

# REGENERATIVE ACTIVITY AT COMSTOCK FARM

## NRCS programming





**Aerial view  
Comstock Farm  
1954**





*COMSTOCK FARM BLACKWATER CONSTRUCTED WETLANDS*

**Aerial view  
Comstock Farm  
2019**

**Self contained  
farm infrastructure**

**Water supply  
Agricultural and domestic wells**

**Sewage  
2 constructed wetland sewers**

**Electricity  
9 kw photovoltaic system  
Power to structures buried  
under roads**

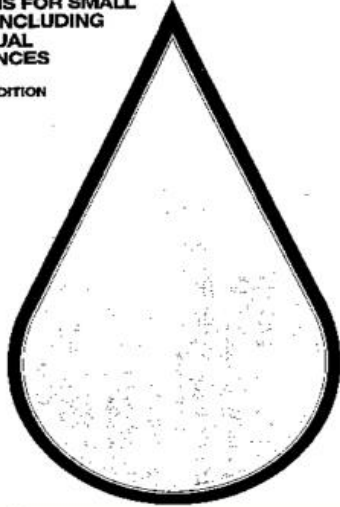




TECHNICAL REPORT SERIES  
**GENERAL DESIGN, CONSTRUCTION,  
 AND OPERATION GUIDELINES:  
 CONSTRUCTED WETLANDS  
 WASTEWATER TREATMENT  
 SYSTEMS FOR SMALL  
 USERS INCLUDING  
 INDIVIDUAL  
 RESIDENCES**

TVA/WM-25/18  
 May 1983  
 Water Management  
 Resources Group  
 Tennessee Valley Authority

SECOND EDITION



# Constructed wetland for sewage treatment at Comstock Farm

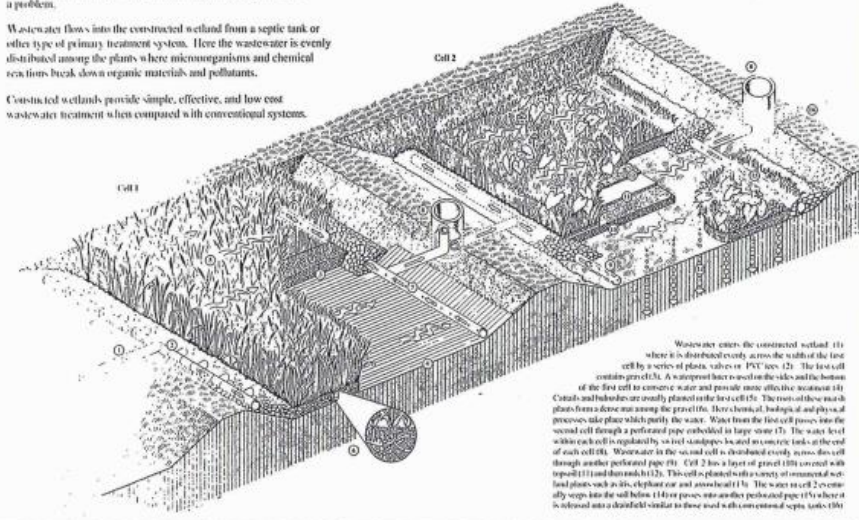
Tennessee Valley Authority  
 Plans used for construction at Comstock Farm and the  
 TNC Witt Nature Center, River Fork Ranch



Constructed wetlands like this one are being built throughout the nation to handle wastewater from mostly small rural communities and homes where traditional treatment systems are a problem.

Wastewater flows into the constructed wetland from a septic tank or other type of primary treatment system. Here the wastewater is evenly distributed among the plants where microorganisms and chemical reactions break down organic materials and pollutants.

Constructed wetlands provide simple, effective, and low cost wastewater treatment when compared with conventional systems.



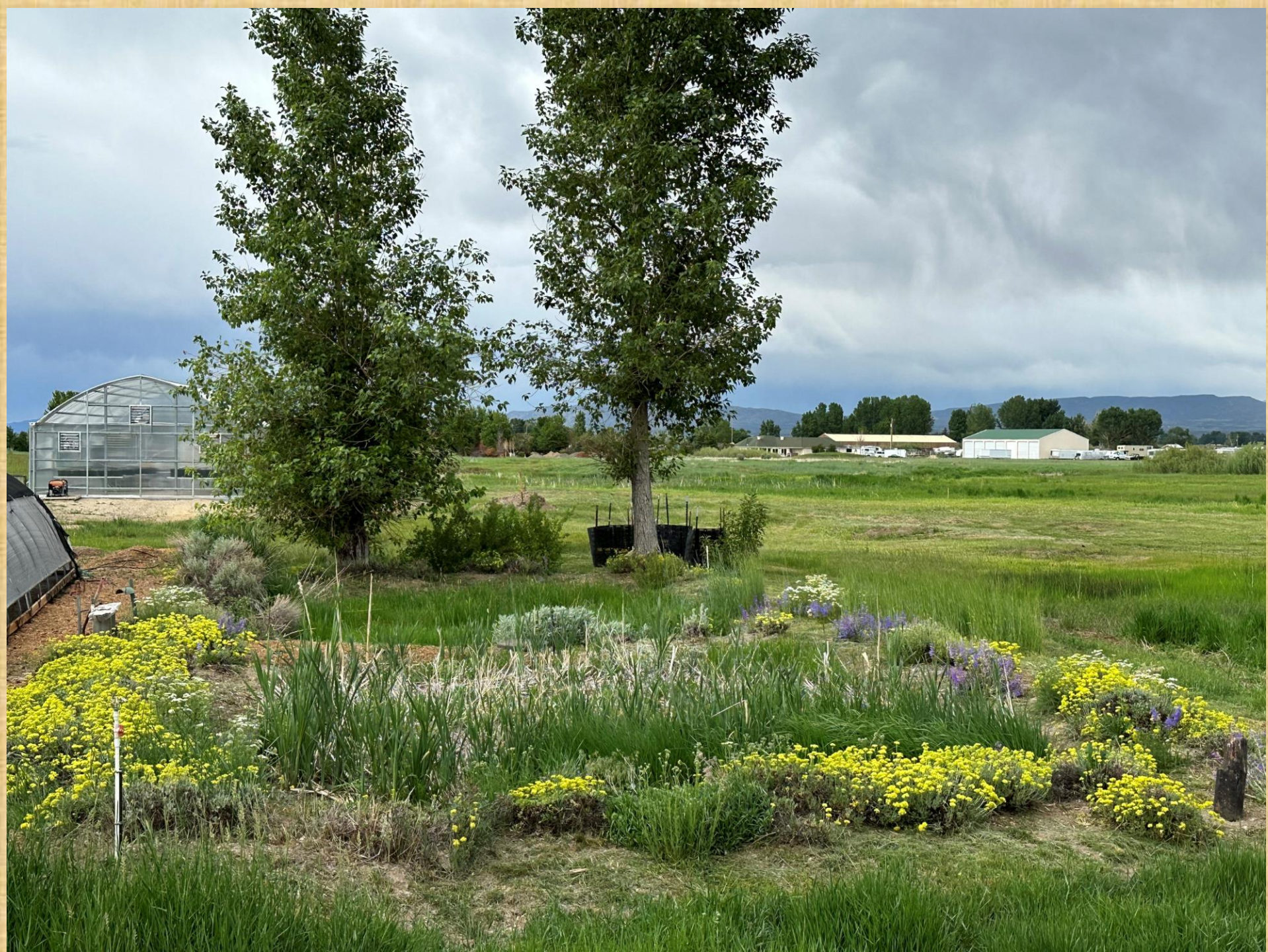
Wastewater enters the constructed wetland (1) where it is distributed evenly across the width of the first cell by a series of plastic, polypropylene (PPE) pipes (2). The first cell contains gravel (3). A waterproof liner is used on the sides and the bottom of the first cell to prevent water and possible more effective treatment (4). Cattle and hickories are usually planted in the first cell. The roots of these marsh plants from a dense mat among the gravel (5). Here chemical, biological and physical processes take place which purify the water. Water from the first cell flows into the second cell through a perforated pipe embedded in large stone (6). The water level within each cell is regulated by vertical standpipes located in concrete tanks at the end of each cell (8). Wastewater in the second cell is distributed evenly across the cell through another perforated pipe (9). Cell 2 has a layer of gravel (10) covered with topsoil (11) and then sand (12). This cell is planted with a variety of constructed wetland plants such as iris, elephant ear and arrowhead (13). The water in cell 2 eventually seeps into the soil below (14) or flows into another perforated pipe (15) where it is allowed into a drainfield similar to those used with conventional septic tanks (16).



