are consistent with the acknowledged comprehensive plans of cities and counties. DSL's SAC requires that this Stockade Block Area Management Plan demonstrate that the activities and recommendations contained herein are compliant with the Comprehensive Plans and Zoning requirements for both Harney and Malheur Counties.

The Department's SAC under Section 3, SAC Requirement 3 (page 47) regards land use program compliance and exceptions and DSL finds *that no DSL programs are exempt from SAC and that all of DSL's land use programs are compatible ones*. SAC Requirement 4 for a Type 2 circumstance (page 51) applies when the need for a compatibility determination is based upon an action initiated by the Department. The four listed principal steps include:

- 1) Giving public notice to affected parties and agencies regarding a scheduled public hearing;
- 2) Regards the content of the notice including a Plan summary, where to find copies of the Plan, comment deadlines and hearing date, time, and location—the notice shall clearly request comments regarding the Plan's compatibility with the affected local government comprehensive plans;
- 3) Directs the notice to be sent to planning departments of affected local governments; and
- 4) Directs that based upon comments received, the Department will adopt findings and conclusions demonstrating the Plan's comprehensive plan compatibility and compliance with statewide planning goals.

A review of the SB comprehensive plan designations and zoning assignments along with current and Plan proposed activities will identify areas of demonstrable compatibility and areas of possible conflict (which will require modification or plan update amendment to resolve and eliminate areas of conflict). The SB has an agriculture (farm and range) resource land comprehensive plan designation in both counties with slightly differing zoning assignments. The zoning in Malheur County is Exclusive Range Use (ERU) with

a minimum lot size of 160 acres. The zoning in Harney County is Exclusive Farm and Range Use (EFRU-1) with a minimum lot size of 160 acres. Both zones permit farm use, agriculture and ranching related activities as “permitted uses” not requiring any specific application or land use decision thereby verifying that the primary activity conducted in the SB is in complete compliance with local comprehensive plans and zoning.

Other actual and/or possible alternative revenue generating activities proposed for the SB include wind power generation, communication facility leases, geothermal and solar energy production, mining, guided hunting and eco-tourism. In Malheur County, exploration only for geothermal, gravel and mineral deposits and transmission towers less than 200 feet tall are (outright) permitted uses while commercial utility facilities for the purpose of generating power for public use by sale, mining and processing of aggregate and geothermal resources, hunting preserves, campgrounds, and transmission towers (over 200 feet in height) are all conditionally permitted uses requiring application and approval.

In Harney County, exploration for geothermal resources and minerals are (outright) permitted uses; transmission towers under 200 feet in height and utility facility service lines are administrative review permitted uses; while operations for mining and processing of aggregate and geothermal resources, hunting preserves, private campgrounds, commercial utility facilities for the purpose of generating power for public use by sale and transmission towers (over 200 feet in height) are all conditionally permitted uses requiring application and approval.

From the discussion above, it can be ascertained that current and proposed activities in the SB are compliant with DSL standards, SAC requirements, and the Malheur County and Harney County Comprehensive Plans. The current and historic ranching and other agricultural activities on the SB (in both counties) are essentially outright permitted thereby not representing any conflict. The proposed alternative revenue generating activities are identified as being conditionally permitted meaning that a conditional use application and approval are required. At this juncture, there are not any foreseeable and/or likely conflicts or incompatibilities between the Malheur County and Harney County Comprehensive Plans and the SB AMP.

Rationale for Vision

The following points provide the rationale or justification for the Plan Vision that follows:

- The Land Board’s 2006-2016 Asset Management Plan requires the Stockade Block be retained as a “core asset” of the Common School Fund real estate portfolio.

- The Oregon Constitution, Article VIII, Section 5, states that Common School Fund lands are to be managed "...with the object of obtaining the greatest benefit for the people of this state, consistent with the conservation of this resource under sound techniques of land management."
- For the foreseeable future, the dominant revenue producing business activity on the Block will be forage leases for livestock grazing.
- There is a moderate potential with four management units (Lambing Canyon, Little Riddle Mtn., North Steens and Stockade) to produce revenue for the Common School Fund through leasing for renewable energy facilities (wind and solar). Whether this potential will be realized depends on a number of factors:
 - Energy market prices
 - Distance to transmission lines
 - Feasibility (cost of development, siting restrictions)
 - Location (is the wind/solar resource present?)
 - Technology

Proving out this potential could be accomplished by the Department through research (e.g. MET towers) or by testing the market with a Request for Proposals.

