

Forest Stewardship Assistance

All programs and assistance are offered on a nondiscriminatory basis without regard to race, color, national origin, religion, sex, age, marital status, or handicap.



Name Robert & Anne MITCHELL
Address P.O. Box 315 City Hudson
State CO Zip code 80642 Phone 888-1188

I recognize that ownership of my property not only grants me the right to manage this property for my benefit, but also carries with it the responsibility to be a good steward of the land and the natural resources on it. As a good steward I wish to improve the productivity, enhance the natural resources, and preserve future options for the use of this property.

The legal description of my property is SW¹/₄ W¹/₂ of N¹/₄, W¹/₂ of SE¹/₄, section 20, township 1 North, range 64 West, _____ principal meridian, Weld County, Colorado. Acres of forest land: _____, acres of land suitable for growing trees: _____, total stewardship acres: 320.

My objectives for forest stewardship management are:

- healthy forest
- aesthetics
- insect and disease control
- fire prevention and fuel reduction
- wildlife habitat improvement for (species) _____
- soil & water protection or improvement
- riparian area improvement
- grazing improvement
- forest products
- forest agriculture (property tax) classification
- conservation planting for:
 - windbreak or shelterbelt
 - screening
 - noise abatement
 - wildlife habitat for (species) _____
 - Christmas trees
 - erosion control
 - reforestation
- other (specify) _____

In order to be a good steward of my property I am requesting the assistance of _____ to help me develop a stewardship plan to guide me in the managing the resources entrusted to me. I understand that this plan may qualify me for Stewardship Incentive Program (SIP) cost sharing.

Robert & Anne Mitchell
Landowner's signature

Feb 13, 1995
date

SIP-100
(10-01-91)

U.S. DEPARTMENT OF AGRICULTURE
Stewardship Incentive Program

1. COUNTY <i>Weld</i>	2. STATE <i>Co</i>
3. ASCS FARM NO. <i>7100</i>	4. CONTROL NO. (from SIP-245)
5. LANDOWNER NAME AND ADDRESS <i>Anne Marie Mitchell Po. Box 351 Hudson Co 80642</i>	

SIP ELIGIBILITY WORKSHEET

NOTE: This worksheet should be attached to the SIP-245 and remain attached throughout the cost-share process.

The following statements are made in accordance with the Privacy Act of 1974 (5 USC 552a). The Food, Agriculture, Conservation, and Trade Act of 1990 authorizes the collection of the following data (36 CFR Part 230). The information is necessary to determine eligibility to participate in the Stewardship Incentive Program (SIP). Furnishing this data is voluntary; however, without it participation in the program may be denied. Any fraudulent claim made hereunder may subject the applicant to Federal, criminal and civil penalties as provided in 18 USC 287, 1001; and 31 USC 231. The data may be furnished to other USDA agencies, IRS, Department of Justice, or other State and Federal law enforcement agencies, and in response to orders of a court magistrate or administrative tribunal.

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate, or any other aspect of this collection of information, including suggestions for reducing this burden, to the Department of Agriculture, Clearance Officer, OIRM, Room 404-W, Washington, D.C. 20250; and to the Office of Management and Budget, Paperwork Reduction Project (OMB No. 0596-0120), Washington, D.C. 20503.

PART 1 - ELIGIBILITY CHECKLIST - TO BE COMPLETED BY ASCS

Check "Yes" or "No" for each:	YES	NO
6. The applicant actually owns the land.	<input checked="" type="checkbox"/>	
7. The landowner is not a Federal, State, or local government agency or other governmental organization.	<input checked="" type="checkbox"/>	
8. The landowner, if a corporation, is not a publicly traded corporation.	<input checked="" type="checkbox"/>	
9. The landowner is not principally engaged in the production of wood products.	<input checked="" type="checkbox"/>	
10. The landowner does not own more than 1,000 acres of NIPF (Non-Industrial Private Forestland), or not more than 5,000 acres of NIPF with an eligibility waiver signed by the State Forester.	<input checked="" type="checkbox"/>	
11. The landowner owns at least the minimum acreage of NIPF that has been established for SIP eligibility by the State Forester.	<input checked="" type="checkbox"/>	
12. The practice is voluntary, or is not required by Federal, State, or local government laws or regulations.	<input checked="" type="checkbox"/>	
13. The practice was not started prior to submission of the application to ASCS.	<input checked="" type="checkbox"/>	
14. The practice has not been established and currently does not exist on the site as a result of previous Federal cost-sharing.	<input checked="" type="checkbox"/>	
15. Other (explain)		

The eligibility information above is provided by ASCS for use by the Service Forester for making eligibility determinations. This information is provided only as a recommendation, and is only based on information made available at the time of application.

16. Signature (Landowner) <i>Anne Marie Mitchell</i>	Date <i>6-6-95</i>
17. Signature (CED or designee) <i>Charles J. ...</i>	Date <i>6-6-95</i>

Supporting statements or documents, if any, are attached by ASCS.

PART 2 - ELIGIBILITY DETERMINATION - TO BE COMPLETED BY THE SERVICE FORESTER

Check "Yes" or "No" for each:	YES	NO
18. The practice requested was determined to be needed and practical (from AD-862).	<input checked="" type="checkbox"/>	
19. The application meets all explicit eligibility criteria and is eligible for cost-sharing at this time because it is higher priority and ample funds are available. ("No" should be checked when eligible applications are not approved because of priorities, or ample funds are not available.)	<input checked="" type="checkbox"/>	
20. Other (explain)		

ELIGIBLE INELIGIBLE →

An INELIGIBLE determination is based on the following from item(s) 6-15 or 18-20 that are checked "No". _____ (Enter numbers) (Note: Service Foresters have the authority to make determinations for items 6-15 regardless of ASCS's recommendation.)

21. Signature (Service Forester) <i>Richard C. Gray</i>	Date <i>6/6/95</i>
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Supporting statements or documents, if any, are attached by the Service Forester.

NOTE to Service Foresters: The original signed copy of this form must be returned to the county ASCS office with each SIP-245 so that ASCS can properly notify the applicant of their application approval/disapproval.