**First blackwater  
constructed  
wetland after 24  
years in operation**

**The greenhouse  
in background  
is propagating an  
endangered species,  
*Eriogonum tiehmii***

**Rental income from the  
greenhouse supports  
farm activities**







**Second blackwater constructed wetland during construction 2018**





GROWING VEGETABLES UNDER THE ARRAYS



A C LOCKOUT



INVERTERS



D C LOCKOUT



USDA GRANT



NV ENERGY REBATE



PANEL INSTALLATION

Our solar project was the first rural installation to combine an NV Energy solar rebate with a USDA rural development grant



Lunch served by RC&D at Comstock Seed Event



COMSTOCK'S SOLAR SYSTEM

THIS BILL IS DUE AND PAYABLE UPON RECEIPT. PLEASE SEE REVERSE SIDE FOR MORE INFORMATION. Page 1 of 2

**NV Energy**  
nvenergy.com

ACCOUNT NUMBER: 100041670000205

Service: COMSTOCK SEED  
Address: 817 FLOYD BL, GARDNERVILLE, NV 89410  
Customer: 101700000  
Phone: 0000000

Co-Applicant: LINDA KLEINER

Next Meter Read Date: Jan 18, 2009 Due Date: Jan 2, 2009 TOTAL AMOUNT DUE: \$11.33

PREVIOUS BALANCE	PAYMENTS	ADJUSTMENTS	BALANCE FORWARD	CURRENT CHARGES
\$425.41	\$425.48(2)	\$0.00	\$0.00	\$11.33

Nevada Energy Connection may help pay your bill, call to see if you qualify. Local (775) 654-0790 or rural Nevada (866) 946-2009.  
Saving energy saves money. For energy conservation tips visit nvenergy.com.  
Thank you for maintaining an excellent payment record. We look forward to serving you in the future.

**ELECTRIC - RES - NET METERING RIDER**

Month	Category	From	To	Days	Production	Current	Multplier	Usage
2009M	KWHH	Apr 30	May 11	31	135	187	20	1,240
KWHH	Apr 30	May 11	31	0	0	30	20	440
KWHH	Apr 30	May 11	31	0	0	0	20	0
2009M	KWHH	Apr 30	May 11	31	6888	84.0	1	1,240

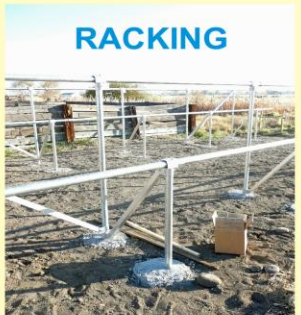
BASIC SERVICE CHARGE: \$ 2.25  
LOCAL GOVERNMENT FEE: .20  
TOTAL ELECTRIC SERVICE AMOUNT: \$8.33

LOW ELECTRIC BILL

PV SYSTEM RECORDS

Date	Time	Power	Temp	Panel	Temp	Panel	Temp	Panel	
2009-01-01	08:00	100	15	1	25	1	25	1	25
2009-01-01	09:00	200	15	1	25	1	25	1	25
2009-01-01	10:00	300	15	1	25	1	25	1	25
2009-01-01	11:00	400	15	1	25	1	25	1	25
2009-01-01	12:00	500	15	1	25	1	25	1	25
2009-01-01	13:00	600	15	1	25	1	25	1	25
2009-01-01	14:00	700	15	1	25	1	25	1	25
2009-01-01	15:00	800	15	1	25	1	25	1	25
2009-01-01	16:00	900	15	1	25	1	25	1	25
2009-01-01	17:00	1000	15	1	25	1	25	1	25
2009-01-01	18:00	1100	15	1	25	1	25	1	25
2009-01-01	19:00	1200	15	1	25	1	25	1	25
2009-01-01	20:00	1300	15	1	25	1	25	1	25
2009-01-01	21:00	1400	15	1	25	1	25	1	25
2009-01-01	22:00	1500	15	1	25	1	25	1	25
2009-01-01	23:00	1600	15	1	25	1	25	1	25

PRODUCTION RECORDS



RACKING

9-kilowatt photo voltaic system installed 2009

At this time, the system provided all the power necessary for business and farm



# Lunch showcases local businesses

By Scott Neuhar  
Staff Writer

Dan Kaffer, a coordinator for Western Nevada Resource Conservation and Development, called it a "celebration of the bounty of Carson Valley and Nevada."

He was referring to a localvore lunch on Feb. 21 at Comstock Seed in Gardnerville. The seed company was celebrating the installa-

tion of a new solar panel system, and the localvore lunch was another way to salute environmental consciousness and sustainability.

According to Wikipedia, a localvore, also known as localvore, eats food produced locally, typically within 100 miles of their house, for nutritional and environmental reasons. Consumption of local food means less energy used in transportation.

"It's pretty amazing," said



SARAH HILL/THE REC

Western Nevada Resource Conservation and Development-Dan Kaffer, left, and Colton Witt hold shoestring fries at Comstock Seed on Feb. 21. See page 5 for more photos from the event.

## DINING LIKE A LOCALVORE

- Trimmer Outpost: 762-2518
- Russell's Mercantile: 782-0919
- Hungry Mother Organics: 267-1322. [www.hungrymotherorganics.com](http://www.hungrymotherorganics.com)
- Comstock Seed: 265-0950. [www.comstockseed.com](http://www.comstockseed.com)
- Tahoe Ridge Winery: 783-1686. [www.tahoeridge.com](http://www.tahoeridge.com)
- The Apple Basket (775) 885-1588. [www.applebasket.com](http://www.applebasket.com)
- Snyder Onions: (775) 463-4446. [snyderonions.com](http://snyderonions.com)
- Full Circle Compost: 267-5305. [www.fullcirclecompost.com](http://www.fullcirclecompost.com)
- Western Nevada Resource Conservation and Development, Natural Resource Conservation Service, 721-2387.

Kaffer. "Nevada-grown healthy food produced with just sunlight and water."

"They were being deep-fried right there while people were waiting in line," Kaffer said.

He said the only thing he couldn't find was local bottled water, so participants drank well water from Comstock Seed.

"All the bottled water comes from Southern California," he said. "There is a taste, if someone with a well or spring around here wanted to start bottling water."