- As surrounding or adjacent agricultural uses reveal, there is a moderate potential for irrigated pasture, hay or cropland within parts of two management units, Saddle Butte and North Steens, and low potential in the Anderson Valley, Virginia Valley and Stockade units. More thorough market and feasibility analysis is needed. Investment of CSF monies on land clearing, seeding and water development may be justifiable under favorable market conditions and with the right crop. Staff estimates conversion costs at \$100 per acre; additional costs associated with well development, pipelines and irrigation equipment have not been estimated.
- Mineral extraction holds low potential due to the limited mineral rights held by the Common School Fund.
- Management of the vegetative community in order to maintain or enhance a healthy, properly functioning ecosystem offers significant benefits to the productive capacity of SB land. A well-managed plant community provides multiple benefits including forage, wildlife habitat and diversity, water quality, and watershed health (water quantity and soil conservation) to name a few.
- Another benefit of maintaining a healthy, properly functioning ecosystem is associated with the avoidance of federal listing of plants and animals.
- The presence of known habitat sites for special "at-risk" plant and animal species (see Map 8) reveals the importance of carefully considering ground-disturbing impacts during the planning and approval process.
- The aggressive management of invasive plants and noxious weeds is of paramount importance in order to protect the productive capacity of the land within the SB and in the surrounding area.

- Sound techniques of land management require a consistent flow of inventory and observation-based knowledge (inventory/monitor). This evidence is needed to judge the response of the land to various land treatments and management decisions. Projects are planned to achieve certain goals or standards aimed at making progress towards fulfilling the Vision. Periodic comparison of results to expectations or standards enables land managers to adjust management actions to achieve the Vision or standard. This systematic approach is often referred to as “adaptive management.” The leasehold management plans are one of the best vehicles for adaptive management on the SB.
- Management actions on the SB often affect a wide range of people and interests including adjacent property owners, Tribes, lessees, public users and other local, state and federal agencies (see Map 2). Neighborly relations and consistent communications increase awareness and understanding of the goals of managing the SB and decrease the opportunity for misunderstanding. In addition, some agencies (e.g. Oregon State University Range Experiment Station, ODFW) can offer expertise and advice helpful to the management decision-making process.

Plan Vision

This **Vision Statement** offers a compelling image of the desired future for the Stockade Block after 20 years of stewardship effort guided by this AMP. Fulfillment of the vision requires adherence to this AMP (including funding and personnel resources), completion of the implementation program and long-term support by the Department and the Land Board.

1. Business activities (e.g. land use leases) provide a stable, predictable positive net income from the land.

- **Revenue**

A stable, predictable flow of income is derived from Stockade Block land best suited for lease for grazing and other agricultural uses. The potential for irrigated agriculture, as another source of lease revenue, is thoroughly investigated and developed as economically feasible. Areas suitable for lease and development of renewable energy have been identified and conserved for that higher earning use. In some cases, the energy and grazing uses co-exist within the same area. Other compatible uses that produce income are aggressively sought out and authorized, if proven feasible.

- **Expenditures**

Management expenses are justified, reasonable and produce outcomes sought in the Vision. They may exceed available revenue in some years but the costs are acceptable given the benefit in land stewardship or financial return including capital appreciation. Land managers are able to obtain “value-added” management assistance through partnerships with lessees, natural resource agencies and other interests.

- **Investment**

Investments in rangeland improvements (e.g. fencing, water improvements), renewable energy studies, wildlife enhancements or other actions that make progress towards fulfillment of the Vision are planned, financed and conducted by lessees, project applicants, or the Department. Actions are financed privately, through grants or directly from the Common School Fund (CSF).

Investment by the CSF in capital improvements and development that aid in meeting financial return goals are subjected to risk and return analysis in order to justify the level of CSF investment.

The Department invests in technology (e.g. GPS and remote sensing) to obtain land management and natural resource information.

2. Land and resources (water, soil, vegetative communities) are well understood and managed to achieve both land and financial stewardship.

