North Dakota
Board of
University and
School Lands:
Surface Land
Management
Policy Manual

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CHAPTER 1 DEFINITIONS

Definitions. The following definitions apply to this manual:

- 1. "Agricultural use" includes the use of trust lands for the purpose of grazing, cropping, haying, and honey bee pasture or meadow.
- 2. "Board" means the Board of University and School Lands.
- 3. "Commissioner" means the Commissioner of University and School Lands.
- 4. "Construction aggregate" means gravel, sand, scoria, road material, building stone, colloidal or other clays, and cement materials.
- 5. "Custodial agreement" means an agreement between the lessee and a third party in which the lessee agrees to take custody of livestock not owned by the lessee for a specified period of time and to provide day to day care for the livestock.
- 6. "Department" means the office of the Commissioner and the Department of trust lands.
- 7. "Disturbed" means any alteration of the topsoil resulting from a mining operation.
- 8. "Encumbrance" means a right other than an ownership interest in real property. The term includes easements, permits, surface damage agreements and any other restrictions, encroachments, licenses, mortgages, and liens that relate to trust lands, and specifically excludes leases for agricultural use, construction aggregate, sodium sulfate, chemical substances, metallic ores, uranium ores, and oil, gas, and coal which are administered separately.
- 9. "Fair market value" means the price set by the Commissioner after an analysis of prices paid for similar products or services in the area of the leased premises.
- 10. "Invasive species" means a species that is non-native to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.
- 11. "Lease" means a contract entered into between the Board and a third party for agricultural use or mining of construction aggregate on trust lands.
- 12. "Leased premises" means the land area subject to a given lease for agricultural use or mining of construction aggregate.
- 13. "Net construction aggregate interest" means the undivided portions of the total construction aggregate estate on a given tract of land.

- 14. "Pest" means any insect, rodent, nematode, fungus, weed, any form of terrestrial or aquatic plant or animal life, viruses, bacteria, or other micro-organisms, except viruses, bacteria, or other micro-organisms, whose presence causes or is likely to cause economic or environmental harm or harm to human health.
- 15. "Trust lands" means any property owned by the state of North Dakota and managed by the Board.
- 16. "Trusts" means permanent trusts and other funds managed or controlled by the Board.
- 17. "Vehicle" means every device in, upon, or by which any person or property may be transported or drawn upon a public highway or trail, except devices moved by human power.

CHAPTER 2 LEASING TRUST LANDS FOR AGRICULTURAL USE

Failure to pay or nonsufficient funds at auction.

- 1. The Commissioner will not issue a lease for agricultural use until payment in full is received by the Department.
- 2. A successful bidder who fails to pay for a lease shall be deemed ineligible to bid at subsequent agricultural lease auctions administered by the Board for the remainder of the current calendar year plus three additional calendar years.
- 3. If a lease payment made at auction is, for any reason, not paid by the bank on which it is drawn, the Commissioner shall notify the bidder by mail addressed to the bidder's post office address on file with the Department that payment by cashier's check or money order is required within ten business days from the date the letter is mailed.

Annual lease rental payment.

- 1. The annual lease rental payment for the second and succeeding years of a lease must be received by the Department no later than five p.m. central standard time on the last business day of January of the lease year. If payment is not received, the lease will automatically terminate without notice.
- 2. If the annual lease rental payment is, for any reason, not paid by the bank on which it is drawn after five p.m. central standard time on the last business day of January of the lease year, the lease will automatically terminate and the Commissioner may designate the lessee ineligible to bid at subsequent agricultural lease auctions for the remainder of the current calendar year plus three additional calendar years.

Assignment and use by a third party.

- A lease, or any part thereof shall not be assigned, nor shall the lessee allow the leased premises or any part thereof to be used in any manner by anyone other than the lessee without the written consent of the Commissioner. A grazing permit issued by a grazing association to a member-permittee is authorized.
- A lessee may request an assignment of a lease from the Department. The Commissioner shall approve or deny an assignment based on the best interests of the trusts. The following assignments may be approved:
 - a. An assignment without restriction to a close relative including the spouse, father, mother, son, daughter, brother, or sister for the same terms and conditions as the original lease.
 - b. An assignment of less than the full lease term to a third party if the lessee is temporarily out of the livestock business or unable to properly stock the leased

premises. Being temporarily out of the livestock business means no longer owning or leasing the livestock and personally providing for their day to day care, with the intent to return to the livestock business within two years or less. The assignment must be for two years or less. The rent payable by the assignee shall be at a rate consistent with the current year's fair market value minimum rent or the current lease price, whichever is greater.

c. An assignment to a third party with the lease expiring at the end of the current lease year. The rent payable by the assignee shall be at a rate consistent with the current year's fair market value minimum rent or the current lease price, whichever is greater.

<u>Sale of lease for agricultural use prohibited.</u> A lessee is prohibited from selling a Board issued lease for agricultural use and any attempt to do so may result in lease termination in accordance with these Board policies.

<u>Inspection by prospective lessee or purchaser.</u> The leased premises must be made available for inspection to a prospective lessee or purchaser. If the leased premises contains an occupied farmstead, a prospective lessee or purchaser must provide the current resident with at least two days advance notice of the intended time and date to inspect the property.

<u>Custodial agreement.</u> A custodial agreement may be permitted if a lessee does not own livestock or is understocked. The custodial agreement must be in writing and a copy furnished to the Department or the arrangement will be treated as third party use. Unless approval is given by the Commissioner, a custodial agreement is not permitted for more than three years.

<u>Right of entry.</u> The Department may enter the land at any time without notification for the purpose of inspecting the land and improvements.

Lease termination.

- Failure to comply with the lease terms or any Board policies may result in lease termination by the Commissioner. Before a lease is terminated, the Department must mail a notice of intent to terminate the lease specifying the reason for termination to the lessee at the lessee's post office address on file with the Department.
- 2. A lessee may file with the Department a written request for waiver or a request for Board review of the notice of intent to terminate the lease, which must include a statement of the specific grounds for the request. A request must be filed with the Department within ten business days after the date the notice of intent to terminate the lease is mailed. A request for a waiver or review is deemed filed when personally delivered or when received by the Department. The Commissioner may waive any breach except those terms required under applicable laws, or the Commissioner may allow the lessee time to cure the breach.
- 3. Not less than ten business days after the notice of intent to terminate the lease is mailed, the Commissioner may terminate the lease. Lease termination is effective upon actual delivery of a notice of termination by the Department. The notice of termination of the lease must be served personally, by mail requiring a signed receipt, or by overnight courier

or delivery service requiring a signed receipt. Failure to accept mail requiring a signed receipt constitutes service. Termination of the lease does not release the lessee from liability for any sum due the Board or from any damages due.

4. When a lease is terminated, the former lessee shall be ineligible to bid at a lease auction administered by the Department for a minimum of the remainder of the current calendar year plus three additional calendar years.

<u>Board review.</u> If the Commissioner determines that Board review of the circumstances of the lease is desirable, the lease may be brought before the Board for its consideration.

<u>Cost share on leased premises.</u> The lessee is responsible for noxious weed and invasive species and pest control on the leased premises. The Department may participate in cost share reimbursement, as follows:

- 1. Payments for state-listed noxious weed control costs;
- 2. Payments for county-listed noxious weed control costs; or
- 3. Payments for other invasive species and pests as allowed by the Department.

<u>Cost share application</u>. A lessee shall submit a request for cost share using the electronic cost share application available on the Department's website or a paper application provided on the Department's website. A lessee shall provide all information specifically required by the application and any supplemental information requested by the Department. The amount of the cost share shall be determined by the Department consistent with the Department's cost share policy.

<u>Cost share on cropland.</u> Noxious weeds and invasive species on cropland are not eligible for cost share.

<u>Cost share payments.</u> Cost share payments may be made upon receipt of an invoice for allowable expenses.

<u>Biological control agents.</u> Use of biological control agents to control noxious weeds is authorized in addition to the chemical control.

Record maintenance. A lessee shall furnish complete and accurate information concerning cultivated acres, hayland acres, noxious weed control, grazing, improvements, or any other information concerning the leased premises when requested by the Department.

