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SEP 02 2008

DEPARTMENT OF
WATER RESOURCES

IRRIGATION FLOW RATE QUESTIONNAIRE

THIS INFORMATION IS REQUIRED FOR ANY ADJUDICATION CLAIM(S) FOR WHICH THE IRRIGATION FLOW RATE CLAIMED IS MORE THAN 0.02 CFS PER ACRE (ONE EXCEPTION IS THAT 0.03 CFS PER ACRE MAY BE ALLOWED FOR IRRIGATION OF UP TO 5 ACRES).

CLAIM NO(S). 75-77A ; 75-10296 ; 75-4337 ; 75-10061K

NAME _____

ADDRESS _____

PHONE _____

1. TOTAL IRRIGATED ACRES SHOWN ON CLAIM(S) REFERENCED ABOVE 299.9 ACRES.

2. SHOW THE NUMBER OF ACRES OF CROPS GROWN FOR YOUR IRRIGATION SYSTEM(S) DURING A TYPICAL SEASON

	Border	Furrow	Corrugation	Sprinkler	Contour Ditch	Other
Alfalfa					217.9	
Beans						
Field Corn						
Silage						
Spring Grain						
Winter Wheat						
Orchard						
Pasture					82	
Potatoes						
Sugar Beets						
Other						

PLEASE COMPLETE ITEMS 3 THROUGH 8 FOR EACH OF THE IRRIGATION SYSTEM TYPES SPECIFIED ABOVE

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Department of Water Resources
Eastern Region

3. BORDER (COMPLETE BELOW BASED ON PEAK USE)

inflow to border (cfs)	border width (feet)	border length (feet)
field slope (%)	set time (hours)	number of borders per set
frequency (days)		

4. FURROW (COMPLETE BELOW BASED ON PEAK USE)

inflow to furrow (gpm)	furrow spacing (inches)	furrow length (feet)
field slope (%)	set time (hours)	number of furrows per set
frequency (days)		

5. CORRUGATION (COMPLETE BELOW BASED ON PEAK USE)

inflow to corr. (gpm)	corr. spacing (inches)	corr. length (feet)
field slope (%)	set time (hours)	number of corrugations per set
frequency (days)		

6. SPRINKLER (COMPLETE BELOW BASED ON PEAK USE)

average nozzle flow (gpm)	nozzle spacing (feet)
lateral length (feet)	lateral spacing (feet)
number of laterals per set	set time (hrs.)
frequency (days)	

7. CONTOUR DITCH (COMPLETE BELOW BASED ON PEAK USE) (ALFALFA) Pod # 2

14 CFS	5-6%
inflow to ditch (cfs)	field slope (%)
5,650'	700' - AVERAGE
ditch length (feet)	distance between ditches (feet)
3 Ditches AVERAGE	11.5 Hours
number of ditches per set	set time (hours)
7 days	
frequency (days)	

8. OTHER IRRIGATION SYSTEM TYPE (specify)
(COMPLETE BELOW BASED ON PEAK USE)

inflow (cfs)	total area irrigated per set (acres)
field slope (%)	set time (hrs.)
frequency (days)	

3. BORDER (COMPLETE BELOW BASED ON PEAK USE)

inflow to border (cfs)	border width (feet)	border length (feet)
field slope (%)	set time (hours)	number of borders per set
frequency (days)		

4. FURROW (COMPLETE BELOW BASED ON PEAK USE)

inflow to furrow (gpm)	furrow spacing (inches)	furrow length (feet)
field slope (%)	set time (hours)	number of furrows per set
frequency (days)		

5. CORRUGATION (COMPLETE BELOW BASED ON PEAK USE)

inflow to corr. (gpm)	corr. spacing (inches)	corr. length (feet)
field slope (%)	set time (hours)	number of corrugations per set
frequency (days)		

6. SPRINKLER (COMPLETE BELOW BASED ON PEAK USE)

average nozzle flow (gpm)	nozzle spacing (feet)
lateral length (feet)	lateral spacing (feet)
number of laterals per set	set time (hrs.)
frequency (days)	

7. CONTOUR DITCH (COMPLETE BELOW BASED ON PEAK USE)

Pasture (Pod #2)

inflow to ditch (cfs) 5.7 cfs	field slope (%) 2%
ditch length (feet) 2,250'	distance between ditches (feet) 400'
number of ditches per set 1 ditch	set time (hours) 11.5 hrs
frequency (days) 8 days	

8. OTHER IRRIGATION SYSTEM TYPE (specify)
(COMPLETE BELOW BASED ON PEAK USE)

inflow (cfs)	total area irrigated per set (acres)
field slope (%)	set time (hrs.)
frequency (days)	

3.