This program or activity will be conducted on a nondiscriminatory basis without regard to race, color, religion, national origin, age, sex, marital status, or handicap.

FOREST STEWARDSHIP PLAN

FOR

Robert and Anne Mitchell
P.O. Box 315
Hudson, Colorado. 80642

A portion of
SW 1/4, W 1/2, of the NW 1/4
and the W 1/20 of the SE 1/4 of
Sec. 20, T1n, R 64w

Weld County Colorado

Prepared By:

Richard C. Gray
Colorado State Forest service
936 Lefthand canyon Drive
Boulder, Co 80302
(303) 442-0428

This stewardship plan has been prepared at my request to guide my management activities which I voluntarily apply to my property. I believe that the activities recommended in this plan are appropriate to meet my objectives and will benefit the natural resources on my property. I intend to apply the recommended practices and to maintain them for a period of at least ten years, thus helping me to be a good steward of the forest and associated resources entrusted to me on my property.

Anne M. Mitchell

LANDOWNER

5-22-95

DATE

STEWARDSHIP PLAN

Dear Mr. and Mrs. Mitchel:

It was a pleasure meeting with you to discuss the development of a stewardship plan for your property. At our meeting you expressed several concerns and desires for management activities on your property. The following plan will address these concerns and make recommendations to meet your goals.

LANDOWNER OBJECTIVES

During our site visit several objectives were brought forth.

- 1) To establish a windbreak to protect a future home.
- 2) To establish vegetative cover on critical areas of soil erosion.
- 3) To convert crop land to permanent grass cover for haying and grazing.
- 4) To establish and enhance wildlife cover and habitat.

In meeting these objectives several secondary benefits such as aesthetics, wildlife habitat and soil protection will be achieved.

GENERAL DISCUSSION

Location/site description

The Mitchel property is located in south central Weld County near the town of Hudson, and encompasses 320 acres.

The property is currently used for farming. The majority of the acreage is in crop production. There is an old home site in the center of the property, this is the approximate location for the new house. There is a wetland area to the south of this location. There are three old check structures in this area. The Denver/Hudson Ditch crosses the property. As identified in the Natural Resources Conservation Service (NRCS) farm plan there are 4 distinct areas on the property. Crop land, wetland, pasture land and the home site. This plan will make recommendations for these areas that are compatible with those of the NRCS.

Climate

The climate in South central Weld County is characterized by cold, dry winters, and warm, relatively dry summers. Average precipitation is 12 inches per year with 75% occurring from April to September. Periods of drought are frequent. Thunderstorm activity is prevalent and sometimes severe. Climatic information effecting vegetation management is as follows:

Data is from Soil survey of Weld County.

- A) Mean annual air temp. is 48 degrees
- B) Frost-free season is 143 days.
- C) Average temperature: January is 25 degrees; July is 73 degrees.
- D) Length of growing season is 150 days.
- E) Average date of the first killing frost is September 29th .
- F) Average date of the last killing frost is May 11th.

Land Use

HISTORIC

Prior to settlement this area was characterized by short and mid-grass prairie. As settlement occurred farming and ranching became prominent. This activity removed much of the native prairie and converted it to crop or pasture land. Past over use of this area has resulted in soil erosion.

CURRENT

As stated before there are 4 distinct land uses on the property.

- 1) Crop land
This area consists of 132 acres that is in a winter wheat/fallow ground situation. This area was farmed as recently as this past year.
- 2) Wetland
This area is 56 acres of stream bottom marshy habitat. The area is predominantly used by wildlife and is grazed by horses.
- 3) Pasture land
This area is 85 acres in size and is over utilized by prairie dogs.
- 4) House site
This area is to be developed into a current home site.

FUTURE

Each of the 4 areas will be converted to a different land use. The land owner is planning on taking the crop land out of production and converting it to hay ground. Likewise the pasture area is to be improved and some of the area converted to hay lands. The wetland will be intensively managed for wildlife and water. The home site will be utilized for the farmstead.

Inventory

For the inventory, the property was designated into the above 4 areas. 1) cropland, 2) wetland, 3) pasture, 4) house site, 5) Ditch. Areas 1 - 4 are further broken down by field number as described by NRCS.

Vegetation

For a description of vegetation occurring on the site refer to the plan from NRCS. Additional vegetation included willow and cottonwood trees along the ditch, and a thicket of black locust that is associated with the old home site. This thicket is most likely a remanent planting from past years and was used for soil protection and or fuel wood production.

Soil & Water

There are 6 soil types occurring on the property, they are: Colby-Adena Loams, Nunn Loam, Terry Fine Sandy Loam, Vona Loamy Sand, Vona Sandy Loam, and Weld Loam. Please refer to appendix for soil descriptions and soils map. All soils with the exception of Terry Fine Sandy Loam are well suited to windbreak and wildlife plantings.

The following trees are listed as suited on your soils

Eastern Red Cedar	Ponderosa Pine
Russian Olive	Siberian Elm
Lilac	Caragana
Sumac	Hackberry
Rocky Mt. Juniper	Siberian peashrub

Wildlife

Currently the majority of wildlife use the wetland area (field 8) for habitat as well as the locust thicket at the home site, and the area adjacent to the ditch. During the inspection several species of wildlife was observed including, jack rabbits, cotton tail rabbits, red-tailed hawks, and a variety of water fowl. There are currently 3 nesting pairs of mallard ducks on the property.

RECOMMENDATIONS

The following recommendations are in addition to and will compliment the ones made by the NRCS. These recommendations are based on the assumption that NRCS's will be implemented.

- 1) Establishment of a wind break planting to protect the house and farm stead area.
- 2) Establish field windbreaks to increase soil moisture and provide protection for live stock.
- 3) Improve the condition of the locust stand.
- 4) Develop field 8 as a wildlife habitat area.
- 5) Develop wildlife habitat in other areas on the property.