CHAPTER 3 CONSTRUCTION AGGREGATE

<u>Application</u>. An applicant shall submit a request for a lease, amendment, assignment, or extension using the electronic application available on the Department's website or a paper application provided upon request. The application must clearly state whether the request is for a lease, amendment, assignment, or extension. An application submitted on any other form will not be accepted. An application fee may be charged as determined by the Board. Each application and lease is limited to a maximum of one hundred sixty contiguous acres (about sixty-five hectares) of like net construction aggregate interest. An application must be made as follows:

- 1. Lease. An applicant shall provide all information required by the application and any supplemental information requested by the Department. An application must designate the type of construction aggregate desired. An application is deemed filed and complete when the Department receives an application, the application fee, and any supplemental information requested by the Department.
- 2. Amendment. A lessee may submit a request for an amendment to a lease for a specific purpose. If the request for an amendment is granted, the Department will mail the amendment to the applicant for signature.
- 3. Assignment. A lease may be assigned upon written consent of the Commissioner. Assignments will be granted by the Commissioner through written notification to both the assignor and assignee. The Commissioner may refuse to assign a lease for good cause. The assignor shall remain responsible for compliance of all lease terms and the Board's policies until the assignment is approved by the Commissioner. Upon approval, the assignee shall be responsible for compliance with all lease terms and the Board's policies. If the request for an assignment is granted, the Department will mail the assignment to the applicant for signature.
- 4. Extension. A lessee may submit a request for an extension of a lease for up to an additional five year term to be granted at the discretion of the Commissioner. The Department may adjust the royalty rate if an additional term is granted. If the request for a lease extension is granted, the Department will mail the lease extension to the applicant for signature.

Lease terms.

- 1. Lease terms may not exceed five years.
- 2. When the lessee is a state agency or a political subdivision, the royalty rate shall be fixed for a lease term of one year or less. For a lease term greater than one year, the royalty rate shall be based on fair market value with an annual adjustment based on the current fair market value.
- 3. When the lessee is a private entity requesting less than five thousand cubic yards of construction aggregate, the term of the lease shall be for one year or less.

- 4. Leases to any entity other than a state agency or a political subdivision for a term greater than one year must be offered at public auction.
- 5. When construction aggregate is requested for an emergency, the term of the lease shall not exceed one year.

Commissioner authorization.

- 1. The Commissioner is authorized to approve and issue construction aggregate leases on the Board's behalf in accordance with these Board policies.
- 2. If an application does not comply with the Board policies, or if the Commissioner determines that Board review is desirable, the application may be brought before the Board for its consideration.

<u>Auctioned leases.</u> Notice of an auction must be published in the official newspaper of the county where the proposed leased premises are located and in the Bismarck Tribune. The notice must be published once at least ten days prior to the day of the auction. The notice must contain the legal description of the proposed leased premises, the lease term, and the time and place where the auction will be held. Bidding must be on a royalty per yard basis. Immediately after the bidding session, a public hearing will be held to receive comments as to whether a lease should be issued.

<u>Use of leased premises.</u> Lessee may use as much of the leased premises as necessary for prospecting, mining, removal of construction aggregate, and reclamation subject to the other requirements of these Board policies.

Advance royalties.

- 1. As consideration for a lease with a term greater than one year, lessee shall pay on the date a lease is issued an advance on the yearly royalty, as determined by the Commissioner, but not less than one thousand dollars.
 - a. The advance payment is due each year in which the lease is in force and is due prior to the lease anniversary date.
 - The advance payment may be credited against construction aggregate mined during the term of the lease. Advance royalty payments for which a credit is not claimed must be forfeited.
 - c. The Commissioner may adjust the advance royalty payment amount. Any adjustment takes effect on the anniversary date of the lease following a six month notice to lessee.
- 2. The Commissioner may require an advance royalty deposit for a lease with a term of one year or less. The deposit will be credited against construction aggregate mined during the term of the lease.

3. If payment is not timely received, a notice of intent to terminate lease will be issued.

Royalties. Royalties must be received by the Department by five p.m. central standard time on the last business day of the calendar month following sale, utilization, stockpiling, or removal from the leased premises of the construction aggregate mined. If payment is not timely received, a notice of intent to terminate lease will be issued. Royalties must be paid in full on any stockpiled construction aggregate remaining on the leased premises ninety days prior to the expiration of the lease.

<u>Testing.</u> The Department may require a lessee to conduct drilling tests on the leased premises prior to mining. If required, sufficient test holes must be drilled to outline the boundaries, thickness, and depth of the construction aggregate deposit and estimate the quality, quantity, and type of construction aggregate located on the leased premises. Lessee shall furnish the Department a map of the leased premises showing the boundaries of the construction aggregate deposit and furnish the Department a written report estimating the thickness, depth, quality, quantity, and type of construction aggregate. All test holes must be reclaimed to the satisfaction of the Department at the conclusion of testing. Failure to conduct test drilling when required or failure to furnish the required information will result in a notice of intent to terminate lease being issued.

Mining and reclamation plan.

- Prior to issuance of a lease, the Department, in consultation with the lessee, will develop a mining and reclamation plan for the Commissioner's approval. Mining must not begin on the leased premises unless the mining and reclamation plan is approved by the Commissioner.
- 2. The intent of the reclamation plan is to reclaim the leased premises to its previous potential use and productivity. The reclamation plan may be modified by the Commissioner and the lessee shall comply with any modifications to the plan. In the event the lessee does not comply with the modified reclamation plan, the lease may be terminated.
- 3. The reclamation plan must indicate the location of the mining operation in relation to the construction aggregate deposit and a plan for the reclamation once the construction aggregate has been removed. The reclamation plan must include the leveling of the disturbed surface at the close of mining operations to as close to its original contour as is reasonably possible taking into consideration the amount of construction aggregate removed, the preservation and re-spreading of topsoil, and the revegetation of the surface with appropriate flora.
- 4. Special reclamation plans for the propagation of wildlife habitat, the creation of a nature preserve, or other alternate land use may be required by the Commissioner, provided the costs of such reclamation do not unreasonably increase the cost of reclamation.

Bond.

- Payment of all royalties and reclamation of any portion of the leased premises that is disturbed by lessee, is the responsibility of lessee. To assure payment of royalties and satisfactory reclamation, lessee must obtain and retain in force a surety bond, in an amount determined by the Commissioner.
- 2. Lessee may, in-lieu of a surety bond, file another form of security subject to the Commissioner's approval.
- 3. The Commissioner shall set the initial surety bond amount at a minimum of five thousand dollars per acre for the initial mine area, with no initial surety bond amount being less than ten thousand dollars.
- 4. The Commissioner may adjust the amount of the surety bond annually, with the adjustment based on the estimated cost to reclaim the remaining disturbed site and the amount of stockpiled construction aggregate. If the Commissioner determines that additional surety bond or other security is required, lessee shall submit additional security within thirty days after request by the Commissioner in the form as required by this section.
- Lessee may submit a written request for a full or partial release of the surety bond to the Commissioner. At the Commissioner's discretion, the surety bond may be released in whole or in part.
- 6. Upon the payment of all outstanding royalties and satisfactory completion of the reclamation, the Commissioner shall release the surety bond. The surety bond may be forfeited to pay outstanding royalties or to complete reclamation. The Commissioner shall give final approval of the reclamation before the surety bond is released. The forfeiture of the surety bond by the lessee will not release the lessee of the duty and responsibility to reclaim the leased premises.
- 7. Upon written request, the Commissioner may waive the bonding requirement for a political subdivision or other state agency.

<u>Theft of construction aggregate</u>. Lessee shall be responsible for the loss or theft of any construction aggregate from the leased premises and such loss or theft does not relieve the lessee from the responsibility to pay royalties for the construction aggregate.

<u>Records and inspections.</u> Lessee shall keep an accurate record of the quantity, quality, and type of construction aggregate mined. The Department may audit, examine and copy any records as may be necessary to assure lessee is complying with all provisions of the lease, Board policies, and applicable laws and may examine all samples, logs, assays, or cores. All mining operations and reclamation operations may be inspected by the Department.

<u>Mining operations.</u> Lessee shall conduct mining operations in a good and workmanlike manner and in accordance with all local, state, and federal laws, and a lease may be terminated by lessor for a failure to comply. Lessee shall take reasonable steps to prevent mining operations from

unnecessarily causing or increasing soil erosion or drainage and damage to crops, pasture, or trees

Reserved rights and termination.