BORDER (COMPLETE BELOW BASED ON PEAK USE)

inflow to border (cfs)	border width (feet)	border length (feet)
field slope (%)	set time (hours)	number of borders per set
frequency (days)		

4.

FURROW (COMPLETE BELOW BASED ON PEAK USE)

inflow to furrow (gpm)	furrow spacing (inches)	furrow length (feet)
field slope (%)	set time (hours)	number of furrows per set
frequency (days)		

5.

CORRUGATION (COMPLETE BELOW BASED ON PEAK USE)

inflow to corr. (gpm)	corr. spacing (inches)	corr. length (feet)
field slope (%)	set time (hours)	number of corrugations per set
frequency (days)		

6.

SPRINKLER (COMPLETE BELOW BASED ON PEAK USE)

average nozzle flow (gpm)	nozzle spacing (feet)
lateral length (feet)	lateral spacing (feet)
number of laterals per set	set time (hrs.)
frequency (days)	

7.

CONTOUR DITCH (COMPLETE BELOW BASED ON PEAK USE)

(ALFA ALFA) POD #3

4 CFS inflow to ditch (cfs)	4% field slope (%)
4650' ditch length (feet)	740' (Average) distance between ditches (feet)
3 ditches average number of ditches per set	11.5 hours set time (hours)
7 days frequency (days)	

8. OTHER IRRIGATION SYSTEM TYPE (specify)
(COMPLETE BELOW BASED ON PEAK USE)

inflow (cfs)	total area irrigated per set (acres)
field slope (%)	set time (hrs.)
frequency (days)	

9.

POD #1 CONVEYANCE FROM SOURCE TO FARM

UNLINED DITCH-SPECIFY SOIL TYPE Extremely gravelly Coarse Sandy loam
4,650' 36" 84"
length (feet) ave. depth from land surface (inches) ave. top width of water surface (inches)

LINED DITCH-SPECIFY TYPE OF LINING N/A
length (feet) ave. depth from land surface (inches) ave. top width of water surface (inches)

PIPELINE

length (feet) diameter (inches)

IS THIS CONVEYANCE SYSTEM SHARED BY OTHER WATER USERS? YES
IF YES, PLEASE DESCRIBE OR SKETCH THE SYSTEM SHOWING THE NUMBER OF WATER USERS, LOCATION OF HEADGATES, LENGTHS ETC.

2- total users on POD # 1

App: 37 Acres irrigated on tract # 50
remainder is irrigated on tract # 51
"below" ditch.

9.

CONVEYANCE FROM SOURCE TO FARM

POD # 2
 UNLINED DITCH-SPECIFY SOIL TYPE Extremely gravelly Coarse Sandy loam
6,850' 36" 84"
 length (feet) ave. depth from land surface (inches) ave. top width of water surface (inches)

LINED DITCH-SPECIFY TYPE OF LINING

N/A

length (feet)

ave. depth from land surface (inches)

ave. top width of water surface (inches)

PIPELINE

length (feet)

diameter (inches)

IS THIS CONVEYANCE SYSTEM SHARED BY OTHER WATER USERS? Yes
 IF YES, PLEASE DESCRIBE OR SKETCH THE SYSTEM SHOWING THE NUMBER OF WATER USERS, LOCATION OF HEADGATES, LENGTHS ETC.

3 water users total P.O.D. # 2

other users:

— FIELD # 3 Tract 51 - 22.87 AC

— 35 Acres down stream at end on ditch.

9. POD #3

CONVEYANCE FROM SOURCE TO FARM

UNLINED DITCH-SPECIFY SOIL TYPE Extremely gravelly Coarse Sandy loam

1700'
length (feet)

36"
ave. depth from land surface (inches)

60"
ave. top width of water surface (inches)

LINED DITCH-SPECIFY TYPE OF LINING

N/A

length (feet)

ave. depth from land surface (inches)

ave. top width of water surface (inches)

PIPELINE

length (feet)

diameter (inches)

IS THIS CONVEYANCE SYSTEM SHARED BY OTHER WATER USERS? No

IF YES, PLEASE DESCRIBE OR SKETCH THE SYSTEM SHOWING THE NUMBER OF WATER USERS, LOCATION OF HEADGATES, LENGTHS ETC.

10. ON-FARM DISTRIBUTION SYSTEM-DRAW A SIMPLE SKETCH OF YOUR ON-FARM WATER DISTRIBUTION SYSTEM. AN AERIAL PHOTO/FARM PLAN WITH THE IRRIGATION SYSTEM SKETCHED ON IT MAY BE USED. THIS SKETCH MUST INCLUDE THE FOLLOWING INFORMATION FOR EACH REACH: LENGTH, TOP WIDTH OF WATER SURFACE, DEPTH FROM LAND SURFACE, SOIL TYPE OR LINING, AND PERCENT OF TOTAL FLOW DURING USE.