Procedures

For recommendation #1:

The primary purpose is to plant a windbreak. This will include a 4 row planting on the north and west side of the house. The first row (outermost) will be a shrub row. Species to use would be Caragana, Lilac, or Quailbush. Space shrubs at 4 foot intervals. Row two (middle-out side) will be a planting of mid-sized evergreen trees. Species to use is Eastern Red Cedar, plant 8 feet apart. The third row (middle inner-side) is a planting of Hackberry, plant on a 10 foot spacing. The fourth row is a planting of large evergreen trees. Use Ponderosa or Austrian pine, planted in a 10 foot spacing. The area should be site prepped prior to planting and machine planted in the spring. Cover all rows with fabric mulch. Supplemental water will be needed for at least the first three years. This would best be accomplished through a drip irrigation system. If you choose to implement this practice a detailed planting plan will be developed and added to this plan.

For recommendation #2:

This is the development of a series of field windbreak/living snow fences. This is an attempt to catch and retain winter snows to supplement water to your hay crop. These plantings will be a double row of Rocky Mountain Juniper or Eastern Red Cedar. Plant on a 10' by 8' spacing. Ten feet between rows, and 8 feet between trees. These plantings can also create excellent wildlife habitat. A twin row of shrubs planted 150' on the leeward side of the Juniper/Cedar rows can be added. These plantings will take up minimal area and would only slightly reduce your hay production. The area should be site prepped prior to planting and machine planted in the spring. Cover all rows with fabric mulch. If mulch is not used the area between the rows could be planted to a wildlife food crop, and the area adjacent to the trees kept weed free through cultivation. If this is the choice, maintain a weed free strip of 3 feet on both sides of the trees. A living snow fence along your driveway will ease your winter time access to the property. If you choose to implement this practice a detailed planting plan will be developed and added to this plan.

For recommendation #3:

This is the improvement of the existing stand of black locust. Currently this stand is overcrowded and stagnating. The stand should be thinned to promote the development and growth of better quality trees both for wood production as well as wildlife habitat. A selective thinning should be carried out on the area. Select the best formed healthy trees and thin any trees that are in contact with that tree. Approximately 1/3 to 1/2 of the trees should be thinned. Black Locust makes excellent fence posts and fuel wood, these could be utilized on the property. Any material not utilized should be piled for wildlife. These piles should be placed in and around the Locust stand as well as out in field 8. If you desire, the Colorado State Forest Service can mark the stand for you.

For recommendation #4:

This deals with improving wildlife habitat in field #8. This area should be fenced off from your other areas. Follow the recommendations of Mr. Randall as outlined in his wildlife plan. In addition to his

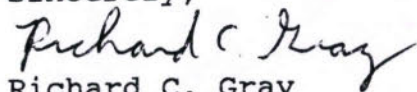
recommendations; wildlife feeding, nesting, and cover areas could be developed. This would entail planting a series of shrub/tree thickets throughout the area. These thickets are approximately 1/10th acre in size, a total of 8 could be established. In addition to the thickets a series of corridor plantings could be placed to connect the thickets. Interspurced throughout this area, plots of un-harvested grains could be planted to provide wildlife feed. These plantings should be adjacent to the thicket and corridor plantings. A series of nesting structures erected for waterfowl would be beneficial. Plantings in this area would include: Hackberry, Cottonwood, Elm, Willow, Caragana, Honeysuckle, Plum, and Cherry. Grain crops to plant include: Wheat, Sorghum, Corn, or Sunflowers. These feeding/cover areas could also be dispurced across the property in areas that are not being utilized for other crops. There are several cost share programs that cover this type of management, a partial list is in the appendix. If you choose any or all of the components of this recommendation a detailed plan will be developed jointly with all agencies involved.

For recommendation #5:

This covers wildlife habitat in other areas of the property. Creation of thickets and feeding areas as described in #4 is advisable through out the property. These areas can be identified on site and the particular practice laid out. Protection of existing stands of native plum will be very beneficial. In any areas such as, old washes, wildlife habitat plantings should be placed for wildlife as well as soil protection. In the area of heavy parie dog activity, place roosting poles for Hawks. This will aid in future control of this problem animal.

It has been a pleasure working with you in your stewardship endeavors. I have included information on cost share practices which you are eligible for. IF you choose to,do a recommendation listed above please contact me so we can get the appropriate paper work filed, as well as outline the practice on the ground. If I can be of further assistance, please contact me.

Sincerely,



Richard C. Gray
Forester

APPENDIX

STEWARDSHIP INCENTIVES PROGRAM
(SIP)

You are eligible for the following cost share amounts:

Under SIP 3 (Woodland improvement) 65% of the cost of installation up to a maximum of \$200/acre. }

Under SIP 4 (Farmstead Windbreak) 65% of the cost of installation up to a maximum of \$450/acre.

Under SIP 4 (Mulch) 65% of the cost of installation up to a maximum of \$775/acre. Maximum cost share of \$259.

Under SIP 4 (Irrigation) 65% of the cost of installation up to a maximum of \$656/acre.

Under SIP 4 (Field windbreak) 65% of the cost of installation up to a maximum of \$.20/linear foot.

Under SIP 6 (Fencing) 65% of the cost of installation up to a maximum of \$.75/foot.

Under SIP 8 (Wildlife habitat mgt.) 65% of the cost of installation up to a maximum of \$450/acre.

Under SIP 8 (Wildlife pothole) 65% of the cost of installation up to a maximum of \$200/pothole. 3 x 200 . 95 All . . WWF June 30 Sept 30^B

Under SIP 8 (Shrub thicket) 65% of the cost of installation up to a maximum of \$280.

Under SIP 8 (Control of competing vegetation) 65% of the cost of installation up to a maximum of \$20/acre. 2 AC June 30 Sept 30TH

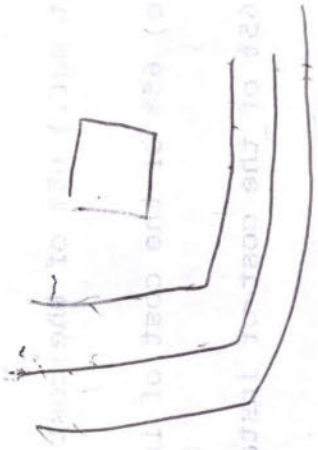
Under SIP 8 (Wildlife structures) 65% of the cost of installation up to a maximum of \$20/structure.