- Failure to comply with lease terms may result in lease termination by the Commissioner. Before a lease is terminated, the Department shall mail a notice of intent to terminate lease specifying the reason for termination, to the lessee at the lessee's address on file with the Department.
- 2. The lessee may file with the Department a written request for waiver or a request for Board review of the notice of intent to terminate lease, which must include a statement of the specific grounds for the request. A request must be filed with the Department within ten business days after the date the notice of intent to terminate is mailed. A request for a written waiver or review is deemed filed when personally delivered or when received by the Department. The Commissioner may waive any breach except those terms required under applicable laws, or the Commissioner may allow the lessee additional time to cure the lease. Termination will not release lessee from liability for royalty owed the Board, damages resulting from a breach of a lease term, or to reclaim the leased premises.
- 3. The Board reserves the right to use, rent, lease, sell, or encumber the leased premises and reserves all historical, archaeological, and paleontological materials on or beneath the surface of the leased premises. Leases for the production of coal, oil and gas, uranium, potash or other valuable minerals have priority over any lease for the mining of construction aggregate.

<u>Surrender by lessee.</u> Lessee may surrender a lease upon payment of all outstanding royalties and other debts owed the Board. Surrender of a lease does not release lessee from its responsibility to reclaim the leased premises.

Conditions on expiration, termination, or surrender. At the expiration, termination, or surrender of a lease and, upon the completion of reclamation, unless otherwise waived, lessee shall remove its property from the leased premises within one hundred twenty days from the date of expiration, termination, surrender, or the date reclamation is completed. Lessee will be liable to the Board for the costs of removal of any property remaining on the leased premises after the deadline for removal. If lessee does not remove all stockpiled construction aggregate from the leased premises by the lease expiration, termination, or surrender date, it will be considered abandoned and will become the property of the Board.

<u>Surface owner consent.</u> Where the surface of the leased premises is not managed or owned by the Board, lessee shall give the surface owner a written description of the specific locations of any land disturbance contemplated by lessee, accompanied by a map, at least one hundred twenty days prior to the commencement of any mining. Lessee shall provide the Department with proof of consent to mine from the surface owner. If there is a change in the nature of the land disturbance contemplated, an updated written description must be furnished the surface owner as soon as possible.

<u>Surface lessee protection.</u> Where the surface of the leased premises is managed or owned by the Board and is leased to a person other than the construction aggregate lessee, the construction aggregate lessee shall restore all fences that have been damaged, moved, or removed as a result of mining operations and shall further compensate the surface lessee for any damage to or loss of other improvements owned by the surface lessee.

Protection of cultural resources. If any historical, archaeological, paleontological, or other cultural artifacts, vestiges, or remains are found prior to, during, or after any exploration, testing, production, mining, or reclamation operations on the leased premises, the director of the state historical Board and the Commissioner shall be notified immediately and the site and the materials must be protected by lessee from further disturbance until a professional examination can be made or until some other form of clearance to proceed is authorized by the Commissioner. Upon written request, the Commissioner may grant an extension of the lease term for delays in operations caused by the requirements of this section. In the event no further disturbance is allowed, the lease may be terminated and lessor will refund to lessee any advance royalties not already credited or forfeited as provided in this chapter. The Department and the Director of the State Historical Board shall have authority to inspect the leased premises at all times to determine compliance with this section.

CHAPTER 4 PERMANENT IMPROVEMENTS

Permanent and nonpermanent improvements.

- 1. Permanent improvements may not be placed on, removed from, or applied to trust lands without the written consent of the Commissioner. Permanent improvements placed on or implemented on trust lands are the property of the state of North Dakota.
- 2. A lessee may place nonpermanent improvements on the land without written consent of the Commissioner. Upon expiration of the lease, the lessee may remove the nonpermanent improvements within one hundred twenty days after the lease expires. Any nonpermanent improvements not removed within one hundred twenty days become the property of the next lessee. The Commissioner, upon written application from the lessee before the end of the one hundred twenty day period, may for good cause extend the period of time for removing nonpermanent improvements.

<u>Application</u>. A lessee shall submit a request for a permanent improvement, using the electronic application available on the Department's website or a paper application provided upon request. The lessee shall provide all information specifically required by the application and any supplemental information requested by the Department.

Rent credit, cost share, and depreciation.

- 1. Rent credits, cost share, and depreciation of project costs may be authorized at the sole discretion of the Commissioner.
- Rent credits or cost share must not exceed the approved maximum project cost as determined by the Commissioner or the actual project cost, less reimbursements from non-Department sources, whichever is lower.
- 3. The Commissioner may depreciate project costs less reimbursements to the lessee from non-Department sources and rent credits or cost share from the Department for a period not to exceed ten years.
- 4. Any unexpired depreciation amount will be available from the Department before the lease auction and will be announced at the lease auction. If the former lessee is not the successful bidder at auction, the new lessee will be required to compensate the former lessee for the undepreciated amount and the Department will continue to depreciate through the original depreciation term. The Commissioner may cancel any undepreciated cost of constructing a permanent improvement if the lessee fails to offer the minimum bid for the land and the land is not leased at the next auction at which the land is offered, or if the lessee fails to comply with the conditions of the lease.

5. No rent credits, cost share, or depreciation for livestock water developments are allowed on leased premises that receive an up-front livestock water deduction in determining the minimum bid for public auction.

General standards for a permit for a permanent improvement. In reviewing an application for a permit for a permanent improvement, the Commissioner may consider the following:

- 1. Financial benefit to the trusts;
- 2. Availability of alternate site or route;
- 3. The least environmentally damaging site or route;
- 4. Physical stability of the landscape;
- 5. Whether technical assistance was sought in planning the proposed permanent improvement;
- 6. Potential for mineral development including oil, gas, coal, construction aggregate, sodium sulfate, chemical substances, metallic ore, or uranium ore;
- 7. Feasibility for reclamation;
- 8. Maintenance of existing wetlands and water flows;
- 9. Any cultural, historical, archeological, and paleontological resources;
- 10. Habitat for federally listed threatened and endangered species;
- 11. Location of the proposed route or site in relation to section lines, quarter section lines, and corridors;
- 12. Potential liability to the trusts; and
- 13. Any other information relevant to the application which would assist in the Commissioner's determination.

<u>Issuance of a permit for permanent improvement.</u> The Commissioner has authority to determine whether to issue a permit for a permanent improvement and to determine the maximum project cost, rent credit, cost share, and depreciation amounts. The Commissioner may impose such terms on a permit as the Commissioner deems necessary. A permit must be issued prior to site preparation or construction.

CHAPTER 5 ENCUMBRANCES OF TRUST LANDS

Application. An applicant shall submit a request for an encumbrance, amendment, assignment, extension, or renewal using the electronic application form available on the Department's website. The application must clearly state whether the request is for an encumbrance, amendment, assignment, extension, or renewal. An application submitted on any other form will not be accepted. An application fee may be charged as determined by the Board. An application must be made as follows:

- 1. Encumbrance. An applicant shall provide all information required by the application form and any supplemental information requested by the Department. An application is deemed filed and complete when the Department receives an application form, the application fee, and any supplemental information requested by the Department.
- 2. Amendment. An applicant may request an amendment to an encumbrance for a specific purpose, including a request to change the site location or route of a previously issued encumbrance. If the request for an amendment is granted, the Department will mail the amendment to the applicant for signature.
- 3. Assignment. An encumbrance may not be assigned unless specifically authorized by the terms of the encumbrance or upon written consent of the Commissioner. Assignments will be granted by the Commissioner through written notification to both the assignor and assignee. The Commissioner may refuse to assign an encumbrance for good cause. The assignor shall remain responsible for compliance with all terms of the encumbrance and the Board's policies until the assignment is approved by the Commissioner. If the Commissioner's approval is not required, the assignor shall remain responsible for compliance with all terms of the encumbrance and the Board's policies until the Department is notified of the assignment. Upon approval or notification, the assignee shall be responsible for compliance with all terms of the encumbrance and the Board's policies. If the request for an assignment is granted, the Department will mail the assignment to the applicant for signature.
- 4. Extension or renewal. An applicant may request an extension or renewal of an encumbrance for an additional term. Additional compensation may be requested by the Department. If the request for an extension or renewal is granted, the Department will notify the applicant.

Surveying and planning permit requirements.

1. Prior to accessing trust lands to conduct surveys, including metes-and-bounds, centerline, cadastral, ocular reconnaissance cultural resource surveys, and wetland delineations, an applicant shall obtain a surveying and planning permit from the Department. The applicant shall complete an electronic application available on the Department's website. An application is deemed filed and complete when the Department receives an application form, the application fee, and any supplemental information requested by the Department.

2. Upon issuance of the surveying and planning permit to the applicant, access to trust lands under the permit is only permissible if a third-party applicant has filed an application for an encumbrance. The surface tenant shall be notified by the third-party applicant of the required access to trust lands at least two calendar weeks prior to the date of access.