SEE ATTACHED AERIAL PHOTO
MAP Tract # 50.

11. HAVE YOU CHANGED YOUR IRRIGATION SYSTEM FROM THE ONE HISTORICALLY USED? (FOR EXAMPLE, LAND LEVELING, CHANGING LENGTH OF RUNS, CHANGE FROM FURROW TO SPRINKLER, ETC.)

IF YES, PLEASE DESCRIBE:

NO

12. HAVE YOU HAD ANY IRRIGATION SYSTEM DESIGN/EVALUATIONS OR FARM SOIL SURVEYS COMPLETED BY THE SOIL CONSERVATION SERVICE, PRIVATE CONSULTANTS, OR IRRIGATION EQUIPMENT DEALERS?
IF YES, PLEASE DESCRIBE OR ATTACH COPIES

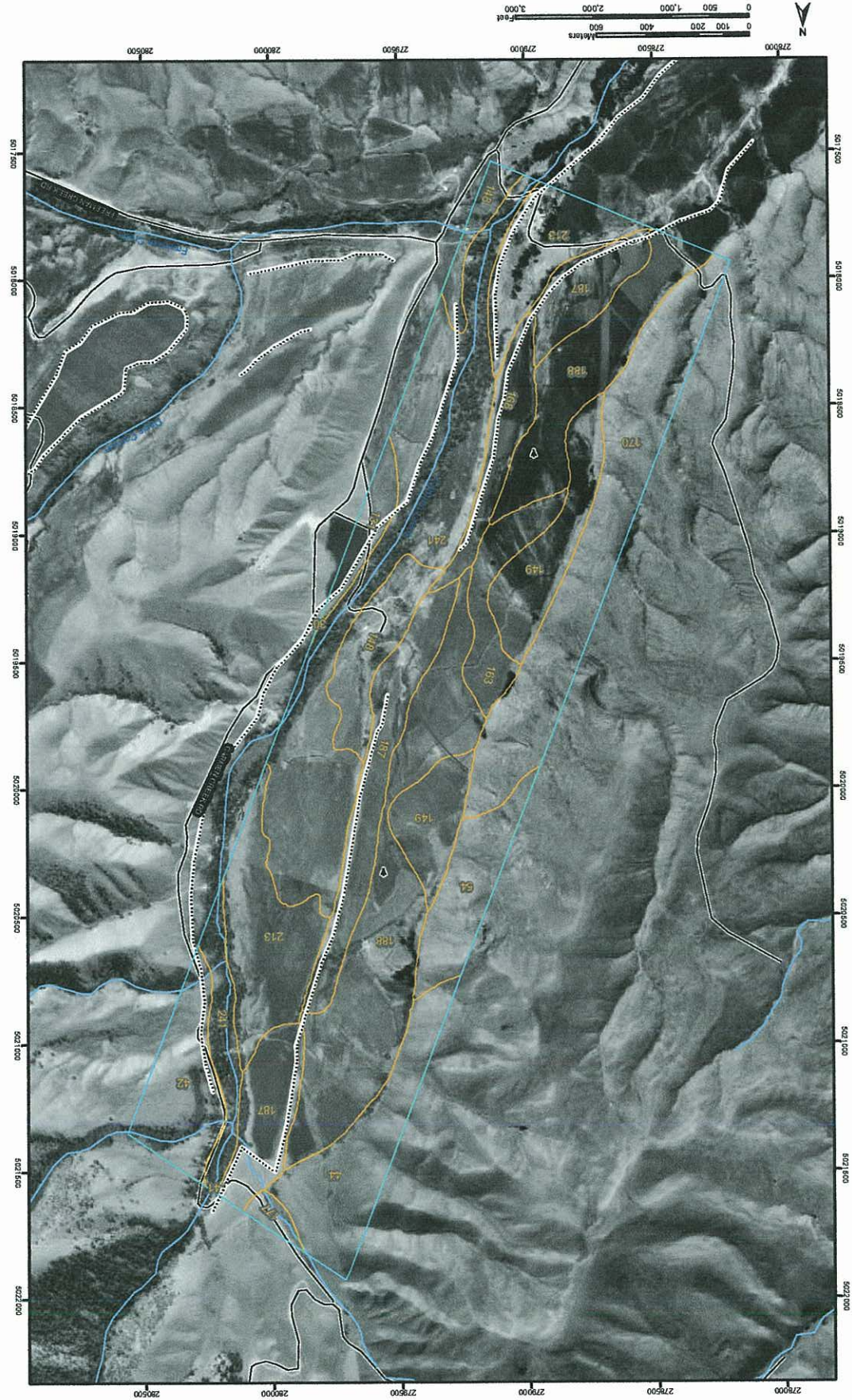
Soil Survey Completed See MAPS
ATTACHED.