If you are interested in applying for cost share for this planting season, you will need to sign up at the ASCS Office of Weld County. They are located in Greeley. Bring this sheet so required information can be filled out.

MEMBERSHIP INCENTIVE PROGRAM

Under SIP 1 (Woodland Improvement) 50% of the cost of installation up to a maximum of \$200/acre.
 Under SIP 2 (Fencing) 50% of the cost of installation up to a maximum of \$500/acre.
 Under SIP 3 (Field Windbreak) 50% of the cost of installation up to a maximum of \$250/acre.
 Under SIP 4 (Wildlife Habitat) 50% of the cost of installation up to a maximum of \$200/acre.
 Under SIP 5 (Wildlife Habitat) 50% of the cost of installation up to a maximum of \$200/acre.
 Under SIP 6 (Wildlife Habitat) 50% of the cost of installation up to a maximum of \$200/acre.
 Under SIP 7 (Wildlife Habitat) 50% of the cost of installation up to a maximum of \$200/acre.
 Under SIP 8 (Wildlife Habitat) 50% of the cost of installation up to a maximum of \$200/acre.
 Under SIP 9 (Wildlife Habitat) 50% of the cost of installation up to a maximum of \$200/acre.
 Under SIP 10 (Wildlife Habitat) 50% of the cost of installation up to a maximum of \$200/acre.

$$\begin{array}{r} 2250 \\ 27000 \\ \hline 29250 \end{array}$$



$$\begin{array}{r} 1450 \\ 292 \\ \hline 742 \end{array}$$

$$\begin{array}{r} 292 \\ 503 \\ 7 \\ \hline 13 \\ 775 \\ 65 \\ \hline 3875 \\ 8400 \\ \hline 12275 \end{array}$$

1904

UNITED STATES
DEPARTMENT OF
AGRICULTURE

NATURAL RESOURCES
CONSERVATION
SERVICE

60 S. 27TH AVE.
BRIGHTON, CO. 80601
(303) 659-7004

February 7, 1995

Mr. & Mrs. Mitchell

RE: Optional Recommendations

PRESENT CONDITIONS

Listed below are four distinct micro environments present on this land. For a visual reference, see the enclosed map.

They include:

Winter Wheat/Fallow Ground:

132.2 acres, including fields 1, 2, 5, 6, and 10. Uneven terrain, and showing evidence of significant past erosion. Approximately one acre in field 5 (see enclosed map), has a severe Canada thistle infestation.

Wetland Wildlife Habitat Area:

56 acres (approximately), including field 8, located in the draw of the current pasture area. Three older check structures are in place. Hydrophytic vegetation includes several species of sedges, rushes, inland saltgrass, and cattails.

Pasture Land:

85.2 acres (approximately), including fields 7 and 9. Appears to have been overgrazed in the past. It is also heavily infested with prairie dogs. Current percent ground cover for this area averages seven percent, with approximately 93 percent of this area left in bare ground. Vegetation includes inland saltgrass, cheatgrass, Rubber rabbitbrush (this plant could also be Douglas rabbitbrush), Alkali Sacaton, wheatgrass (possibly western and intermediate), thistle, curly doc, common mullein, and trace amounts of various other species. The prairie dog holes are approximately ten to twenty feet apart throughout this entire area.

Other Land:

11.1 acres, including fields 3 and 4, part of which was the original homesite, and an area to the west that was not cropped for at least this last year. The old home site is predominantly under tree cover, and the other 8.3 acres is under rye, sand dropseed, and cheat grass.

OPTIONS

Field 1:

We have discussed the possibility of seeding this to native dryland grasses for grazing. Please refer to the enclosed seeding recommendation labeled 'OPTION 1', for the recommended species, varieties, and seeding rates.

The recommended seeding dates are between November 1 and April 30 on unfrozen ground. Seeding depth should be between one-quarter and three-quarters of an inch deep. For best results, the seeding should be done with a grass drill equipped with double disc furrow openers, an agitator box, and drop tube placement directly between the discs. The drill rows should be run perpendicular to the prevailing erosive winds, which are out of the northwest in this area.

Seedbed preparation should include a light tillage operation, to create a firm and friable seedbed. It may be necessary to relieve the competition from volunteer wheat by using a one-time contact chemical application or an additional tillage operation. Please refer to a local chemical representative for the recommended chemical and rate of application. Prior to any chemical application, check out the residual life of the chemical that you apply to ensure that it will not interfere with your planting date.

Post Grass Seeding:

Weed control for this area should be accomplished with timely mowing. We recommend that you do not apply chemicals to new grass seedings until they reach the five leaf stage; even if it is a chemical that targets only broad-leaf species and not grasses. Mow the weeds down after they have produced a seedhead, but before the seed reaches maturity and becomes viable. This will occur at different times of the year for different weed species. For example mowing rye is usually most effective if done in the last week and a half of May to the first week of June. If purple top was the main weed problem, mowing would probably have to occur a week to two weeks earlier than that. We will be available to help you determine the main weed problem and the best the best time for control.

I have written two scenarios for management of field 1, to address both dryland conditions and irrigated conditions:

Field 1 Under Dryland Conditions:

The seeded native grasses may take up to four growing season to establish themselves well enough to provide forage for grazing. It may only take one or two growing seasons, if climatic conditions are favorable.

Caution: It is very important to the stand longevity to let the grass establish an adequate root system prior to grazing. Even if you have four inches or more top growth, your root system may not be adequate.

Annual production per acre of useable forage is probably going to average 800 to 1000 pounds to the acre per year. Useable production in this case is based on a take half leave half rule of thumb. Which means that you are actually producing 1600 pounds of forage to the acre, but leaving half of the plant's top growth to ensure a healthy root system for future production.