<u>General standards for an encumbrance.</u> In reviewing an application for an encumbrance, the following may be considered:

- 1. Financial benefit to the trusts;
- 2. Availability of alternate encumbrance site or route;
- 3. The least environmentally damaging site or route regardless of property ownership;
- 4. Physical stability of the landscape;
- 5. Other potential future uses for the trust lands, including urban development;
- 6. Potential mineral and other material development including oil, gas, coal, construction aggregate, sodium sulfate, chemical substances, metallic ore, or uranium ore;
- 7. Feasibility for reclamation;
- 8. Maintenance of existing wetlands and water flows;
- 9. Any cultural, historical, archeological, and paleontological resources;
- 10. Habitat for federally listed threatened and endangered species;
- 11. Location of the proposed route or site in relation to section lines, quarter section lines, and corridors;
- 12. Potential liability to the trusts;
- 13. Applicant's past encumbrances on trust lands;
- 14. Applicant's financial stability; and
- 15. Any other information relevant to the application which would assist in the determination.

Issuance of an encumbrance.

1. The Commissioner is authorized to approve and issue an encumbrance on the Board's behalf in accordance with these Board policies.

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- 2. If an application does not comply with the Board policies, or if the Commissioner determines that Board review is desirable, the application may be brought before the Board for its consideration.
- 3. The Commissioner may impose such terms as the Commissioner deems necessary. An encumbrance must be issued prior to site preparation or construction.

<u>Right of Entry.</u> The Department may enter the land at any time without notification for the purpose of inspecting the land, activity, or construction.

Expiration of an encumbrance. Unless otherwise stated in the encumbrance, the encumbrance expires two years from the date of issuance if the activity or construction is not fully completed. An encumbrance automatically terminates without notice at the end of its term or for failure to complete an activity or construction. Prior to the expiration of the encumbrance, the holder may apply for an amendment or extension in accordance with these Board policies.

CHAPTER 6 PUBLIC ACCESS AND USE

Vehicular access. The use of vehicles on trust lands is prohibited, except:

- 1. Within thirty-three feet of section lines;
- 2. As allowed by the terms of a lease, permit, or easement issued by the Board;
- 3. When used for travel on a public road easement issued by the Board;
- 4. When used by government personnel in the performance of official duties; or
- 5. When hunting under a special permit issued by the director of the North Dakota Game and Fish Department to shoot from a stationary vehicle and with written permission from the lessee and Commissioner.

Public access.

- 1. Non-vehicular public access to leased and unleased trust lands is allowed, if in the best interests of the trust, unless:
 - a. Specifically prohibited by the Commissioner; or
 - b. Lessee posts the land with signage issued by the Department, which:
 - (1) Requires notification to the lessee before entry by the public; or
 - (2) Closes the trust lands to all public access.
- 2. Lessee shall not lease, sell, or otherwise be compensated for access to, on, across or over leased trust lands.

Prohibited activities. The following activities and items are prohibited on trust lands:

- 1. Target shooting, explosives, and exploding targets;
- 2. Camping, picnicking, or camp fires;
- 3. Unattended hunting blinds, tree stands, and screw in steps;
- 4. Baiting to attract, lure, feed, or habituate wildlife for any purpose. Bait includes grains, screenings, minerals, salt, fruits, vegetables, hay, or any other natural or manufactured feeds. Bait does not include the use of lures, scents, or liquid attractants for hunting;
- 5. Disturbing or removing artifacts or any cultural, historical, archeological, or paleontological resources found on trust lands without written permission from the Board;

North Dakota Board of University and School Lands: Surface Land Management Policy Manual

- 6. Disposing of refuse including garbage, bottles, cans, trees, branches, or other waste materials:
- 7. Dog training;
- 8. Guiding and outfitting;
- 9. Collecting plant parts for sale or other commercial purposes;
- 10. Trapping, unless written permission is granted by the Commissioner;
- 11. Tree cutting and firewood gathering, unless authorized in writing by the Commissioner; and
- 12. Beehives, unless specifically authorized in a lease for agricultural use.

<u>Organized event.</u> Upon written request, the Commissioner may allow by written agreement or permit, an organized event involving public access or activity on trust lands if the event:

- 1. Is an appropriate use of trust lands;
- 2. Does not damage trust lands;
- 3. Does not negatively impact the value or financial return of the trust lands in violation of the Board's fiduciary duty to the applicable trusts as determined by the Commissioner;
- 4. Protects the state of North Dakota from liability and other claims for damage; and
- 5. Has been approved by the current lessee, if leased.

CHAPTER 7 FAIR MARKET VALUE MINIMUM RENT POLICY

In order to provide a uniform and equitable leasing system for trust lands, the Fair Market Value Minimum Rent (FMV) policy uses a market value approach to establish a minimum opening bid at public auction. The Department of Trust Lands (DTL) contracts with a vendor to conduct a survey to assess land cash rents and land prices from agricultural owners and producers at a county level throughout North Dakota (County Rents and Prices Survey (Survey)) on an annual basis. The Survey provides statistically reliable land use data to help DTL gain insight into current rental rates.

The Commissioner may adjust the grassland Resource Area Productivity Index, Region Cropland Productivity Index, and fencing and water adjustments, as needed. The Board of University and School Lands (Board) shall review any substantive adjustments that would impact the entire method.

Technical adjustments may be necessary when errors are discovered in the tract data. The Commissioner is authorized to make these and other technical adjustments that impact the minimum bid for individual tracts before the public auction or during the term of a lease, provided the lease has not been bid up.

Grassland FMV

(((((RR - F) X SE) X (GPI ÷ RAPI)) - BW*) X Grass Acres) - W* + (BF* x Grass Acres) + LF = Grassland Minimum Bid

- Regional Rent (RR): The RR is calculated based on a three-year moving average rental rate for pastureland (grassland), as annually reported in the Survey. Individual counties will typically be a region. Counties may be combined to create a region based on land resource similarity, adjacent land ownership, presence of trust lands, and low survey report numbers. (Addendum A - Grassland Leasing Regions map).
 - a. If one county is designated as a region the RR is based on that county's average rental rate.
 - b. If a region includes more than one county the RR is based on the lowest county average rental rate of the counties in the region.
- 2. Fence (F): To recognize that in most cases the Board does not provide or maintain fences, while most private landlords do, a deduction will be applied to regional rent. (Addendum B Fence Adjustment Determination for Fair Market Value Minimum Rent Policy).
- 3. Potential Survey Error (SE): Because of the potential for error in the Survey, a downward adjustment of 10% (0.90) will be applied to each regional rent. This adjustment compensates for differences reported by those who leased land, versus those who did not lease land, to keep trust lands competitively priced.
- 4. Grassland Productivity Index (GPI): DTL prepares a Grassland Productivity Worksheet to rate a tract's potential rangeland forage productivity. (Addendum C Grassland Productivity Worksheet). Tracts that potentially produce more forage in a land resource area may be

priced proportionately higher, and tracts with lower potential forage production may be priced proportionately lower, than an average tract.

For tracts not surrounded by Forest Service National Grasslands, the tracts' GPI are calculated at the "high good" productivity rate, while tracts surrounded by or adjacent to Forest Service National Grasslands or Tribal or reservation land are calculated at the "mid good" productivity rate. These ratings are based on the Natural Resources Conservation Service method of determining forage productivity. The lower GPI for tracts surrounded by or adjacent to Forest Service National Grasslands or Tribal or reservation land more closely reflects long term average use on trust land in those areas.

- 5. Resource Area Productivity Index (RAPI): The RAPI is the average potential grassland productivity for trust lands in a land resource area. (Addendum D Grassland Resource Areas map and Addendum E Land Resource Area Productivity Chart). The average is calculated by adding the carrying capacity, at the high good rating, of each individual tract within the land resource area and dividing that sum by the number of grass acres for those tracts within the land resource area.
- 6. Badlands Water Adjustment (BW*): In the Badlands, where there is lower grassland productivity, it is not always cost effective to develop water. Therefore, to recognize that livestock water sources serve multiple Badlands' tracts shared by multiple land owners, a deduction on a per grass acre basis may be applied in-lieu of providing rent credit or cost share for developing water on trust lands. (Addendum F Badlands Water Adjustment Determination for Fair Market Value Minimum Rent Policy and Addendum G Badlands Water Adjustment Tracts map).
- 7. Water Adjustment (outside Badlands) (W*): If it is determined that there is no potential development for permanent livestock water sources on the tract or on adjacent tracts, the GPI will be reduced by 40% (0.60).
- 8. Board Owned Fencing (BF*): For tracts where the Board owns a boundary fence, a positive adjustment is made to negate any Fencing (F) deduction. (Addendum B Fence Adjustment Determination for Fair Market Value Minimum Rent Policy).
- Surface Lease Fee (LF): A lease fee of five cents per total tract acre will be charged annually
 to partially offset the expenses of conducting lease auctions, issuing leases, and maintaining
 surface lease records.
- * These are tract specific adjustments that take into account a tract's unique characteristics.
- 10. Grassland Opening Bid Limits.
 - a. Minimum: The minimum opening bid for grassland will not be less than 25% of the threeyear moving average of the regional rent adjusted for potential survey error and fencing.
 - b. Maximum: The maximum opening bid for grassland will not be greater than 125% of the three-year moving average of the regional rent adjusted for potential survey error and fencing.