Kaffer said more than 120 people attended the event, and about 110 took part in the localvore feast.

The grass-fed beef burgers came from Genoa's Trimmer Outpost, which sells beef from cows raised on historic Ranch No. 1. The white and wheat buns came from Russell's Mercantile Bakery and Café. Salad greens and other veggies were provided by Minden-based Hungry Mother Organics. Tahoe Ridge Winery provided wine, while Dutch Oven apple and plum cobbler were made possible by apples from The Apple Basket in Washoe Valley and plums from Lucille and Tony Pitts of Gardnerville.

Snyder Onion of Yerington provided onions for fried onion strings, and Smith Val-

ley potatoes were used for localvore food produced with just sunlight and water.

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Kaffer himself did everything from cutting the onion and potatoes to frying the burgers.

"Half the people there came up and commented how good the food was," he said. "It was one heck of a meal. Everyone who donated should be thanked. As a community, we should support our local businesses that can produce this bounty."

Kaffer said Full Circle Compost of Minden received and composted the waste produced from the event.

"They even composted the silverware; it was compost silverware," Kaffer said.



## Green for green



SARAH HILL/THE REC

Renewable Generations Program Manager for NV Energy Scott Gerz, center, presents a check to Ed and Linda Kleiner, the owners of Comstock Seed Inc. on Feb. 21. At left, the Kleiners receive a check from U.S. Department of Agriculture Rural Development Business and Cooperative Programs Director Herb Shedd, Wells Fargo Business Banker Sarah Hill, and Acting State Director for USDA Rural Development Kay Venetier.

# Local connectivity has helped our business grow



## Gardnerville seed company reaches out for the sun

By Scott Neuhar  
Staff Writer

A Gardnerville seed company is now relying on the sun to power its business. In November, Comstock Seed installed a \$100,000 solar photovoltaic array panel system to generate the energy needed to power its 43-acre farm, which sits off Highway 89 between Centerville and Klamath Falls.

"The solar system was made for us by the state of Nevada," Kaffer said. "Right now, in Nevada, we're getting about a 14-cent deficit. From about March to fall, we'll begin turning a profit."

Kleiner said he's been successfully receiving the solar credits for his new system.

"I want good records because I want to see what our absolute production capacity is," he said.

The owners on his two-acre historic farm also provide data about carbon dioxide usage.

"We've used about \$19,000 worth of fuel," Kleiner said. "Using your solar, or a photovoltaic, you contribute to carbon-free power."

Kleiner said his company will also receive more than \$200,000 in tax credits for the project. He said the panel system will be in place for about five years.

"They have a 25 to 30-year warranty," he said. "They're backed down in crop insurance because the wheat is what they do out here."

Comstock Seed, which leases a 1700-acre, 1930s converted milk pasture and

all went back to soil. But all that is coming to an end now. The message is out there."

Comstock Seed specializes in native seeds, grains and flowers for drought-tolerant landscaping and restoration work. Kleiner said the company has found work in the restoration process.

"We provide for water-tolerant landscaping all the time, but we do a lot of business with the utility industry," he said.

A large portion of Comstock's business comes from the restoration of river valley corridors. Other customers include transportation companies, miners, oil areas and other developers.

Kleiner said that some of his laws are calibrated for exponential crops such as water buckwheat. Great Basin wild rice and seven-awn. He said carbon brought out the solar credits when he worked for the Nevada plant.

"The seed industry could really keep agriculture alive in the valley," he said. "We have a great opportunity."

A ribbon cutting ceremony for the solar array installation will be 1 p.m. Saturday at Comstock Seed, 917 Highway 89. Attendees, Dan Kaffer of Western Nevada Resource Conservation & Development will be serving food produced within 100 miles of Carson Valley, including local beef, pork and trout. Kleiner's plan for the future and Kleiner's two businesses, call 265-0950.

# Working to make Nevada green

EDITOR:

Thanks everybody for coming to our farm Feb. 21 for the sustainable living solar tour. This event raised the bar in Douglas County and Nevada for solar applications in agricultural areas.

If we build enough of these systems we will have a double impact by reducing the foreign energy deficit and the need for large power plants.

- Everybody includes:
- Dan Kaffer and Western Nevada Resource and Conservation Development for his incredible "localvore" lunch organization!
  - Steve Lewis, Vicki Bates, and the Sustainable Living Group
  - Herb Shedd with the U.S. Department of Agriculture Rural Development
  - Matthew Tuma from Sen. Harry Reid's office
  - Kevin Kirkeby from Sen. John Ensign's office
  - Leslie Ames from Tahoe Solar Designs.

Thanks for helping with the tours; I hope you build a million more PV systems.

- Scott and Larry from NV Energy
- Chris Freeman and Kelly Kite, grill chefs par excellence
- Trimmer Outpost for the awesome beef
- Snyder Onion for their fried onion strings
- Craig and Conner Witt from Full Circle Compost and the magic French fry maker
- Smith Valley Potatoes for supplying the Witt's magic French fry maker
- Russell's Mercantile Bakery for the breads

■ Mark O'Farrell from Hungry Mother Organics for the fresh greens

■ Tahoe Ridge for the fine wine. We sat around the fire toasting you by late afternoon as the storm rolled in

■ Douglas High School's culinary class for all the trimmings. Be careful with those knives

■ Nora, Houston, and the DH environmental group manned the dutch-ovens

■ The Apple Basket for their dutch oven cobbler (apple of course)

■ Lucille and Tony Pitts for their Nevada plum dutch oven cobbler

■ Sara Hill from Wells Fargo

■ Everybody else who came to celebrate, and then went home to build their own energy system

■ Last, I want to thank Dan Kaffer for the super cool solar-hat-with-fan/toilet-seat combo. I'll save you a chair good buddy;

Ed Kleiner  
Gardnerville

Most of our sales are regional not local

AC 3-6-09



**In the beginning, there was hay**

**Between 2000 and 2017 production dropped from 70 tons to 30 tons; one cutting per year**







**Neighbor's Canadian thistle, knapweed, foxtail**



**Hoary cress**

**Hay fields declined and weeds advanced**



**White top**



**Prolific annual weeds 6-03**





**Moral of the story, “reality is nuanced”**

**Occasional burning is considered productive for releasing nutrients, stimulating growth; common practice in restoration**



**Burning sends carbon from the field into the atmosphere.**

**After a few burning years, ditches and fields were losing vegetative cover, opening the door for expanding weed invasions.**

**Quit burning 2007; increased mowing hay fields off season**

**Using flail mower instead of brush hog**

**Continue to maintain a burn pile; expanding composting**

**Mulching fields with native residual organic material**







COMSTOCK  
SEED

3-11-22

RE: NRCS ASSISTED HABITAT AND CROP IMPROVEMENT PROGRAMS

- \*   E327A\_July\_2019 Pollinator, beneficial habitat, hedgerow
- \*  E327B\_July\_2019 Monarch habitat
-  E328E\_July\_2019 4 Crop rotation one year
-  E328J\_August\_2019 Crop rotation, benefits for pollinators
-  E328K\_August\_2019 Multiple crop rotation to benefit wildlife
- \*  E328L\_May\_2020 Crop residue for wildlife
-  E328M\_May\_2020 Crop rotation with sunflower and canola for pollinators
- \*  E340C\_July\_2019 Cover crop green manure
- \*  E340D\_July\_2019 Cover cropping for orchard and vineyard
-  E340E\_July\_2019 Adding cover crop into rotations for soil health
-  E420A\_May\_2020 Pollinator habitat
- \*  E420B\_May\_2020 Monarch habitat
-  E449C\_August\_2019 Enhancing water management with automated monitor...
-  E449D\_August\_2019 Enhancing water management monitoring equipment
-  E484A\_August\_2019 Plant based mulching
-  E484C\_August\_2019 Specialty crop mulching with natural materials
-  E511A\_July\_2020 Crop harvesting that preserves other favorable species
-  E511B\_July\_2020 Crop harvesting that maintains wildlife habitat
-  E644A\_August\_2019 Managing flood irrigated landscapes for wildlife