- **Land and Resources**

Except for the areas committed to developed uses associated with renewable energy production, mineral production, roads, rights-of-way or cultivated agriculture, the SB is managed to maintain a healthy, properly functioning ecosystem based on the following plant communities and percent of area:

	Current	20 Year Goal
Sagebrush steppe	62%	65%
Western juniper woodland	35%	30%
Non-native (seeded) rangeland	3.0%	4.9%
Aspen groves	0.01%	0.01%
Riparian	0.01%	0.01%
Meadows	0.01%	0.04%

The natural plant communities (does not include non-native rangeland) are balanced and provide for greater natural hydrologic function than existed prior to implementation of the Plan.

- **Land and Watershed Stewardship**

Streamside land use activities are managed to maintain water quality at or above state standards.

Western juniper is healthy and abundant within its historic sites, principally among rocky outcrops within the SB. Juniper management activities are focused on those areas outside of its historic sites where wildfire suppression has enabled juniper to disperse and thrive thereby disrupting established plant communities and ecosystems. Management of juniper dispersal and encroachment enhances local watershed hydrologic functions and benefits native ecosystems. Noxious weeds are controlled to the extent that they no longer threaten to reduce the productivity of the land.

Roads, trails, and other land developments are sited to avoid steep side slopes and unstable soils. Soil erosion is minimal and controlled.

Each leasehold management plan is up to date and reflects the results of inventory, monitoring and evaluation.

Wildlife and aquatic habitat is conserved through maintenance of a healthy functioning ecosystem among the SB's plant communities. The impacts of developed land uses on wildlife and aquatic habitat are mitigated through the conservation or enhancement of the remaining habitat on the SB.

Special Stewardship areas are managed to conserve unique or significant natural or cultural resources.

- **Inventory**

Inventories of the SB's natural resources and human environment that are most critical to management (e.g. water features, rangeland condition, big game wildlife, threatened and endangered species, noxious weed infestations, juniper cover, outdoor recreation opportunities) are complete and periodically updated. The condition of natural resources affected by lessee practices and developments are also inventoried and updated. Baseline information on critical natural resources has been gathered early on in the life of the Plan. Cultural resources are inventoried when ground-disturbing activities are anticipated. Full utilization of the latest technology (GPS and GIS) enable efficient and cost effective data collection and evaluation.

- **Monitoring**

Periodic monitoring of natural resource conditions enable the Department to determine if the land condition is responding within the established standards of healthy functioning ecosystems.

- **Adaptive Management**

The results of the inventory, monitoring and analysis guide land management decisions including investments and new use authorizations. Management is flexible in order to respond to unforeseen changes (e.g. wildfire, economic change, climate change) while maintaining progress towards the Vision.

3. Management of the Stockade Block as an asset of the Common School Fund reflects a long-term view of the land as an investment.

- **Land Tenure**

The Stockade Block remains under the control and management of the Department of State Lands as a trust asset of the Common School Fund. Some private in-holdings have been acquired in order to facilitate effective management (e.g. assure unencumbered access and control over the surrounding SB lands).

- **Land Classification**

In the short term, the land remains classified as Rangeland. In the long term, it is classified among four classes based on economic highest and best use, land use and capability: Rangelands, Agriculture, Mineral and Energy Resources (MER) and Special Stewardship (SS). The majority of the SB is designated Rangelands; areas of irrigated cropland are included as Agriculture. Areas primarily used for renewable energy are classified as MER; and significant or unique natural or cultural resource areas are managed under the Special

Stewardship classification. Forage leases continue on lands designated for use other than Rangeland when grazing use is compatible with the primary use.

- **Management Resources and Commitment**

Staff resources and project funding has kept pace with management expectation to make progress towards the Vision.

4. While meeting Trust land obligations, management of the Stockade Block considers the interests of neighbors, agencies, tribal governments, and lessees.

The SB land managers have an open, cooperative working rapport with neighboring landowners. Actions that affect their interests are communicated to them in advance; and adjustments made to reduce conflicts when feasible. Management activities and resources are coordinated when mutual benefits are identified. For example, the control of wildfire and noxious weeds is often discussed and plans for control are in place.

