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IRRIGABLE SOILS
OF
WYOMING



Prepared By
WYOMING WATER PLANNING PROGRAM
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MAP OF IRRIGABLE SOILS OF WYOMING
EXPLANATION AND DATA

The Irrigable Soils Map of Wyoming was prepared to assist interested groups, agencies, and individuals concerned with or interested in land use planning, agriculture, and conservation treatment needs. The map can be used for general planning and to help delineate areas which may be potentially suitable for irrigation.

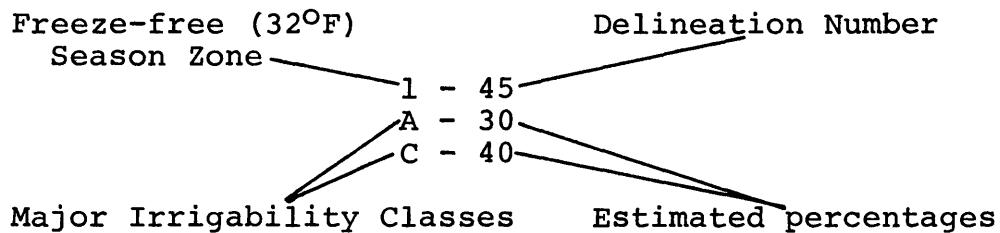
Irrigable lands take into consideration a combination of factors including soils, topography, drainage, and growing season. The present availability or lack of irrigation water is not considered in the classification of soils for the map, Irrigable Soils of Wyoming. The classification used is a rating system indicating the potential usefulness of different kinds of soil for irrigated agriculture in Wyoming.

The classification of soil irrigability is based on climate and soil properties as they relate to limitations for use as irrigated soils. The map and classification system together can be used to signal major limitations for initial improvement and major hazards to continued use. The map is not intended to be used for the location of specific fields for agriculture or for the identification of specific management needs.

The map of Irrigable Soils of Wyoming delineates areas of soils having varying properties. The soils are grouped into five major classes of potential usefulness related to irrigation. The major classes are divided into subclasses to indicate the nature of the most outstanding use-limitations. Since length of growing season is very important in determining the kinds of crops which might be grown and their economic value, the irrigability classes are further subdivided according to the freeze-free (32°F) season zone in which the various soils occur. The climatic zones are numbered one through four (1, 2, 3, 4).

The map symbols are based on climatic zone, delineation number, soil class, and percentage of soil class. The delineation number is an identification number, assigned by the Soil Conservation Service, based on irrigable soil class and subclass, and percentage. A delineation indicates areas having similar characteristics, similar soils, landscapes, and other characteristics that affect classifying the soils

into soil irrigability classes and subclasses. The symbols, by which the soil irrigability classes of the different delineations shown on the map are identified, consist of four parts:



Estimated percentages may not total 100 percent for every map symbol as only the dominant soil irrigability classes are presented for an area.

A further breakdown into irrigability subclasses is shown in the tabulations by hydrologic units and counties.

The five major soil irrigability Classes A, B, C, D, and E are defined in Table I in general terms of decreasing potential usefulness and increasing limitations or hazards. Class A soils are the most valuable for irrigation purposes; Class E soils are soils that should not be irrigated. The soil irrigability subclasses a, c, d, f, etc., are listed under each major class in Table I, and a brief description of the kind of outstanding limitation is given there. The length in days of the four freeze-free (32°F) season zones of Wyoming is also given in Table I.

Other tables accompanying the map of irrigable soils include:

Table I-A - Percentage by soil class and subclass for each climatic zone and delineation number.

Table II - Tabulation of irrigability classes and subclasses by hydrologic area.

Table III - Tabulation of irrigability classes and subclasses by county.

Table IV - Acreage totals of irrigability classes by hydrologic area.

Table V - Acreage totals of irrigability classes by county.

An explanation of the data on each table precedes the table.