A sample of  
NRCS programs  
available in 2022  
that are pertinent  
to our farm



One acre  
Great Basin Wildrye  
Generated \$6500 in sales

# Comstock Farm sales Hay and Seed 2018

**NRCS 327A  
Hedgerow  
Future application**

Roadside  
Sagebrush  
\$674

Vineyard  
300 Frontenac  
Vines .6 acres  
**NRCS E340d  
groundcover**  
Alternative crop  
experimental field  
3.3 acres  
\$7675 sales

**NRCS  
Experimental  
Green manure  
crop .6 acres  
NRCS 340 intensive  
ground cover  
NRCS E420B  
Monarch habitat**



**NRCS  
High Tunnel**

Hay production  
26 acres  
\$6600

**NRCS E328L  
Crop residue  
for wildlife**

**NRCS  
Fallow Field**

Wetland seed  
\$339

Many natives do not like heavy bottomland clay soils



# Reclamation in the western U.S.



Pinetree power plant southern Sierras

Drought tolerant landscaping Virginia City



Tahoe Keys riparian restoration South Lake Tahoe



Ivanpah powerplant  
Smithsonian photo

Pipeline Las Vegas



Waterfall fire Carson City



Carson City freeway at hospital



Northstar ski resort



U.S. Borax overburden Boron CA



CStwP 2017-1 Contract Map  
# 8193271707M

Date: 9/12/2017

Customer(s): EDGAR S KLEINER  
District: CARSON VALLEY CONSERVATION DISTRICT  
Approximate Acres: 43.7  
Legal Description: Farm 363, Tract 395, Fields 1 - 10  
T12N, R20E, Section 18

Field Office: MINDEN SERVICE CENTER  
Agency: USDA - NRCS  
Assisted By: JIM GIFFORD  
State and County: Douglas County, Nevada



Prepared with assistance from USDA-Natural Resources Conservation Service

Legend

Practices (polygons)

<all other values>

Practice code, notes

315, Herbaceous Weed Control: Chemical - Spot Treatment - 13.3 acres - CIN 1 (2018)

340, Cover Crop: Basic Organic/Non-Organic - Winter Kill - 0.6 acres - CIN 2 (2018)

E340106Z3, Intensive Cover Cropping (orchard/vineyard floor) to increase soil health and OM - CIN 3 (2018)

CStwP\_Plan\_2017-1



## NRCS Field designations at Comstock Farm

### High tunnel installation 2010

Fields 1,3,4 Maintained hay fields; **Regenerative seeding** 10-22

Field 2,10 Maintains wetlands; physical and chemical treatments

Field 3 NRCS Fallow field 2022

Field 5 Experimental native seed production fields

Great Basin wildrye, Penstemons, Sulfur buckwheat

Blue area NRCS **green manure field** 2017-19

NRCS Monarch seeding 2021-

**Regenerative seeding** 1-24

Field 6 Vineyard with NRCS **groundcover seeding** 11-18

### Future designation

2022 Hedgerow development planted along Hwy 88; 30' width

Wildrye field expansion beginning fall 2024



# NRCS HIGH TUNNEL PROGRAM

June 2010

3 years of production records required  
with program application



70% summer shade cloth



Added essential dedicated  
all season water line



2-11



2-11





# HOOPHOUSE CONSTRUCTION DETAILS

## Additions to survive wind and rodents



Added cinder block anchors on end walls



Added knee braces down the length



Added flashing over R max

Added corkscrew anchors embedded in concrete



Added R max insulation Below ground level



Added 1/4" hardware cloth over R max





**EFFORTS PAY OFF**

**NRCS has brought visitors to tour**



Tomatoe plants after first freezes



Ed beeting  
His wife

717 lbs of tomatoes first season  
primary harvest after killing frosts



1.75 lb Amana gold tomatoe





**Added a vegetable dryer for preservation; easy alternative to jars  
1.5 lbs of dried tomatoes fits into a sandwich ziploc**





# NRCS groundcover establishment

Annual weeds 6-19



Vineyard cover crop seeding  
11-18

In our harsh dry windy environment  
should annual cropping be encouraged?



Grass groundcover  
5-23

Sheep and Hard Fescue  
and remnant Tall fescue





Comstock Seed  
917 Highway 88  
Gardnerville, NV 89460  
(775) 265-0090

Order Date: 05/03/18  
Order Number: 26428  
Project Name: GREEN MANURE CROP  
Project Number:  
Blend Name: COMSTOCK FIELD 5 OPEN SPACE

Sold To: COMSTOCK FARM

Species & Variety  
CEREAL RYE FALL V.N.S  
CEREAL OATS SPRING VNS  
VETCH, HAIRY  
CLOVER ALSIKE  
RYEGRASS ANNUAL GULF

Pure Seed %	Total Viable	Tested	Origin
23.33	88	07/01/17	CAN
23.79	97	10/17/16	OR
16.61	95	07/31/17	OR
11.79	97	09/15/17	CAN
23.30	98	12/22/17	OR

Bulk Lbs: 50.00 PLS Lbs: 46.83

Other Crop: 0.46    Hard Seed: 0.00  
Weed Seed: 0.00    Dormant: 4.45  
Inert Matter: 0.71

Restricted:  
Noxious:

## NRCS E340c Green Manure 3 year program 2018-20

Also seeded daikon radish  
5-2-18 2 lb

Broadcast seeded  
lightly tilled in  
4-18

6-18







# NRCS Green manure cover crop 7-19



**DAIKON RADISH**

*BILL TO:* COMSTOCK FARM 917 STATE ROUTE 88 GARDNERVILLE, NV 89460  
*PO Number:* **seeded daikon radish 5-2-18 2 lb**

Blnd No	Quantity		Lot Number	Description
	PLS	Bulk		
1		12.00	TS991520	CEREAL RYE FALL V.N.S
1		12.00	Y16-16-CO-4	CEREAL OATS SPRING VNS
1		8.40	B1-16-52V	VETCH, HAIRY
1		6.00	17-0024	CLOVER ALSIKE
1		12.00	L106-17-5GC	RYEGRASS ANNUAL GULF

47.21 50.40





**NRCS E327b Monarch habitat**  
**Green manure field**



Fallow for two seasons; surface dominated by filaree, cheatgrass, and annual mallow



**12-21**  
 Rototilled surface after late fall rain;  
 shallow rooted annuals removed

**Pollinator garden; seeded 12-21**

Comstock Seed

DATE OF QUOTE: December 7, 2021

QUOTE EXPIRES: January 6, 2022

QUOTE BY: ED

CUSTOMER: COMSTOCK FARM

TELEPHONE:

FAX:

PROJECT NAME: POLLINATOR SEED BLEND

PROJECT #:

PRICING: Bulk

AREA: Area 1		Total Area: 0.50 Acres		
SPECIES	LBS/ACRE	SEEDS/LB	SEEDS/FT SQ	% SEEDS *
MILKWEEED SHOWY p	2.00	87,000.00	3.99	9.67
MILKWEEED THIN LEAF p	3.00	100,000.00	6.89	16.66
BEEPLANT, YELLOW p	1.00	65,900.00	1.51	3.66
BEEPLANT ROCKY MOUNTAIN	1.00	65,900.00	1.51	3.66
YARROW WHITE	0.15	2,770,000.00	9.54	23.08
LUPINE BLEND p	1.00	20,000.00	0.46	1.11
PENSTEMON BLEND p	1.00	550,000.00	12.63	30.55
BUCKWHEAT SULFUR p	1.00	209,000.00	4.80	11.61
	<b>10.15</b>		<b>41.33</b>	<b>100.00%</b>

\* - "% SEEDS" IS YOUR DESIRED PROPORTIONAL REPRESENTATION OF EACH SPECIES FOR THE SITE. OR IN OTHER WORDS, HOW MANY PLANTS OF EACH TYPE DO YOU WANT TO SEE GROWING.

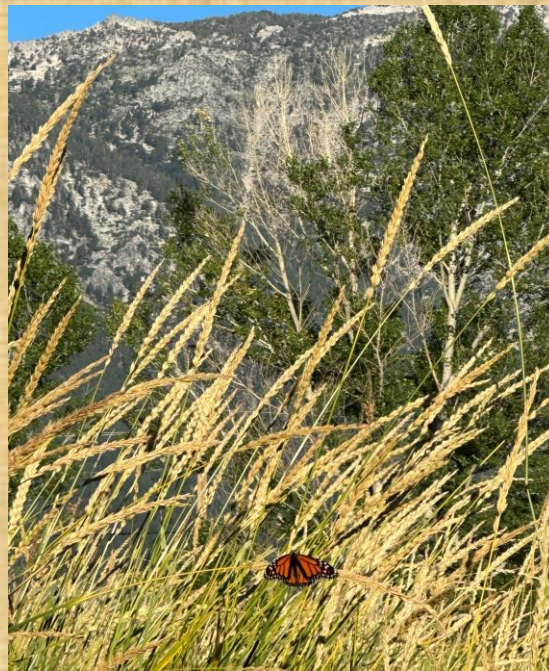




## **Monarch garden 9-22**

**Perennial clover dominant  
and persistent with  
Yarrow, vetch, and sunflowers  
But where's the Milkweed,  
Penstemons, and Sulfur flower?**





**MILKWEED MONARCH HABITAT SUMMER 2023**

**Asclepias speciosa and fascicularis have increased  
10-fold on the farm in the last three years**





Comstock Seed

From: 917 Highway 88  
Gardnerville, NV 89460

1 of 30

Mix Name: **Custom Mix** 8-01550  
Mix #: **237098** Cover crop 2023

% Pure	Common Name	Variety	G + D or H	Origin
16.94	CEREAL RYE	Gazelle (S)	92 + 0 = 92	CAN
16.89	TRITICALE	Gunner (S)	99 + 0 = 99	MT
16.83	PEAS	Arvika/Austrian Peas	93 + 1 = 94	MT
8.47	SAINFOIN	Shoshone	96 -TZ	MT
8.46	VETCH, HAIRY	VNS	97 + 0 = 97	
8.45	LENTIL	Avondale	98 + 0 = 98	MT
8.42	RYEGRASS, ANNUAL	Meroa	97 + 0 = 97	OR
3.37	RYEGRASS, PERENNIAL	Nui (F)	96 + 0 = 96	NZ
3.22	INTERMEDIATE WHEATGRASS	Oahe	95 + 0 = 95	SD
3.18	PASTURE BLEND	Oro Verde	0 + 0 = 0	USA
1.69	CRESTED WHEATGRASS	Newkirk	96 + 0 = 96	CAN
1.68	BLUEGRASS, KENTUCKY	Ginger	96 + 0 = 96	OR
1.66	FORAGE RADISH	Groundhog	98 + 0 = 98	MT

0.16 Other Crop Date Tested: 22-Oct-21  
0.60 Inert Matter Hard Seed: 0.17  
0.00 Weed Seed Noxious Weed: NONE FOUND

Net Weight: 47.53 Lbs. PLS 50.00 Lbs. Bulk  
Coverage: 50.000 Bulk #

NOTICE TO BUYER LIMITATIONS OF WARRANTIES AND REMEDIES

Crop yield and quality are dependent upon many factors beyond the control of the labeled seller and NO WARRANTY is made for crop yield and quality. The labeled seller warrants that all seed sold has been labeled as required under applicable state and federal seed law and that the seed conforms to the label description, within recognized tolerances. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE LABEL.

No claim shall be asserted against the labeled seller unless Buyer reports to the labeled seller within a reasonable period after discovery (not to exceed thirty days), any condition that might lead to a complaint. BUYER'S EXCLUSIVE REMEDY FOR ANY CLAIM OR LOSS RESULTING FROM BREACH OF WARRANTY, BREACH OF CONTRACT OR NEGLIGENCE (INCLUDING BUT NOT LIMITED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES) SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE.

By acceptance of the seed, Buyer agrees the terms and conditions stated above are a benefit to the bargain and constitute the entire agreement between Buyer and the labeled seller. Buyer shall return the original unopened seed package to the labeled seller within twenty days of receipt for a refund of the purchase price if not accepted under these terms.

NOTICE: REQUIRED ARBITRATION / CONCILIATION / MEDIATION

The seed laws of several states including Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Minnesota, Mississippi, Montana, North Dakota, South Carolina (Section 46-21-260), South Dakota, Texas and Washington require arbitration, conciliation or mediation of disputes involving alleged defective seed before certain legal actions may be maintained against a seller. North Carolina offers an alternative to court action that allows claims to be investigated and heard before the Special Seed Board. A complaint (sworn for AR, CO, FL, IL, IN, MN, MS, MT, NC, SC, TX, WA; signed only, CA, GA, ID, ND, SD) must be filed with the Department of Agriculture or Seed Commissioner (IN) or State Plant Board (AR) or Commissioner of Agriculture (NC) within such time to permit an inspection of seed, crops or plants (by an Arbitration Committee - AR, ID, MS, SC). In NC, failure to follow this procedure will limit the amount of damages recoverable. Certified copy of complaint must be sent by registered mail to the labeled seller as provided in individual state law. Information about these requirements may be obtained from the state Department of Agriculture.