- **Coordination and consultation with tribal interests and agencies**

Early coordination and consultation on projects (e.g. juniper removal) has created open communication with tribal interests and the various agencies (e.g. ODFW, SHPO). Adjustments are made to projects to reduce impacts and conflicts, when feasible or legally required. Management activities and resources are coordinated when mutual benefits are identified.

An active, cooperative partnership with universities, research institutes and experiment stations and state and federal agencies engaged in rangeland, agricultural, wildlife management and recreational resources management enables land managers to obtain high-level expertise and resources on a variety of land management issues.

- **Public Users**

An ODOT-maintained highway rest area facility is located adjacent to State Highway 78. Interpretative signs explain the history and management of the Stockade Block and its relationship to the Common School Fund.

The SB is available for public use and is managed as a semi-primitive area for both motorized and non-motorized uses. The area accommodates a wide range of public uses managed to minimize effects on the land, its revenue generating capacity, the activities of all lessees and other authorized users. Recreation use is primarily associated with upland game bird and big game hunting. Dry camping is allowed in designated areas. Vehicle access is limited to certain routes in order to control noxious weeds and fires.

In keeping with a semi-primitive setting, the Department has not developed improved recreation facilities. Lessees catering to public recreation users have developed facilities to meet customer needs.

Vision Implementation Program

This section identifies the management actions that are needed to achieve the Plan Vision for the Stockade Block. The following Actions are arranged by subject area as they appear in the Plan Vision.

The time range for completion of the Action is identified: *Short-term* (1 to 5 years following Plan adoption); *Long-term* (5 to 10 years following Plan adoption); and *On-going* (the Action is continually being addressed). Achieving these Actions is dependent upon the availability of staff and resources.

In keeping with the Vision, Table 7 (below) shows the recommended Asset Land Classification and Management Action to be applied to each Stockade Block management unit. As expected, the primary classification is Rangeland. Generalized management actions shown on Table 7 emphasize actions that address rangeland, agricultural and renewable energy potential.

A. Business Activities (e.g. land use leases) provide a stable, predictable positive net income from the land.

- Action A-1: Investigate the physical feasibility and market potential of converting rangelands to irrigated agricultural land in the North Steens and Saddle Butte Management Units. Implement conversions where return on investment is justified. *Time Range: Short-term.*
- Action A-2: Investigate opportunities to increase AUMs through range improvements (structural and non-structural). For those proposed improvements that have quantifiable and measurable outcomes, conduct financial return analysis before implementation to be sure that actions will justify the revenue return. *Time Range: On-going.*
- Action A-3: Investigate renewable energy potential; encourage industry to investigate and develop alternative energy generation facilities on the SB. *Time Range: Short-term.*
- Action A-4: Monitor the Chicago Climate Exchange and any similar carbon credit investors to determine when the sale of the SB's rangeland soil carbon management offsets might be eligible for sale. Assist Oregon State University and others with studies to determine the levels of carbon sequestered annually on the SB. *Time Range: On-going.*
- Action A-5: Carefully manage investments and expenses by conducting appropriate risk and benefit analysis to CSF investments:

- Action A-5 (a): Implement project planning including leasehold management plans, to ensure that priorities are set and the most important tasks are accomplished.
- Action A-5 (b): Exercise due diligence; evaluate potential financial returns and risks on new ventures prior to commencement.
Time Range: On-going.

B. Land and resources (water, soil, vegetative communities) are well understood and managed to achieve both land and financial stewardship.