Cropland FMV

(((CPI ÷ RCPI) X (RR X SE)) X Cropland Acres) + LF = Cropland Minimum Bid

- Cropland Productivity Index (CPI): DTL prepares a Cropland Productivity Worksheet to rate a tract's potential cropland productivity. (Addendum H - Cropland Productivity Worksheet). Tracts that have a higher than average potential cropland productivity may be priced proportionately higher, and tracts with lower potential cropland productivity may be priced proportionately lower, than an average tract.
- 2. Region Cropland Productivity Index (RCPI): The RCPI is the average potential cropland productivity for all cropland in a region. (Addendum I Region Cropland Productivity Index map). The acreage of each cropped soil in a region is multiplied by the soil's crop productivity index. The totals for each cropped soil are added and divided by the total cropland acres in a region.
- 3. Regional Rent (RR): The RR will be calculated based on a three year moving average of the most frequently reported non-irrigated cropland rental rate, as annually reported in the Survey. Individual counties will be a region.
- 4. Potential Survey Error (SE): Because of the potential for error in the Survey, a downward adjustment of 5% (0.95) will be applied to each regional rent. This adjustment compensates for differences reported by those who leased land, versus those who did not lease land, to keep trust lands competitively priced.
- 5. Surface Lease Fee (LF): A lease fee of five cents per total tract acre will be charged annually to partially offset the expenses of conducting lease auctions, issuing leases, and maintaining surface lease records.
- 6. Cropland Opening Bid Limits.
 - a. Minimum: The minimum opening bid for cropland will not be less than the three-year moving average of the regional rent as reported by the Survey.
 - b. Maximum: The maximum opening bid for cropland will not be greater than 105% of the three-year moving average of the regional rent for cropland reported by the Survey.

Hayland FMV

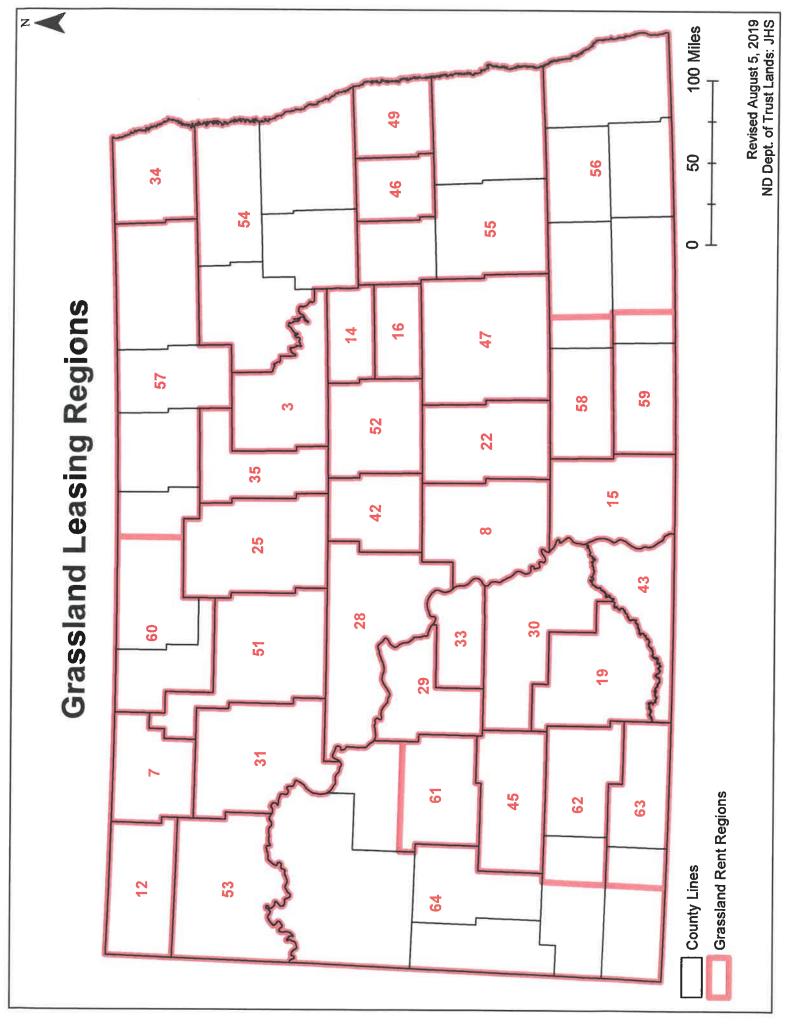
- Regional Rent (RR): The RR will be based on a three-year moving average rental rate for pastureland (grassland), as annually reported in the Survey. Individual counties will be a region. (Addendum J – Region Hayland Productivity Index map).
- 2. Hayland Productivity Index (HPI): The HPI is calculated by taking the individual tract's hayland tons per acre divided by the region's highest hayland tons per acre. (Addendum K Hayland Productivity Worksheet).

Surface Lease Fee (LF): A lease fee of five cents per total tract acre will be charged annually
to partially offset the expenses of conducting lease auctions, issuing leases, and maintaining
surface lease records.

Opening bid for terminated leases

- 1. If a lease is terminated, the tract may be offered at public auction for the remainder of the lease term, not to exceed the expiration date of the original lease.
- 2. When a lease terminates, the opening bid for that tract at the next auction will be set as follows:
 - a. For a tract that leased for the minimum opening bid, the opening bid will be calculated using the tract's current FMV.
 - b. For a tract that leased for higher than the minimum opening bid, the opening bid will be calculated at the midpoint between the current FMV and the terminated lease amount.
 - c. For a tract that leased for higher than the minimum opening bid and terminated twice within the five year lease term, the opening bid will be the previous lease amount.
 - d. For a tract that remains unleased for a calendar year, the opening bid will be calculated using the tract's current FMV.

Board of University and School Lands Effective Date: December 17, 2018



1707 North 9th Street PO Box 5523 Bismarck, ND 58506-5523 Phone: (701) 328 – 2800 Fax: (701) 328 – 3650

https://land.nd.gov



MEMORANDUM

Date: October 8, 2018

To: Jodi Smith

Commissioner of University and School Lands

Michael Humann

Surface Division Manager

From: Joseph Stegmiller 7445

Natural Resource Professional

RE: Fence Adjustment Determination for Fair Market Value Minimum Rent Policy

The fence adjustment was established in 1989 to provide a rent reduction to compensate for the lack of fence on school trust lands. The initial adjustment was set at \$1.50 per grass acre based on the material labor cost of the fence and the interest rate on a 5 year loan. The fence adjustment was reviewed in 2013 with the adjustment remaining at \$1.50 per acre reduction. The 2013 review found the cost of materials had increased but the interest rates had substantially decreased which kept the fence adjustment the same.

The following parameters were established for the fence adjustment in 2013:

- Average tract size of 320 acres which requires 2.5 miles of fence
- · Three strands of 12.5 gauge barbed wire
- 5 ½ foot steel posts with twenty foot post spacing
- 5 year loan at interest rate of 4.75% of material cost
- Labor equals material costs, while maintenance after 5 years will equal interest amount
- 30 year life (material and labor)
- 25% materials salvage value

Review of Fence Adjustment

A review of the fence adjustment was conducted to determine any changes in material costs and interest rates. Material costs were obtained from Farm and Home Supply (Bismarck Store) and Tractor Supply Company (website). Interest rates for a farm operating loan was obtained from Farm Credit Services of Mandan. The average tract size, life span of fence, and salvage value was determined to be valid and were not changed.