An average sized cow, with calf, will eat and or destroy 1200 pounds of forage in thirty days. Stocking rates are based on this estimate, so given approximately 60 acres of this type of forage (in a dryland situation), you would be able to support fifty cows for one month, or approximately five cow/calf pairs for a year. This is a general

estimate. The production that you receive under good management conditions can be much greater. And the amount of forage actually consumed can be more or less depending on the animal, and stage of life cycle.

Field 1 Under Irrigated Conditions:

The following information is based on irrigated conditions:

The recommended species will change slightly if you choose to continually irrigate this area. If that will be the case, please let me know and I can modify the seeding recommendation. Seeding dates can be extended into May if irrigation water is available and applied. Seeding rates are higher under irrigated conditions.

Stand establishment will take less time. You can expect increased annual production, at a rate of one and a half to two times that of dryland.

Grazing Management:

Grazing management will also change if irrigation water is applied. I recommend rotational grazing through out the growing season whether irrigated or not. However, with irrigation water being applied, growth will become more rapid, and it will be necessary to move the cattle from one area to another more often.

As you get closer to having an established pasture, we can discuss grazing management in more detail.

Fields 3, 4, 5, 6, and part of 2- Dryland Hay Area

The area that you are thinking of turning into dryland, or possibly irrigated, hay production, includes the fields numbered 3, 4, 5, 6, and part of 2, roughly 87 acres. Please see the enclosed seeding recommendations labeled 'OPTION 2' and 'OPTION 3' for the recommended species, varieties and planting rates. OPTION 2 is for a stand of dryland alfalfa only, and OPTION 3 is for a stand of alfalfa and grass.

If you do decided that irrigation water will be available, and used from the initial seeding date, please refer to the enclosed Forage Seed Source List as sources of information on the exact variety of alfalfa that will suite your land conditions the best. I am referring you to them on this point as they will have the most up to date information on newly researched varieties of alfalfa for irrigated conditions.

The Pubescent Wheatgrass I have recommended in OPTION 3 is an introduced species. It will take up to two growing seasons to establish, and it is tolerant of the salt conditions that you have in this area. I will caution you that under strict dryland conditions, and a drought that lasts for more than one growing season, you may see a decline in this species.

Alfalfa is only moderately tolerable to salt conditions. For this reason, I would recommend planting the grass/alfalfa mix over the strait alfalfa seeding. However, if irrigation water is going to be

available, a strait alfalfa stand. The irrigation water will help leach out some of the salts that tend to stay close to the surface without irrigation water.

Variables to Consider:

If managed properly, the grass/alfalfa stand should last you eight to ten years.

The first growing season, you may get one cutting of hay. After establishment, and depending on climatic conditions, in a dryland situation, you can probably expect an average of two cuttings a year. Given the sub-irrigated conditions, you may have more. If you do plant the alfalfa grass mix, weed control might become more intensive and difficult.

FIELDS 7 & 9 -PASTURE AREA

The number one priority prior to establishing grass, is going to be prairie dog eradication. There are many options for you to consider. Listed below are a few that might work for you.

1. Hire a professional consultant that guarantees their work to remove the prairie dogs.
2. Removal via deep plowing. **Only if adequate moisture is obtained through the winter months**, do a deep plowing followed by the planting of a cover crop from mid-May to Mid-June. The plowing should be done immediately prior to the planting of the cover crop.

The deep plowing is going to do two things. The first is that it will run through the holes, destroying a good number of them. Secondly, the prairie dog's field of vision will be disturbed by the rough surface created, and from the growth of the cover crop. Thus discouraging a re-invasion.

The recommended species for a cover crop is either a grain sorghum, or a forage sorghum. Seeding rates should be at approximately eight pounds to the acre. If sufficient growth, or a seedhead, is produced then mowing the cover crop in the fall time, to a height no lower than twelve inches is recommended. This can either be sold as or used for a hay source.

The grass mixture as specified in OPTION 4 should then be planted directly into the cover crop residue between November 1 and April 30. Please refer to the recommendation on the seeding for field one for specifics on seeding this area.

3. Plow and plant immediately. This option is probably going to least effective of the three given. Wait until mid-October, deep plow or rip this area, and follow it immediately with the grass seeding. In this case, your land is going to be highly susceptible to wind erosion, since we tend to have our strongest winds from October to May in this area. Therefore, you may want to immediately follow the seeding with a mulch application; possibly clean barnyard manure up to four tons per acre.

Placing poles around the seeded area, a minimum of three foot high, to supply raptors in the area with natural purchases may also inhibit prairie dog re-infestation. You may also want to purchase some plastic owls and/or hawks (natural predators of prairie dogs), and place them in strategic areas surrounding the new seedings.

Option 3 requires the lowest capital input. However, you do need to consider the extra maintenance it will cost you in the long run, given the continual control you will need to enforce. Also, if your methods of control are not sufficient to keep the prairie dogs out, you have some loss in the investment you put into the seeding operation, or even loss of livestock if an animal gets caught in a hole. It is possible that the prairie dogs will only move to an adjacent area.

The exact acres that need to be re-seeded should be determined while in the field, so that we can measure out the areas that are in hydrophytic vegetation and saltgrass. This should be done prior to you purchasing your seed. The areas that are sod-bound in saltgrass, should remain as undisturbed as possible, because tillage in these areas will only encourage the salt grass to grow better and spread more.

Where this re-seeding is concerned, you may want to think about try different methods, or re-seeding just small areas at first to see what is going to work out best for your situation. Please keep me posted on what your ideas are, and I will be happy to help in any way that I can.

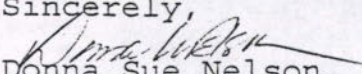
FIELD 10

We have neglected to discuss what your future intentions are for this field. Give me a call if you would like to discuss this field.

Additional Comments:

I would like to stress that plow-out permits (to re-seed fields 7 and 8 and to establish hay production in field 3) may need to be obtained from the Weld County Attorney prior to actual work being done. Also, before anything is done with the old home site area, the State Historical Preservations Office should be contacted to see if it exists as a State Historical Marker. Randy Randall, our Area Biologist has enclosed his own recommendation on wildlife enhancement in your wetland area, and has already spoke with you regarding the regulations surrounding the disturbance to wetland acres.