Will Call:  
Comstock Farm

# 28 ACRE REGENERATIVE DRILL SEEDING 10-22

## Rich Wilkinson Great Plains drill

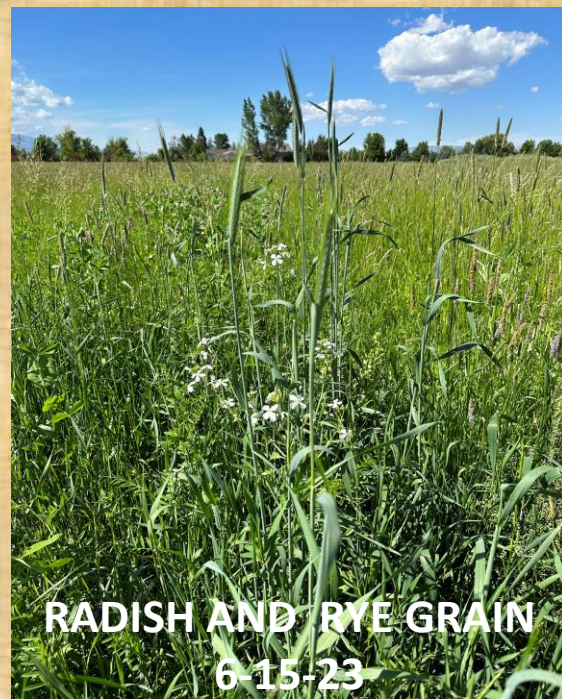
### FIELDS 1,3,4



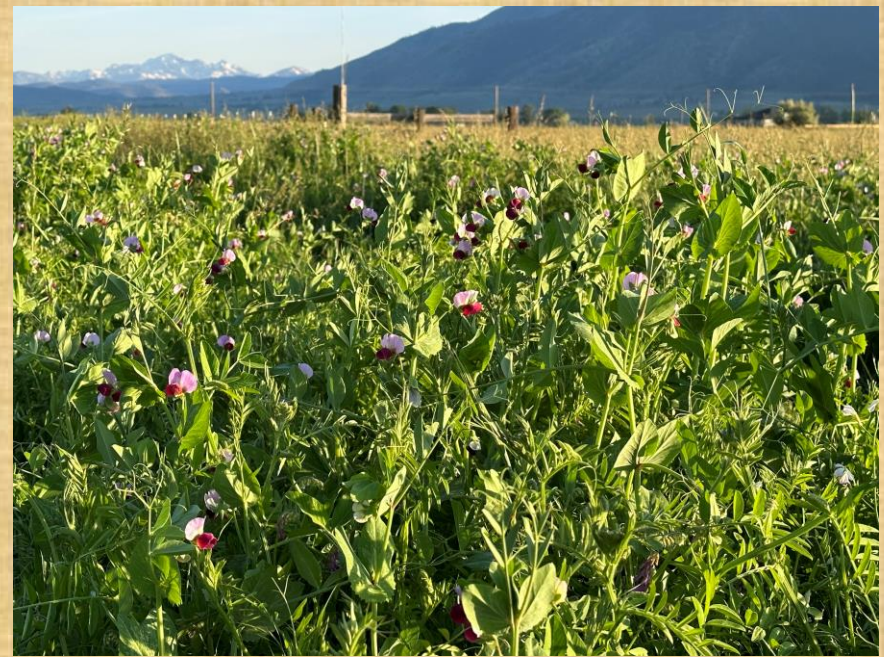




**PEAS SURFACING 6-9-23**



**RADISH AND RYE GRAIN  
6-15-23**



**ARVIKA AUSTRIAN PEAS FLOWERING 6-16-23**



**HAIRY VETCH 7-10-23**

**COVER CROP  
SUCCESS**









**REGENERATIVE SEEDING IN  
GREAT BASIN WILD RYE ROWS**

**1-24**

**Current groundcover  
between rows**

**annual broadleaf weeds**







**BAYS**

**1 2 3 4 5 6 7 8 9 DR**

**Each bay contains a unique cover crop seed blend and variable application techniques**



**Grass left standing until early spring mowing  
4' snow drifts settled in western rows**



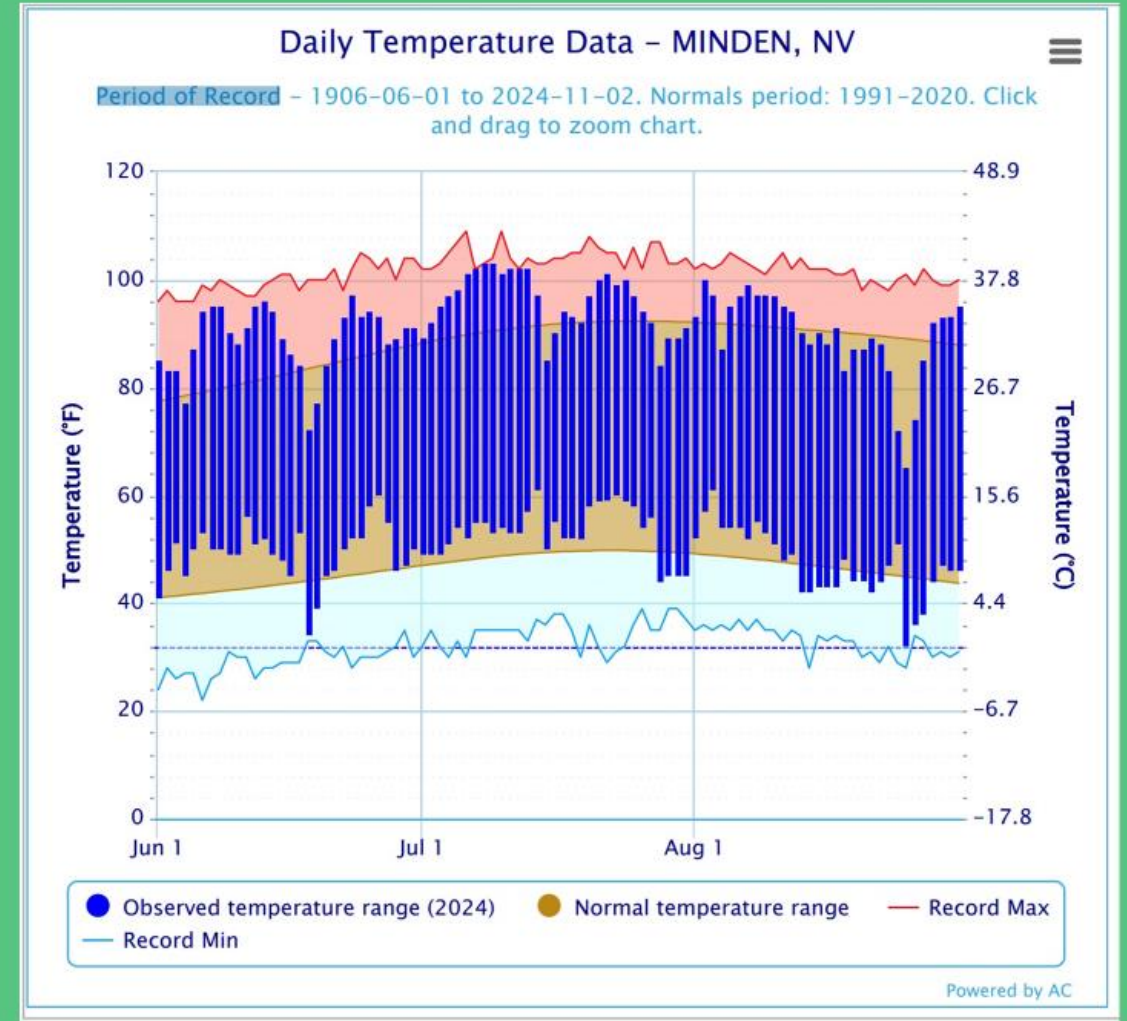
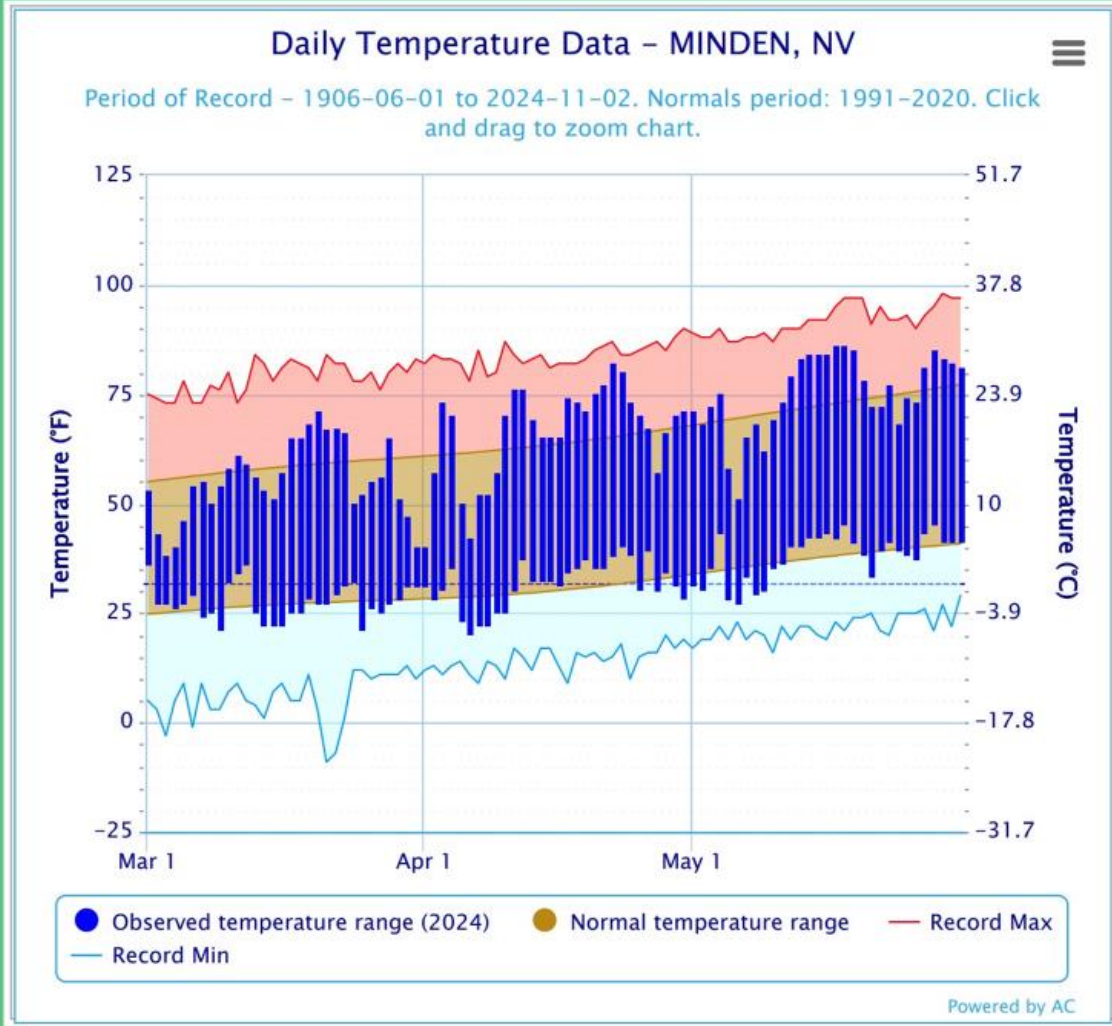
1-24 COVER CROP SEEDING		<b>COVER CROP SEEDING 1-24</b>					<b>Broadcast experiment</b>				
SPECIES		Bulk LBs Seeded									
Date		26-Jan	20-Jan	21-Jan	21-Jan	23-Jan	26-Jan	27-Jan	28-Jan	30-Jan	