Material Description and Costs

Description	Amount	Cost/Unit	Subtotal
12.5 gauge barbed wire	30	\$64.99	\$1,949.70
5 1/2 foot steel fence posts (plus) clips	645	\$3.99	\$2,573.55
Wood Posts (5-6"x8', treated)	27	\$18.98	\$512.46
Wood brace timbers (4"-8', treated)	15	\$9.49	\$142.35
Smooth brace wire (9 gauge)	4	\$13.98 per 10 lb. (171 ft.)	\$55.92
2 .83	Tot	al cost of Fencing Materials	\$5,233.98

The cost of fence materials for 2.5 miles of fence was comparable to the 2013 cost with a slight reduction. The cost of materials in 2013 was \$5,480.00 which is \$246.02 more than the 2018 total.

Average Interest Payment of a \$5,233.98 loan at 6.2% interest:

Year	Payment	Principal	Interest	Balance
Yr1	\$1,270.54	\$940.51	\$324.51	\$4,382.47
Yr2	\$1,270.54	\$998.83	\$271.71	\$3,383.64
Yr3	\$1,270.54	\$1,060.75	\$209.79	\$2,322.89
Yr4	\$1,270.54	\$1,126.52	\$144.02	\$1,196.37
Yr5	\$1,270.54	\$1,196.37	\$74.17	\$0.00
A	verage Intere	est Payment	\$204.84	

The average interest rate of a farm operating loan increased from 4.75% in 2013 to 6.2%.

The following parameters were established for the Fence Adjustment in 2018:

- Average tract size of 320 acres which requires 2.5 miles of fence.
- Three strands of 12.5 gauge barbed wire (2-barbed)
- 5 ½ foot steel posts (heavy duty) with twenty foot post spacing
- 5 year loan at interest rate of 6.2% of material cost
- Labor equals material costs, while maintenance after 5 years will equal interest amount
- 30 year life (material and labor)
- 25% materials salvage value

Fence Adjustment (per acre) = $((((MC \times (1 - S)) + LC) + LS) + AI) + TS$

MC = Material Cost S = Salvage Value LC = Labor Cost LS = Life Span of Fence Al = Average Interest of 5 year loan

\$1.59 per acre = ((((\$5,233.98 x (1 - 0.25)) + \$5,233.98) + 30 years) + \$204.84) ÷ 320 acres

TS = Tract Size

Recommendation

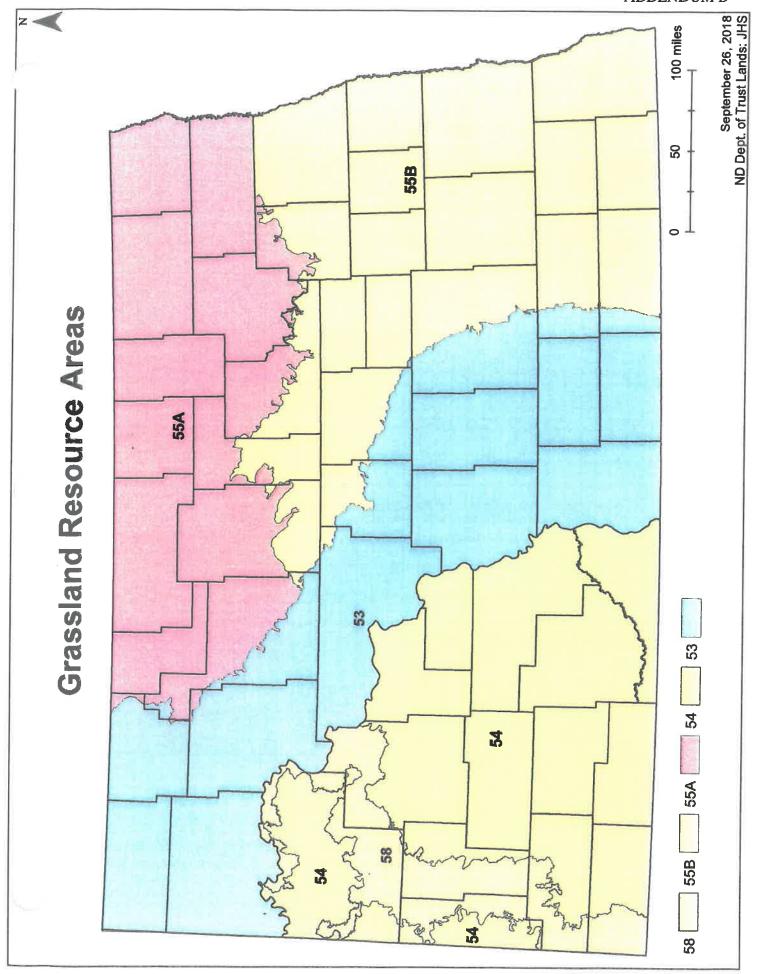
Based on the information gathered in the review, it is recommended that the Fence Adjustment be increased from \$1.50 to \$1.60 (\$1.59 rounded to the nearest tenth cent).

10-08-2018
Date
10-09-18
Date

GRASSLAND PRODUCTIVITY WORKSHEET

Subdivision	Section	Township	Range	County

Soil Symbol	Range Site	% Range Site	Acres	Adjusted Acres	AUMs/AC	AUMs	Acres
							Total
							Grass
							Hay
							Crop
							Water
							-
							Trees
							-
							Barren
							Other
ate				Mid Goo Total AU	d Ms		PI = (AUMs/grass acre)
eclass	_yesno			High God Total AU	od Ms		PI =
repared B	y:			I JULI AU	1113		(AUMs/grass acre)