- Action B-1: Develop a program for meeting the vegetation management goals established in the Plan Vision (e.g. the conversion of western juniper woodland and sagebrush steppe). Identify method of treatments and conditions under which a treatment will be applied (e.g. prescribed burning, spraying, etc). Implement the most effective treatment to achieve the vegetation conditions articulated in the Plan Vision. Integrate the program with leasehold management plans. *Time Range: Short-term.*
- Action B-2: Inventory important internal access roads and tracks. Minimize soil disturbance to roads in areas of unstable soils or steep side slopes. *Time Range: Short-term.*
- Action B-3: Continue Rangeland Analysis. Accelerate post collection data processing. Establish and follow a schedule for periodically obtaining rangeland condition data to assist in determining if management is achieving the vision of maintaining a healthy properly functioning ecosystem. *Time Range: Short-term for schedule; On-going for implementation.*
- Action B-4: Continue inventory and mapping of invasive weeds. Continue treatments to control invasive weeds. Engage in cooperative invasive weed abatement efforts with lessees, and local, state and federal government agencies. Monitor and document the effectiveness of invasive weed abatement activities. *Time Range: On-going.*
- Action B-5: Continue monitoring recreation uses (particularly Off-Highway Vehicle use and commercially guided recreation activities) on the SB. Evaluate and develop a management strategy to minimize adverse impacts. *Time Range: Short-term.*
- Action B-6: Manage the SB to protect or mitigate impacts to resident plant and animal species that are considered “at-risk” or are listed at the state or federal level. For any proposed ground disturbing activities, and particularly for any sites identified on Map 8, conduct surveys (as

applicable) of “at-risk” and/or listed species. *Time Range: Short-term for surveys; On-going.*

- Action B-7: Require cultural resource surveys prior to any ground disturbing activity. Coordinate with State Historic Preservation Office and Tribes as applicable. *Time Range: On-going.*

C. Management of the Stockade Block as an asset of the Common School Fund reflects a long-term view of the land as an investment.

- Action C-1: Conduct a review of priority in-holdings to evaluate the advantages and disadvantages of acquiring such lands. Consider land exchange as the preferred transaction method. *Time Range: Short-term.*
- Action C-2: Re-classify land as it is converted from Rangeland to a “higher and better (income producing) use” such as Mineral and Energy Resources or Agriculture. *Time Range: Short-term.*
- Action C-3: Re-classify areas or sites to Special Stewardship as warranted based on inventory and analysis. Special Stewardship lands are those that represent a unique or significant natural or cultural resource. Management may require that the actual location of the site not be revealed on maps accessible to the general public. *Time Range: On-going.*

D. While meeting Trust land obligations, management of the Stockade Block considers the interests of neighbors, agencies, tribal governments, and lessees.

- Action D-1: Maintain communication and notice protocols designed to assure that proposed project plans and management actions are shared with lessees, neighboring landowners, tribes and local, state and federal agencies. Take actions to assure that resulting comments and input received are addressed, as appropriate. *Time Range: On-going.*
- Action D-2: Initiate contacts with ODOT, BLM, tribes and counties and, if feasible, pursue development of a Highway 78 rest area. *Time Range: Short-term.*
- Action D-3: Install signage on Highway 78 to identify the Stockade Block. *Time Range: Short-term.*

E. Other Considerations

- Action E-1: Review the Stockade Block Area Management Plan within five years of Land Board adoption and periodically thereafter. Report to the Land Board the results of efforts to implement the Plan and fulfill the Vision. *Time Range: On-going.*

Table 7 Land Classification / Management Action							
	ICR	Agriculture	Rangeland	MER	Special Stewardship	Recommended Classification	Management Action
<i>Management Unit</i>							
Anderson Valley (3,179 acres)	□	●	■	●	●	Rangeland	Maintain and enhance rangeland. Investigate solar potential.
Lambing Canyon (5,561 acres)	□	□	■	⊙	●	Rangeland/ MER	Maintain and enhance rangeland. Investigate wind potential.
Little Riddle Mtn. (9,216 acres)	□	□	■	⊙	●	Rangeland/ MER	Maintain and enhance rangeland. Investigate wind potential.
North Steens (28,097 acres)	□	⊙	■	●	●	Rangeland/ Agriculture	Maintain and enhance rangeland and agriculture. Investigate wind potential.
Saddle Butte (67,295 acres)	□	⊙	■	⊙	●	Rangeland/ Agriculture	Maintain and enhance rangeland. Investigate irrigated agriculture and solar potential.
Stockade (106,245 acres)	□	●	■	⊙	●	Rangeland/ MER	Maintain and enhance rangeland. Investigate wind and solar potential.
Virginia Valley (7,960 acres)	□	●	■	●	●	Rangeland	Maintain and enhance rangeland. Investigate irrigated agriculture potential.
ICR – Industrial/Commercial/Residential MER – Mineral and Energy Resources							
None □ Low ● Moderate ⊙ High ■							

For More Information

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