Seeding method			ddsd	dsd	dsd	sdd	dsd	dsd	dsd	dsd	
		Bay 1	Bay 2	Bay 3	Bay 4	Bay 5	Bay 6	Bay 7	Bay 8-9	Ditch road	
	Annual rye L73	2	2	2	2	2	2		2	2	
	Radish	1	1	1	1	1	1	1	1		
	Lentils	2	2	2	2	2	2	2	2		
	Peas	2	2	2	2	2	2	2	2		
	Millet	1	1	1	1	1	1	2	2	2	
	Crimson clover	1	1	1	1	1	1	1	1	1	
	Hycon Rose clover	1	1	1	1	1	1	1	1	1	
	Wheat winter Ray	2		2							
	Barley spring Lavina				2						
	Oats spring Monida					2					
	Oats spring Ajay							5			
	Triticale						2				
	Quickguard									5	
	Hairy vetch								2		
	Wildflowers annual	1									
		13	10	12	12	12	12	14	13	11	

**Unlike spring 2022 seeding which also contained perennial pasture species as well**



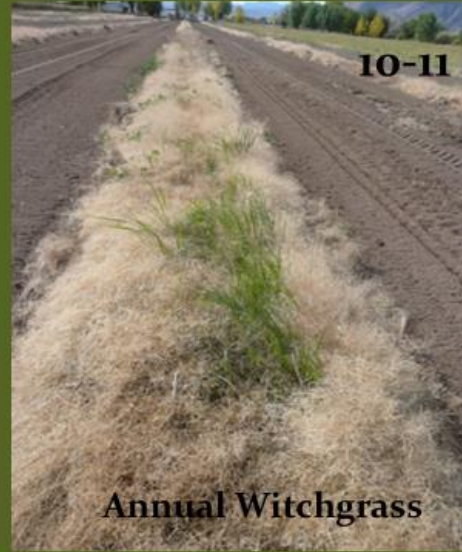
16 days below freezing early April into May

June 18<sup>th</sup> freeze; Comstock Farm is colder than Minden  
Last irrigation July 1; early July, 8 days above 100 degrees



Normal hay production 25-30 tons; 2024 7 tons; native seed production down 60%  
Normal hay processing fee, \$4-6.00/bale; 2024 \$16/bale