LAND RESOURCE ARE ODUCTIVITY CHART

Ecological Site (abbreviation) Original Range Site (abbreviation) S3 54 Badlands Fan (BaF) Thin Upland (Tu) No 0.45 0.38 Claspey (Cy) Thin Upland (Tu) No 0.75 0.38 0.38 Claspey (Cy) Claspey (Cy) Clay O 0.50 0.50 0.53 0.44 Claspey (Cy) Clayery (Cy) Clayery (Cy) 0.60 0.50 0.53 0.44 Clayery Steep (Cy) Clayery (Cy) Clayery (Cy) 0.60 0.50 0.53 0.44 Clayery Steep (Cy) Clayery (Cy) Clayery (Cy) 0.60 0.50 0.53 0.44 Clayery Steep (Cy) Clayery (Cy) Clayery (Cy) 0.60 0.50 0.53 0.44 Clayery Steep (Cy) Clayery (Cy) Clayery (Cy) 0.60 0.50 0.53 0.44 Clayery (Cy) Clayery (Cy) Clayery (Cy) 0.60 0.50 0.53 0.44 Clayery (Cy) Clayery (Cy) Clayery (Cy) 0.60 0.50 0.53	High Good (HG) and Mid Good (MD) Stocking rates in Animal Unit Months per acre by Ecological Site) and Mid G	ood (IMD) Sto	ocking rate:	s in Antmal	Unit Month	is per acre o	y Ecologica	Site
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Overflow (Ov) 0.83 0.69 0.75 Silty (Si) or Loamy (Ly) 0.60 0.50 0.53 Overflow (Ov) 0.83 0.69 0.75 Saline Lowland (SL) 0.60 0.50 0.75 Sandy (Sa) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Shallow (Sw) 0.60 0.50 0.53 Shallow (Sw) 0.53 0.44 0.45 Shallow (Sw) 0.65	\dashv	0.53	0.44	0.68	0.57	99.0	0.63	0.45	0.38
Silty (Si) or Loamy (Ly) 0.60 0.50 0.53 Overflow (Ov) 0.83 0.69 0.75 Sands (Sa) 0.60 0.50 0.73 Sandy (Sy) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Shallow (Sw) 0.60 0.50 0.53 Shallow (Sw) 0.53 0.44 0.45 Shallow (Sw) 0.53 0.44 </td <td>0.83</td> <td>0.75</td> <td>0.63</td> <td>1.08</td> <td>0.87</td> <td>1.05</td> <td>0.88</td> <td>09.0</td> <td>0.50</td>	0.83	0.75	0.63	1.08	0.87	1.05	0.88	09.0	0.50
Overflow (Ov) 0.83 0.69 0.75 Overflow (Ov) 0.83 0.69 0.75 Overflow (Ov) 0.83 0.69 0.75 Saline Lowland (St.) 0.83 0.69 0.75 Sands (Sa) 0.60 0.50 0.75 Sandy (Sy) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Shallow (Sw) 0.60 0.50 0.53 Shallow (Sw) 0.53 0.44 0.45 Shallow (Sw) 0.65 0.65	09:0	0.53	0.44	0.68	0.57	99.0	0.63	0.45	0.38
Overflow (Ov) 0.83 0.69 0.75 Overflow (Ov) 0.83 0.69 0.75 Saline Lowland (SL) 0.83 0.69 0.75 Sands (Sa) 0.60 0.50 0.75 Sandy (Sy) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Shallow (Sw) 0.60 0.50 0.53 Shallow (Sw) 0.53 0.44 0.45 Shallow (Sw) 0.53 0.04 0.05 Wooded (trees) 0.10 0.08	-	0.75	0.63	1.08	0.87	1.05	0.88	0.60	0.50
Overflow (Ov) 0.83 0.69 0.75 Saline Lowland (SL) 0.83 0.69 0.75 Sands (Sa) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Shallow (Sw) 0.60 0.50 0.53 Shallow (Sw) 0.53 0.44 0.45 Wedland (WL) 1.58 1.34 1.5 Wedland (WL) 1.58 0.1 0.10 Wooded (trees) 0.10 0.08 0.1 Subirrigated (Sb) 1.20 1.13	+	0.75	0.63	1.08	0.87	1.05	0.88	0.60	0.50
Saline Lowland (SL) 0.83 0.69 0.75 Sands (Sa) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Shallow (Sw) 0.60 0.50 0.53 Shallow (Sw) 0.53 0.44 0.45 Wetland (WL) 1.58 1.34 1.5 Wooded (trees) 0.10 0.08 0.1 Subirrigated (Sb) 1.20 1.00 1.13	-	0.75	0.63	1.08	0.87	1.05	0.88	09.0	0.50
Sands (Sa) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Sandy Claypan (SyCp) 0.60 0.50 0.53 Sandy Claypan (SyCp) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Shallow (Sw) 0.53 0.44 0.45 Wetland (WL) 1.58 1.34 1.5 Wooded (trees) 0.10 0.08 0.1 Subirrigated (Sb) 1.20 1.00 1.13	_	0.75	0.63	6.0	0.75	0.90	0.75	09.0	0.50
Sands (Sa) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Sandy Claypan (SyCp) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Shallow (Sw) 0.60 0.50 0.53 Shallow (Sw) 0.53 0.44 0.45 Wetland (Wt) 1.58 1.34 1.5 Wooded (trees) 0.10 0.08 0.1 Subirrigated (Sb) 1.20 1.00 1.13	_								
Sandy (Sy) 0.60 0.50 0.53 Sandy Claypan (SyCp) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Shallow (Sw) 0.53 0.44 0.45 Shallow (Sw) 0.53 0.44 0.45 Shallow (Sw) 0.53 0.44 0.45 Shallow to Gravel (SwG) 0.53 0.44 0.45 Shallow to Gravel (SwG) 0.653 0.38 0.38 Wetland (WL) 1.58 1.34 1.5 Wooded (trees) 0.10 0.08 0.1 Subirrigated (Sb) 1.20 1.00 1.13		0.53	0.44	99.0	0.57	0.75	0.63	0.45	0.38
Sandy Claypen (SyCp) 0.60 0.50 0.53 Sandy (Sy) 0.60 0.50 0.53 Shallow (Sw) 0.53 0.44 0.45 Wetland (WL) 1.58 1.34 1.5 Wooded (trees) 0.10 0.08 0.1 Subirrigated (Sb) 1.20 1.00 1.13	09.0	0.53	0.44	0.68	0.57	0.75	0.63	0.45	0.38
Sandy (Sy) 0.60 0.50 0.53 Shallow (Sw) 0.53 0.44 0.45 Wetland (WL) 1.58 1.34 1.5 Wooded (trees) 0.10 0.08 0.1 Subirrigated (Sb) 1.20 1.00 1.13	09:0	0.53	0.44	89.0	0.57	0.75	0.63	0.45	0.38
Shallow (5w) 0.53 0.44 0.45 Wetland (WL) 1.58 1.34 1.5 Wooded (trees) 0.10 0.08 0.1 Subirrigated (5b) 1.20 1.00 1.13		0.53	0.44	0.68	0.57	0.75	0.63	0.45	0.38
Shallow (\$w) 0.53 0.44 0.45 Shallow (\$w) 0.53 0.44 0.45 Shallow (\$w) 0.53 0.44 0.45 Shallow to Gravel (\$w\$G) 0.45 0.38 0.38 Wetland (Wt) 1.58 1.34 1.5 Wooded (trees) 0.10 0.08 0.1 Subirrigated (\$b) 1.20 1.00 1.13	+	0.45	0.38	09.0	0.50	09.0	0.57	0.30	0.25
Shallow (5w) 0.53 0.44 0.45 Shallow (5w) 0.53 0.44 0.45 Shallow to Gravel (5wG) 0.45 0.38 0.38 Wetland (WL) 1.58 1.34 1.5 Wooded (trees) 0.10 0.08 0.1 Subirrigated (5b) 1.20 1.00 1.13	+	0.45	0.38	09.0	0.50	09.0	0.57	0.30	0.25
Shallow (5w) 0.53 0.44 0.45 Shallow to Gravel (5wG) 0.45 0.38 0.38 Wetland (WL) 1.58 1.34 1.5 Wooded (trees) 0.10 0.08 0.1 Subirrigated (5b) 1.20 1.00 1.13	+	0.45	0.38	09.0	0.50	09.0	0.57	0.30	0.25
Shallow to Gravel (5wG) 0.45 0.38 0.38 Wetland (WL) 1.58 1.34 1.5 Wooded (trees) 0.10 0.08 0.1 Subirrigated (5b) 1.20 1.00 1.13	0.53	0.45	0.38	09.0	0.50	09.0	0.57	0.30	0.25
Wetland (WL) 1.58 1.34 1.5 Wooded (trees) 0.10 0.08 0.1 Subirrigated (Sb) 1.20 1.00 1.13	0.45	0.38	0.38	0.45	0.38	0.53	0.44	0.24	0.20
Wooded (trees) 0.10 0.08 0.1 Subirrigated (5b) 1.20 1.00 1.13	+	1.5	1.25	1.80	1.50	1.95	1.63	1.16	0.97
Subirrigated (Sb) 1.20 1.00 1.13	+	0.1	0.08	0.10	0.08	0.10	80.0	0.10	0.08
Subirrigated (5b) 1.20 1.00 1.13	+	0.1	0.08	0.10	0.08	0.10	0.08	0.10	0.08
	-	1.13	0.94	1.13	0.94	1.28	1.07		

LAND RESOURCE ARE? ODUCTIVITY CHART

Subirrigated Sands (SbSa)	Subirrigated Savannah (SbSv)	0.83	69'0	No	No	0.83	69.0				
Thin Claypan (TCp)	Thin Claypan (TCp)	0.23	0.19	0.19	0.16	09.0	0.19	0.30	0.25	0.15	0.13
Thin Sands (Tsa)	Thin Sands (Tsa)	0.45	0.38	0.45	0.38	0.53	0.44	0.60	0.5	0.30	0.25
Thin Sandy (Tsy)	Thin Upland (TU)	0.53	0.44	0.45	0.38	09.0	0.44	09.0	0.57	0.30	0.25
Thin Loamy (Tly)	Thin Upland (TU)	0.53	0.44	0.45	0.38	09.0	0.44	09.0	0.57	0.30	0.25
Very Shallow (VS)	Very Shallow (VS)	0.23	0.19	0.19	0.16	0.23	0.19	0.30	0.25	0.20	0.13
Wetland (WL)	Wetland (WL)	1.58	1.34	1.5	1.25	1.80	1.50	1.95	1.63	1.16	0.97
Wet Meadow (WM)	Wet Meadow (WM)	1.20	1.00	1.2	1.00	1 28	1 07	1 35	1 13	1 10	000

Average Distance to Center of Grazing Unit

To provide the most effective grazing utilization, the livestock water tank should be located near the center of the tract. For a section of land (640 acres) the shortest distance for a straight line pipeline route to travel to the center would be 2,640 feet. The longest distance a straight line pipeline route would travel is 3,733.5 feet. Since the terrain within the Badlands is rough and broken, the pipeline would be routed to avoid certain terrain which would increase the footage. Therefore, it is proposed the distance a pipeline should travel to reach the center of the tract is 3,733.5 feet.

Average Life Span of Water Source

Based on the NRCS specifications, the life span of a livestock water pipeline (Code: 516) is 20 years if installed and maintained correctly. It is recommended the average life span of a pipeline be set at 20 years for the Badlands Water Adjustment.