As you develop your objectives, and think about some of the options, I would enjoy sitting down with you and helping you develop a Resource Management System through our office. It does not include any funding, but through this system we can provide you with strong management objectives. Please stay in touch, and let me know how things are going.

Sincerely,

Donna Sue Nelson
Range Conservationist

NONTECHNICAL SOILS DESCRIPTION REPORT
FOR DESCRIPTION CATEGORY - ALL

Survey Area- WELD COUNTY, SOUTHERN PART, COLORADO

Map
Symbol Description

formed on plains and high terraces in eolian or alluvial deposits. The surface is a fine sandy loam, as is the subsoil. The underlying material is a sandy loam. The soils have moderately rapid permeability. Their available water holding capacity is moderate. Roots penetrate to 60 inches or more. Runoff is slow and the erosion hazard due to wind is high. Capability subclass VIIa irrigated, VIIc nonirrigated.

77 VONA SANDY LOAM, 3 TO 5 PERCENT SLOPES The Vona soil is a deep, well drained soil. It is formed on high terraces from alluvial material. The surface is a sandy loam, as is the subsoil. The underlying material is a sandy loam. The soils have moderately rapid permeability. Their available water holding capacity is moderate. Roots penetrate to 60 inches or more. Runoff is slow and the erosion hazard due to wind is high. Capability subclass VIIa irrigated, VIIc nonirrigated.

79 WELD LOAM, 1 TO 3 PERCENT SLOPES The Weld soil is a deep, well drained soil. It is formed on sandstone plains from eolian material. The surface is a loam. The subsoil is a heavy clay loam and light clay. The underlying material is a silt loam. The soils have slow permeability. Their available water holding capacity is high. Roots penetrate to 60 inches or more. Runoff is slow and the erosion hazard due to wind is low. Capability subclass Ii irrigated, Iii nonirrigated.

NONTECHNICAL SOILS DESCRIPTION REPORT
FOR DESCRIPTION CATEGORY - ALL

Survey Area- WELD COUNTY, SOUTHEAST PART, COLORADO

map
Symbol

Description

- 10 COLBY-ADENA LOAMS, 3 TO 9 PERCENT SLOPES This map unit is on long rolling slopes and dissected plains. This unit consists of 65 percent Colby and 35 percent Adena soils. The Colby soil occupies the steeper, convex parts of the landscape and the Adena soil occupies the less steep, slightly concave parts. The Colby soil is a deep, well drained soil. It formed in loess. The surface is a loam. The underlying material to a depth of 60 inches or more is a loam or silt loam. This soil has a moderate permeability. The available water holding capacity is high. Roots penetrate to a depth of 60 inches or more. Runoff is medium and the erosion hazard due to wind is moderate. The Adena soil is a deep, well drained soil. It formed in loess. The surface is a loam. The underlying material to a depth of 60 inches or more is a loam or silt loam. This soil has a moderate permeability. The available water holding capacity is high. Roots penetrate to a depth of 60 inches or more. Runoff is medium and the erosion hazard due to wind is moderate. Capability subclass (Ve nonirrigated).
- 20 NAVA LOAM, 1 TO 3 PERCENT SLOPES The Nava soil is a deep, well drained soil. It is formed on terraces from eolian material. The surface is a loam. The underlying material is clay loam and sandy loam. The soils have moderately slow permeability. Their available water holding capacity is high. Roots penetrate to 60 inches or more. Runoff is slow and the erosion hazard due to wind is moderate. Capability subclass (Ve irrigated, (Ii nonirrigated).
- 63 BERRY FINE SANDY LOAM, 3 TO 9 PERCENT SLOPES The Berry soil is a moderately deep, well drained soil. It is formed on plains in residual fine sandstone. The surface is a fine sandy loam, as is the subsoil. The underlying material is a fine sandy loam. The soils have moderately rapid permeability. Their available water holding capacity is moderate. Roots penetrate to the depth of the sandstone, which ranges from 2' to 30' thickness. Runoff is slow and the erosion hazard due to wind is severe. Capability subclass (Ve irrigated, (Ie nonirrigated).
- 74 VONA LOAMY SAND, 5 TO 9 PERCENT SLOPES The Vona soil is a deep, somewhat excessively drained soil. It is

LOCAL FORAGE SEED SOURCES

Adams County CO-OP
55 W. Bromley Lane
Brighton, Co. 80601
(303)659-1230

Arkansas Valley Seed, Inc.
4625 Colorado Blvd.
P.O. Box 16025
Denver, Co. 80216
(303)320-7500

Brighton Grain Co., Inc.
404 North Main
Brighton, Co. 80601
(303)659-3247

Kissler Farms
R.R. 1 Box 9C
Bennett, Co. 80102
(303)366-9832
(303)644-3342

Anderson Seed Co.
717 6th St.
Greeley, Co. 80631
(806)298-2751

Raymond Behrens
Star Route 37A
Byers, Co. 80103
Day (303)644-4129
(303)822-5595

Casterline Seed Co.
Box 309
#3 Collins Avenue
Eaton, Co. 80615
(303)454-3484

Pioneer Hi-Bred Int.
N. Am. Seed Div.
Plains Sales Area
3750 W. 24th St.,
Apt. 2-103
Greeley, Co. 80634
(303)330-0589

NOTE: The above list is in no way a complete listings. For additional information, please feel free to give us a call. The Natural Resources Conservation Service-Brighton Field Office - 60 S. 27th Ave. - Brighton, Co. 80601. Phone: (303)659-7004.

Any information compiled or distributed by the NRCS officials must be done without regard for race, color, sex, age or religion.

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To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call (202)720-7327 (voice) or (202)720-1127 (TDD). USDA is an equal employment opportunity employer.