13. PLEASE INCLUDE ANY FURTHER COMMENTS WHICH WILL AID IN THE EVALUATION OF YOUR WATER REQUIREMENTS.

PLEASE RETURN FORMS TO:

Dept. of Water Resources
Adjudication Bureau
P. O. Box 83720
Boise, ID 83720-0098

Soil Map-Custer-Lemhi Area, Idaho, Parts of Blaine, Custer, and Lemhi Counties
(Brandon McFarland)



MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 12N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Custer-Lemhi Area, Idaho, Parts of Blaine, Custer, and Lemhi Counties
Survey Area Data: Version 9, Jan 29, 2008

Date(s) aerial images were photographed: 7/31/1992; 8/26/1992

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

MAP LEGEND

	Area of Interest (AOI)		Very Stony Spot
	Soils		Wet Spot
	Soil Map Units		Other
	Special Point Features		Special Line Features
	Blowout		Gully
	Borrow Pit		Short Steep Slope
	Clay Spot		Other
	Closed Depression		Political Features
	Gravel Pit		Municipalities
	Gravelly Spot		Cities
	Landfill		Urban Areas
	Lava Flow		Water Features
	Marsh		Oceans
	Mine or Quarry		Streams and Canals
	Miscellaneous Water		Transportation
	Perennial Water		Ralls
	Rock Outcrop		Roads
	Saline Spot		Interstate Highways
	Sandy Spot		US Routes
	Severely Eroded Spot		State Highways
	Sinkhole		Local Roads
	Slide or Slip		Other Roads
	Sodic Spot		
	Spill Area		
	Stony Spot		

Map Unit Legend

Custer-Lemhi Area, Idaho, Parts of Blaine, Custer, and Lemhi Counties (ID752)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
30	Calcids-Badland-Xerolls complex, rolling to very steep	0.2	0.0%
41	Cryolls-Rubble land-Rock outcrop complex, 50 to 80 percent slopes	0.1	0.0%
42	Cryepts-Rubble land-Rock outcrop complex, 50 to 80 percent slopes	44.6	4.3%
44	Dacont-Custco association, 20 to 50 percent slopes	62.0	6.0%
54	Dawtonia-Custco association, 20 to 50 percent slopes	38.1	3.7%
131	Misfire-Pattee-Dawtonia complex, 20 to 45 percent slopes	15.2	1.5%
148	Packham gravelly loam, 1 to 4 percent slopes	46.1	4.4%
149	Packham-Perreau complex, 5 to 15 percent slopes	67.7	6.5%
163	Pattee-Perreau complex, 1 to 4 percent slopes	28.8	2.8%
168	Perreau silt loam, 1 to 4 percent slopes	28.5	2.7%
170	Perreau silt loam, 8 to 20 percent slopes	117.8	11.4%
177	Povey-Klug, cool complex, 25 to 60 percent slopes	5.6	0.5%
187	Shenon-Perreau complex, 4 to 8 percent slopes	114.3	11.0%
188	Shenon-Perreau complex, 4 to 20 percent slopes	181.7	17.5%
213	Swahlen-Packham complex, 2 to 8 percent slopes	98.9	9.5%
241	Yearian very stony loam, 1 to 4 percent slopes	187.8	18.1%
Totals for Area of Interest (AOI)		1,037.4	100.0%

Map Unit Description

Custer-Lemhi Area, Idaho, Parts of Blaine, Custer, and Lemhi Counties

149 Packham-Perreau complex, 5 to 15 percent slopes

Setting

Elevation: 4000 to 6000 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 39 to 46 degrees F
Frost-free period: 75 to 125 days

Composition

Packham and similar soils: 60 percent
Perreau and similar soils: 30 percent

Description of Packham

Setting

Landform: Fan remnants
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Properties and Qualities

Slope: 5 to 8 percent
Depth to restrictive feature: 20 to 35 inches to Strongly contrasting textural stratification
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 2.00 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 15 percent
Gypsum maximum: 0 percent
Available water capacity: Very low (about 2.1 inches)

Interpretive Groups

Land capability (non irrigated): 6s
Ecological site: GRAVELLY LOAM 8-12 ARTRW8/PSSP (R012XY004ID)