The following cost per acre deduction was computed based on the proposed review criteria:

Cost Reduction (per acre) = $((C \times L) + LS) + TS$

C = average cost per foot of installation
L = average length to reach center of tract
LS = average life span of pipeline
TS = average tract size

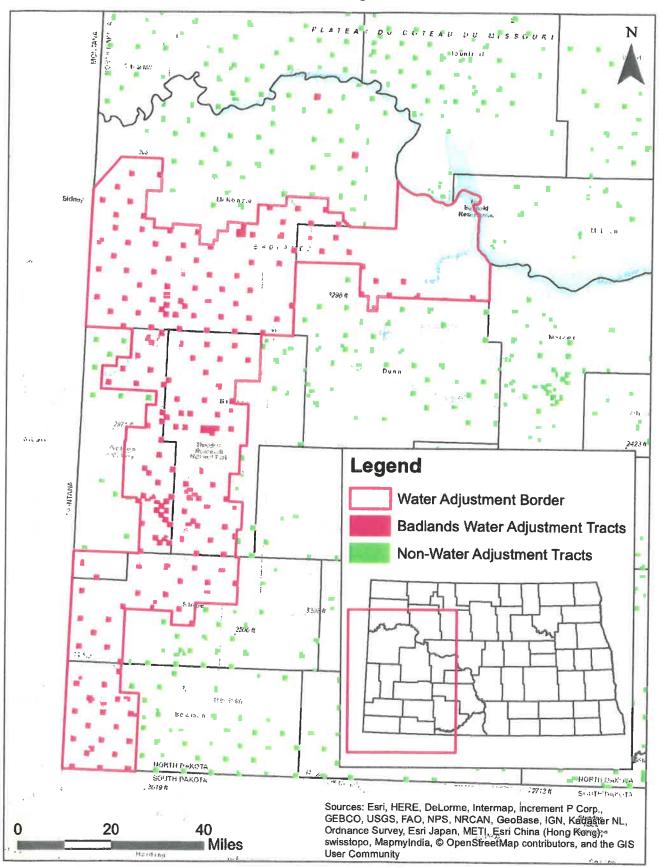
\$0.88 per acre = ((\$3.00/ft. x 3,733.5 ft.) + 20 year life span) ÷ 640 acre tract

Recommendation

It is recommended the criteria for determining the Badlands Water Adjustment be adjusted to reflect the most prevalent livestock water development in the area and the water adjustment be increased from \$0.65 to \$0.85 per grass acre for tracts within the Badlands Water Adjustment.

Michael Humann Manager, Surface Management Division	10-08-2018 Date
Jodi Smith Commissioner of University and School Lands	10-09-18 Date

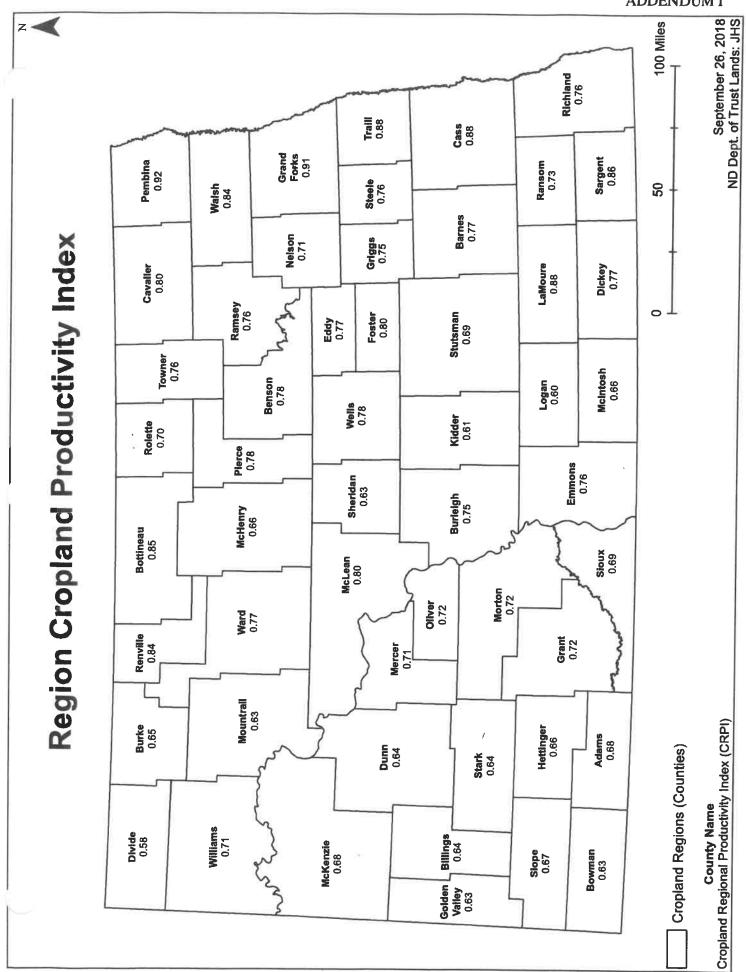
Badlands Water Adjustment Tracts

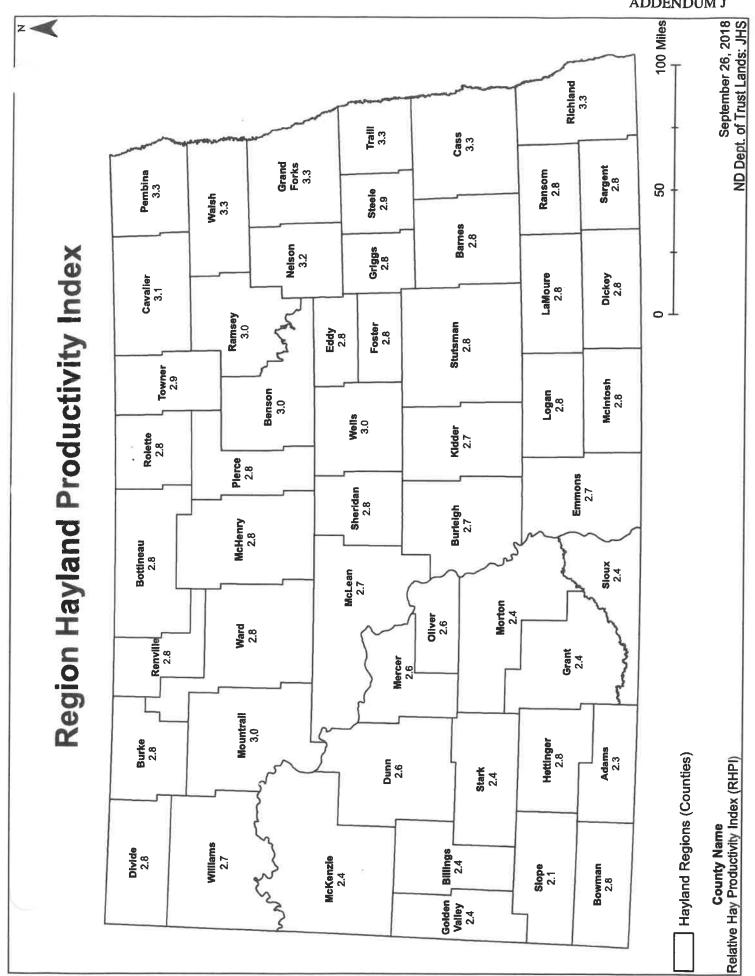


CROPLAND PRODUCTIVITY WORKSHEET

Subdivision	Section	Township	Range	County

Soil Symbol	Soil Type	% Soil Complex	Acres	Adjusted Acres	Production Index (PI)	Pl/Total Crop Acs	
							Total
							Grass
							Crop
							Water
							Trees
							Barren
				31			Other
				Total D			
Prepared I	_yesno			rotal P	rorated Index		





HAYLAND PRODUCTIVITY WORKSHEET

Subdivision	Section	Township	Range	County

Soil Symbol	Soil Type	% Soil Complex	Acres	Adjusted Acres	Tons/AC	Tons	Acres
							Total
							Grass
							Hay
							Crop
							Water
							Trees
							Other

Total Tons

Date			
	Total Tons / Hay Ac = Tract Tons Per Ac	()	
Reclassyesno			
	Tract Tons Per Ac / County Tons Per Ac = Hayland Pl	() input # to	
Prepared By:	SURF		

g:\surface\forms\inspecti\hayland productivity wksht.doc General Worksheet - Forms "Approval" Not Required April 2003/Updated Nov 08