Producer: MITCHELL Planner: DS NELSON Date: 2-7-95
 Contract/Agreement # Contract Item N
 Field No. 67
 Irrigated/Dryland
 Range Site: SANDY PLAINS
 Practice Name/No. 550
 Seeded Preparation Dates:
 Dead Litter Cover Pounds Needed:
 Clean Till/Firm S

Seeding Operation

Drill Spacing: 7-12" Type: GRASS
 Planting Depth: 1/4-3/4" Dates: 11-1 TO 4-30
 Fertilizer: Pounds Actual/Acre Recommended
 Nitrogen: Potassium:
 Phosphorous:
 Weed Control: Chem
 Mechanical: Flash Grazing:
 Dates:
 Mulch: Kind Amount: lbs./acre
 How anchored: How applied:
 Anchored depth:

Seed Recommendations

OPTION 1

Species	Variety	PLS/Ac(100%)	% of Species in mixture
SAND BLUESTEM	ELIOA	8.00	30
SWITCHGRASS	GRENVILLE	2.50	30
PRAIRIE SANDREED	GOSHEN	3.50	30
WESTERN WHEATGRASS	ARRIBA	8.00	10

PLS Rate/Species/	Acres	Total PLS/Species	1
2.40			
0.75			
1.05			
0.30			

I have left the Acres and Total PLS/Species columns blank, because the exact acres have not yet been defined.
 NOTE: If you choose to irrigate this site immediately, then the seeding rate of all species will need to be doubled.

Producer: MITCHELL Planner: DS NELSON Date: 2-7-95
 Contract/Agreement # Contract Item N
 Field No. 1 Land Resource 67
 Irrigated/Dryland DRYLAND
 Range Site: SANDY PLAINS/LOAMY PLAINS
 Practice Name/No. Dates:
 Seedbed Preparation Pounds Needed:
 Dead Litter Cover
 Clean Till/Firm S

Seeding Operation

Drill Spacing: 7-12" Type: GRASS
 Planting Depth: 1/4-3/4" Dates: 11-1 TO 4-30
 Fertilizer: Pounds Actual/Acre Recommended
 Nitrogen: Potassium:
 Phosphorous:
 Weed Control: Chem
 Mechanical: Flash Grazing:
 Dates:
 Mulch: Kind Amount: lbs./acre
 How anchored: How applied:
 Anchored depth:

OPTION 2

Seed Recommendations

Species	Variety	PLS/Ac(100%)	% of Species in mixture
ALFALFA	LADAK, RANGER VERNAL	6.00	100

PLS Rate/Species/	Acres	Total PLS/Species	i
6.00			

I have left the Acres and Total PLS/Species columns blank,
 because the exact acres have not yet been defined.
 NOTE: If you choose to irrigate this site immediately,
 then the seeding rate of all species will need to be doubled.

Any of the 3 listed varieties are acceptable for dryland.

Producer: MITCHELL Planner: DS NELSON Date: 2-7-95
 Contract/Agreement # Contract Item N
 Field No. 67
 Irrigated/Dryland DRYLAND
 Range Site: SANDY PLAINS/LOAMY PLAINS
 Practice Name/No.
 Seeded Preparation Dates:
 Dead Litter Cover Pounds Needed:
 Clean Till/Firm S

Seeding Operation

Drill Spacing: 7-12" Type: GRASS
 Planting Depth: 1/4-3/4" Dates: 11-1 TO 4-30
 Fertilizer: Pounds Actual/Acre Recommended
 Nitrogen: Potassium:
 Phosphorous:
 Weed Control: Chem
 Mechanical: Flash Grazing:
 Dates:
 Mulch: Kind Amount: lbs./acre
 How anchored: How applied:
 Anchored depth:

Seed Recommendations

OPTION 3

Species	Variety	PLS/Ac(100s)	% of Species in mixture
ALFALFA	L40AK RANGER VERNAL	6.00	50
PUBESCENT WHEATGRASS	LUNA	9.00	50

PLS Rate/Species/	Acres	Total PLS/Species	
3.00			1
4.50			

I have left the Acres and Total PLS/Species columns blank, because the exact acres have not yet been defined.
 NOTE: If you choose to irrigate this site immediately, then the seeding rate of all species will need to be doubled.

Producer: MITCHELL Planner: DS NELSON Date: 2-7-95
 Contract/Agreement # Contract Item N
 Field No. 1 Land Resource 67
 Irrigated/Dryland DRYLAND
 Range Site: SANDY PLAINS/LAMY PLAINS
 Practice Name/No.
 Seedbed Preparation Dates:
 Dead Litter Cover Pounds Needed:
 Clean Till/Firm S

Seeding Operation

Drill Spacing: 7-12" Type: GRASS
 Planting Depth: 1/4-3/4" Dates: 11-1 TO 4-30
 Fertilizer: Pounds Actual/Acre Recommended
 Nitrogen: Potassium:
 Phosphorous:
 Weed Control: Chem
 Mechanical: Flash Grazing:
 Dates:
 Mulch: Kind Amount: lbs./acre
 How anchored: How applied:
 Anchorage depth:

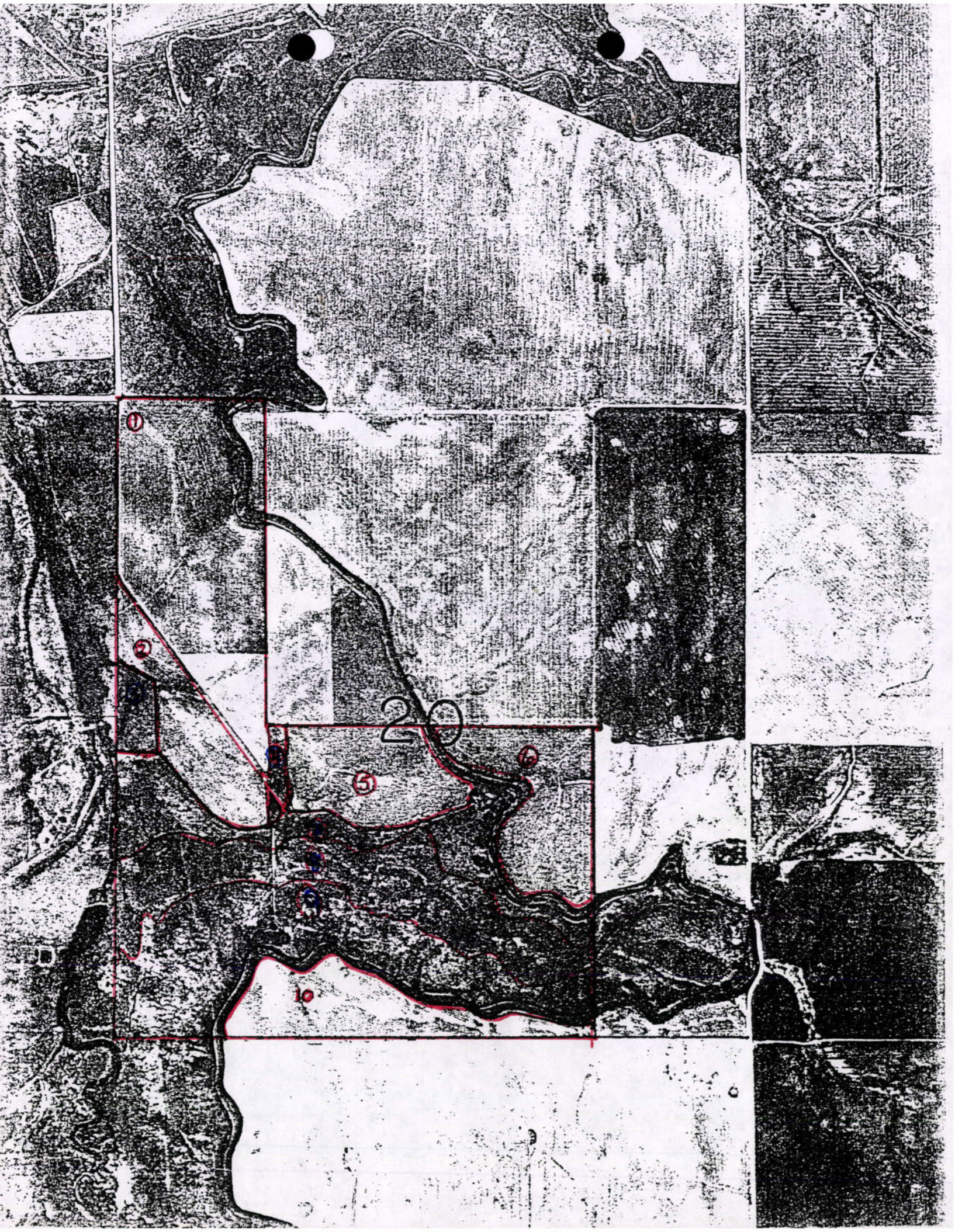
 OPTION 4

Seed Recommendations

Species	Variety	PLS/Ac (100%)	% of Species in mixture
ALKALI SACATON	SALADO	1.00	20
WESTERN WHEATGRASS	ARRISA	3.00	30
SWITCHGRASS	GREENVILLE	2.50	20
BIG BLUESTEM	KAW	5.50	10
LITTLE BLUESTEM	PASTURA	3.50	10
SIDSBATS GRAMA	VAUGHN	4.50	10
YELLOW INDIAN R. LULU		5	10
PLS Rate/Species/	Acres	Total PLS/Species	
	1.00		
	1.40		
	0.50		
	0.55		
	0.55		
	0.45		
	0.5		

I have left the Acres and Total PLS/Species columns blank, because the exact acres have not yet been defined.
 NOTE: If you choose to irrigate this site immediately, then the seeding rate of all species will need to be doubled.

This seeding is at 110%, because of the topographic and salt conditions.



United States
Department of
Agriculture

Natural Resources
Conservation
Service

60 South 27th Avenue
Brighton, CO 80601
659-7004

TO: Bob Mitchell

DATE: February 7, 1995

SUBJECT: Waterfowl and Wildlife
Management

FILE CODE:

Purpose: To provide assistance on wildlife and waterfowl management.

Background: On February 1, Donna Nelson, Range Conservationist, and I met with you and your wife. This meeting was to develop management practices which could be implemented on your acreage. These alternatives are enclosed for your consideration in the development of your acreage.

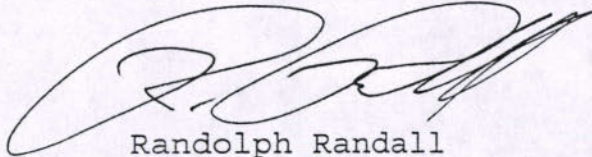
Our visit suggests that there are a number of options that you may wish to consider implementing. Our NEPA regulations as outlined in GM-190, will be adhered to in our recommendations that follow. 1) The U.S. Army Corps of Engineers must give its approval. 2) An Environmental Evaluation (CO ECS-7) must be completed. 3) Water resources must be contacted to insure that Colorado water laws are not violated. They can be reached at (303)-352-8712. 4) A wetland evaluation sheet will have to be completed once the planned alternatives have been selected. 5) Woody vegetation within the wetland site must not be removed.

Recommendations: I feel that once the above concerns have been completed implementation of the following alternatives would be beneficial in any combination.

- o Create a 0.6 acre open water pond at the dam that is most eastern (see the attached map).
- o Create a three 0.1 acre potholes at the dam that is located to the west of the above mentioned site.
- o Gain control of 2/3 of the cattail encroachment that at present has reduced the amount of open water for desired wildlife. Enclosed are control methods which may be implemented.
- o Create brush piles which are beneficial to cottontail rabbits and pheasants that are in the area. Enclosed are instructions on the construction of these piles.

- o Plant a few plum thickets near the wetland acres.
- o Manage agricultural foods that are planted adjacent to the site to have a secondary benefit to wildlife. See the enclosed publication.

Thank you for the opportunity to serve you.

A handwritten signature in black ink, appearing to read 'Randolph Randall', with a large, sweeping flourish at the end.

Randolph Randall
Biologist

word/trip/mitch