Typical Profile

0 to 5 inches: gravelly loam
5 to 32 inches: very gravelly sandy loam
32 to 60 inches: very gravelly loamy sand

Description of Perreau

Setting

Landform: Hillslopes
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Lacustrine deposits

Properties and Qualities

Slope: 5 to 15 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 25 percent
Gypsum maximum: 10 percent
Salinity maximum: Very slightly saline or slightly saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio maximum: 13.0
Available water capacity: Moderate (about 7.4 inches)

Interpretive Groups

Land capability (non irrigated): 6e
Ecological site: LOAMY 8-12 ARTRW8/PSSPS (R012XY032ID)

Typical Profile

0 to 4 inches: silt loam
4 to 13 inches: gravelly clay loam

Map Unit Description

Custer-Lemhi Area, Idaho, Parts of Blaine, Custer, and Lemhi Counties

13 to 26 inches: gravelly loam

26 to 60 inches: extremely gravelly loam

Map Unit Description

Custer-Lemhi Area, Idaho, Parts of Blaine, Custer, and Lemhi Counties

188 Shenon-Perreau complex, 4 to 20 percent slopes

Setting

Elevation: 3700 to 6000 feet
Mean annual precipitation: 8 to 13 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 50 to 100 days

Composition

Shenon and similar soils: 55 percent
Perreau and similar soils: 30 percent

Description of Shenon

Setting

Landform: Fan remnants, stream terraces
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Alluvium derived from igneous rock

Properties and Qualities

Slope: 4 to 20 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 25 percent
Gypsum maximum: 0 percent
Sodium adsorption ratio maximum: 5.0
Available water capacity: Moderate (about 8.9 inches)

Interpretive Groups

Land capability classification (irrigated): 4e
Land capability (non irrigated): 4e
Ecological site: LOAMY 8-12 ARTRW8/PSSPS (R012XY032ID)

Typical Profile

0 to 4 inches: loam
4 to 14 inches: loam
14 to 24 inches: clay loam
24 to 60 inches: gravelly loam

Description of Perreau

Setting

Landform: Fan remnants, stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits

Properties and Qualities

Slope: 4 to 12 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 25 percent
Gypsum maximum: 10 percent
Salinity maximum: Very slightly saline or slightly saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio maximum: 13.0
Available water capacity: Moderate (about 7.4 inches)

Interpretive Groups

Land capability classification (irrigated): 4e
Land capability (non irrigated): 6e
Ecological site: LOAMY 8-12 ARTRW8/PSSPS (R012XY032ID)

Map Unit Description

Custer-Lemhi Area, Idaho, Parts of Blaine, Custer, and Lemhi Counties

Typical Profile

0 to 4 inches: silt loam

4 to 13 inches: gravelly clay loam

13 to 26 inches: gravelly loam

26 to 60 inches: extremely gravelly loam

Map Unit Description

Custer-Lemhi Area, Idaho, Parts of Blaine, Custer, and Lemhi Counties

213 Swahlen-Packham complex, 2 to 8 percent slopes

Setting

Elevation: 4000 to 5600 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 70 to 125 days

Composition

Swahlen and similar soils: 65 percent
Packham and similar soils: 20 percent
Minor components: 5 percent

Description of Swahlen

Setting

Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Properties and Qualities

Slope: 2 to 8 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 2.00 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Low (about 4.3 inches)

Interpretive Groups

Land capability classification (irrigated): 3s
Land capability (non irrigated): 4s
Ecological site: GRAVELLY LOAM 8-12 ARTRW8/PSSP (R012XY004ID)

Typical Profile

0 to 2 inches: stony loam
2 to 8 inches: very gravelly loam
8 to 27 inches: very gravelly loam
27 to 60 inches: extremely gravelly coarse sandy loam

Description of Packham

Setting

Landform: Stream terraces
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Mixed alluvium

Properties and Qualities

Slope: 2 to 8 percent
Depth to restrictive feature: 20 to 35 inches to Strongly contrasting textural stratification
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 2.00 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 15 percent
Gypsum maximum: 0 percent
Available water capacity: Very low (about 2.1 inches)

Interpretive Groups

Land capability classification (irrigated): 4s
Land capability (non irrigated): 6s
Ecological site: GRAVELLY LOAM 8-12 ARTRW8/PSSP (R012XY004ID)

Typical Profile

Map Unit Description

Custer-Lemhi Area, Idaho, Parts of Blaine, Custer, and Lemhi Counties

0 to 5 inches: gravelly loam
5 to 32 inches: very gravelly sandy loam
32 to 60 inches: very gravelly loamy sand

Minor Components

Aquolls soils

Percent of map unit: 5 percent
Landform: Depressions