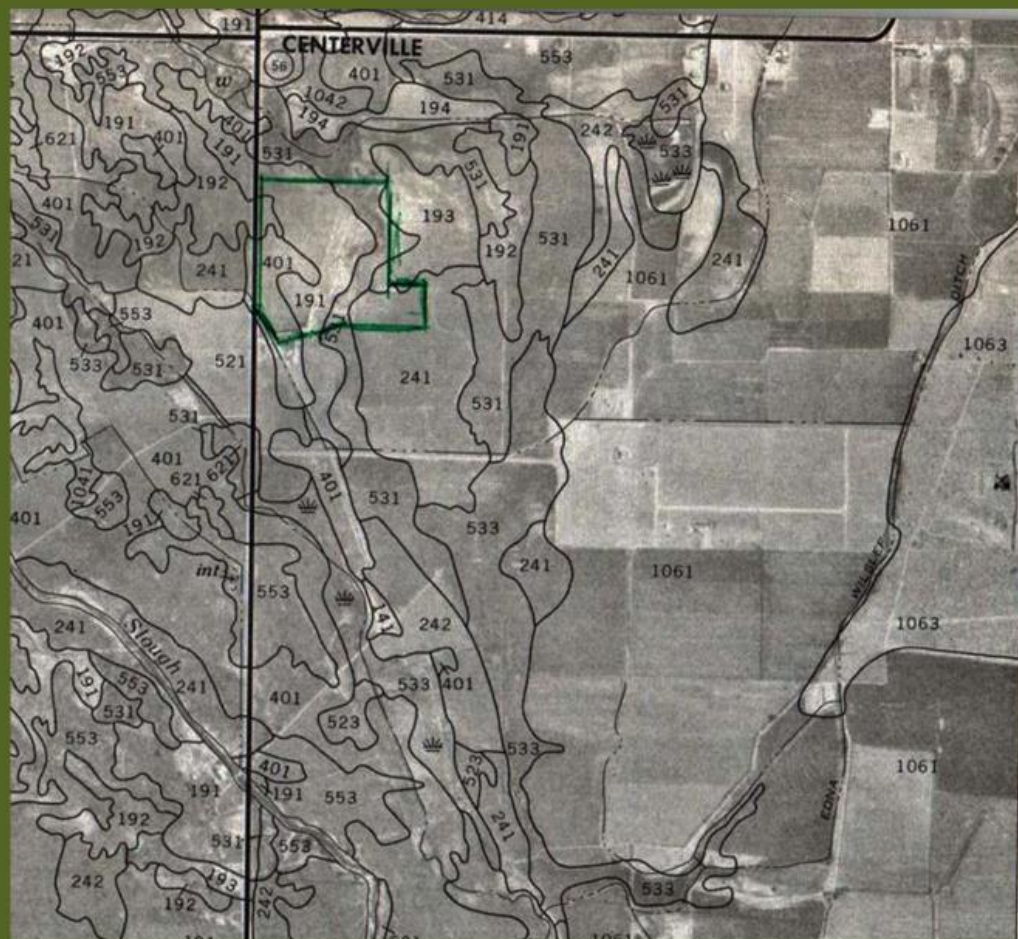


Experimental crop *Leymus cinereus*  
Great Basin Wildrye cultivation





## USDA SOIL SURVEY ANSWERS QUESTION ABOUT POOR PLANT DEVELOPMENT



- 191 Cradlebaugh clay loam drained slightly; saline-alkalal(surface clay loam, below clay loam)**
- 241 Dressler coarse sandy loam (20" coarse sandy loam, 40" coarse sand loam to cobbly sand)**
- 401 Heidtman (clay loam very deep poorly drained 47" clay loam surface with 20" sand underneath)**
- 531 Jubilee loam (very deep poorly drained soil in depressions)**



**Great Basin Wildrye  
6-23**

**Shed contains our  
ag well 300 gpm  
at 100' depth**





**NRCS Fallow Field 7-22**

**Are these fields slowly  
reverting to 1850?**

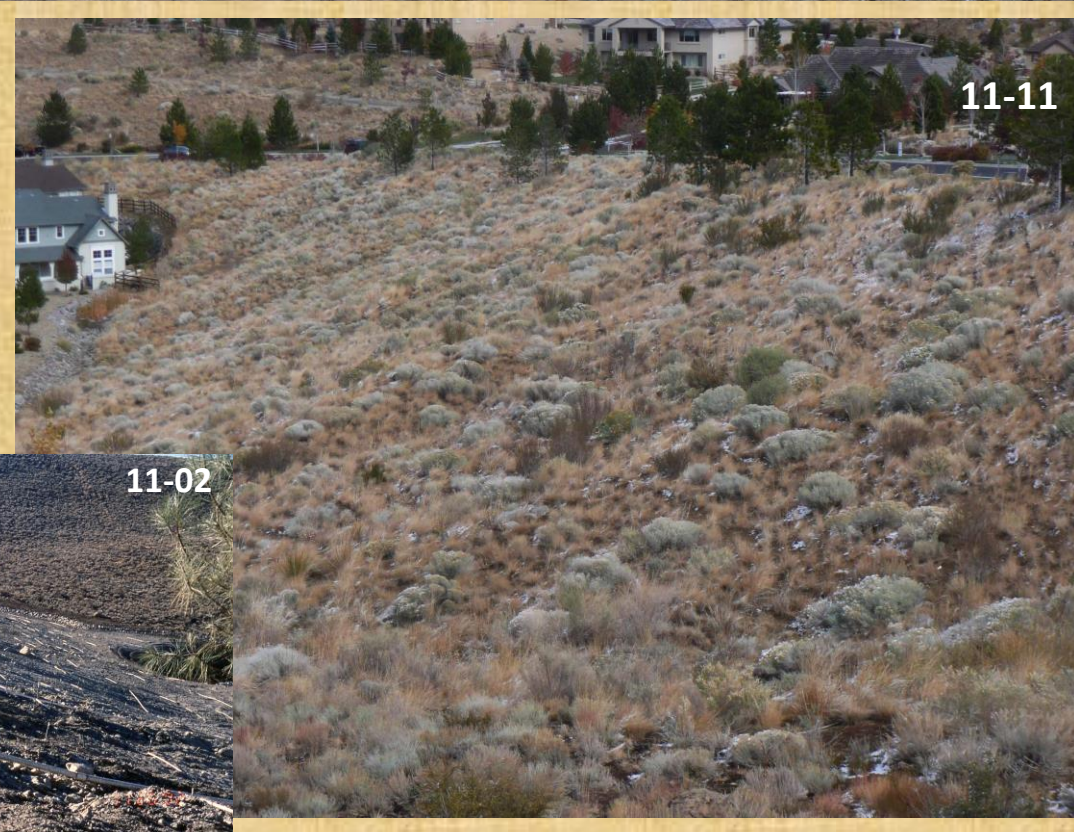




# Somerset housing development Reno, NV



Are these slopes  
reverting to  
1850?



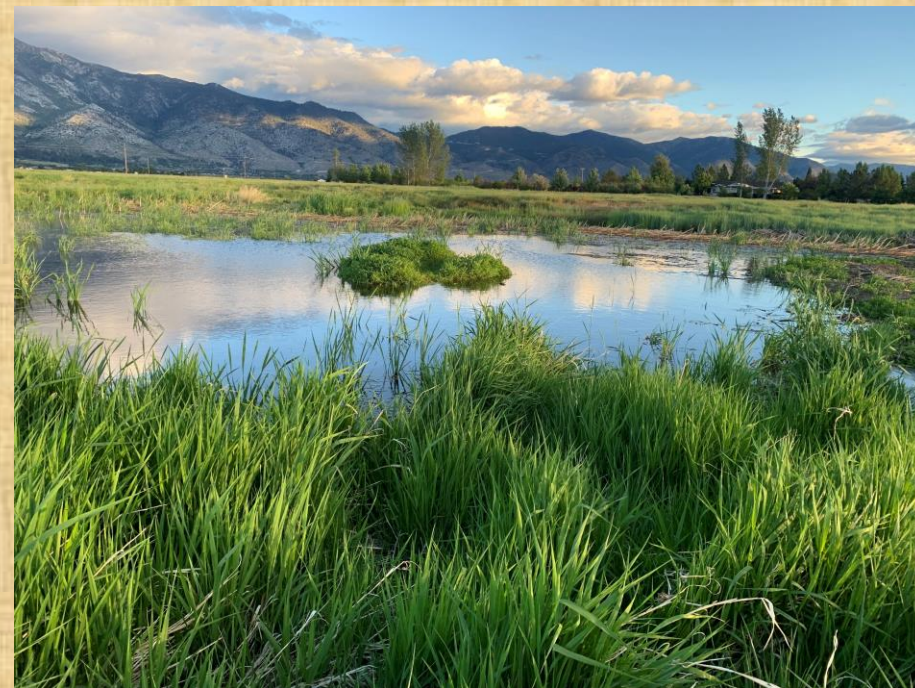


CRANES ON THE FARM





# Home sweet home



Questions?