TABLE I - SOIL IRRIGABILITY CLASSES AND SUBCLASSES

<u>Irrigability Class and Subclass</u>	Freeze-free (32°F) Season Zones (Days) ¹			
	1 (> 120)	2 (90-120)	3 (60-90)	4 (< 60)
Class A -- Soils that have slight or few limitations that restrict their use for irrigated agriculture (no subclass).	A	A	A	A
Class B -- Soils that have moderate limitations that reduce choice of crops or require moderate conservation practices.				
Subclass a -- Soils having moderately low available water-holding capacity	a	a	a	a
Subclass d -- Soils having hardpan or bedrock at 30 to 40 inches	d	d	d	
Subclass k -- Stony and cobble soils	k			
Subclass p -- Slowly permeable soils	p	p	p	p
Subclass w -- Wet soils	w	w	w	w
Subclass x -- Saline and/or alkali soils	x	x		
Subclass wx -- Wet and saline and/or alkali soils	wx	wx		
Class C -- Soils that have severe limitations that reduce choice of crops or require special conservation practices or both.				

¹Freeze-free (32°F) Season Zones are also referred to as Climatic Zones

Table I - Continued

Subclass a -- Soils having low available water-holding capacity	a	a	a	a
Subclass c -- Soils having coarse surface textures and low available water-holding capacity	c			
Subclass d -- Soils having hardpan or bedrock at 20 to 30 inches		d	d	d
Subclass k -- Stony and cobble soils	k	k	k	k
Subclass p -- Slowly permeable soils	p	p	p	
Subclass s -- Soils having 4 to 8 percent slopes	s	s	s	s
Subclass w -- Wet soils	w	w	w	w
Subclass x -- Saline and/or alkali soils	x	x	x	x
Subclass as-- Soils having low available water-holding capacity and 4 to 8 percent slopes	as			
Subclass ds-- Soils having hardpan or bedrock at 20 to 30 inches and 4 to 8 percent slopes	ds	ds	ds	ds
Subclass ps-- Slowly permeable soils with 4 to 8 percent slopes	ps	ps	ps	

Table I - Continued

Subclass wx-- Wet and saline and/or alkali soils	wx	wx	wx	wx
Class D -- Soils that have very severe limitations that restrict the choice of crops or require special practices and management, or both.				
Subclass a -- Soils having very low available water-holding capacity	a		a	a
Subclass d -- Soils having hardpan or bedrock at 10 to 20 inches	d	d	d	d
Subclass k -- Stony and cobbley soils	k	k	k	k
Subclass p -- Very slowly permeable soils	p			
Subclass r -- Soils having dissected landscapes	r		r	r
Subclass s -- Soils having 8 to 15 percent slopes	s	s	s	s
Subclass w -- Wet soils		w	w	w
Subclass x -- Saline and/or alkali soils	x	x	x	x
Subclass as-- Soils having very low available water-holding capacity and 4 to 15 percent slopes	as			

Table I - Continued

Subclass ds-- Soils having hardpan or bedrock at 10 to 20 inches and 4 to 15 percent slopes	ds	ds	ds	ds
Subclass ps-- Very slowly permeable soils on 4 to 15 percent slopes and slowly permeable soils on 8 to 15 percent slopes	ps		ps	ps
Subclass wf-- Wet soils subject to frequent overflow	wf			
Subclass wx-- Wet and saline and/or alkali soils		wx		
Class E -- Soils having properties that according to the criteria used in the development of this map indicate they should not be irrigated (no subclass).	E	E	E	E

Table I-A gives the irrigability class percentage composition for each map symbol delineation under each of the four freeze-free (32°F) season zones. The location by county is also given for each map symbol delineation. An example from the map will help clarify the uses of the map symbols. For example:

1-10
C-35
D-35

The explanation of the map symbol is as follows:

<u>Symbol</u>	<u>Meaning</u>
1-10	1 - area is in climatic freeze-free zone number 1. 10 - Number 10 is a delineation number that indicates areas having similar characteristics, soils, landscapes and other characteristics that affect classifying the soils into soil irrigability classes and subclasses.
C-35	C - A predominant soil class in the area is Class C. 35 - 35 percent of the soils in the area fall into soil Class C.
D-35	D - A predominant soil class in the area is Class D. 35 - 35 percent of the soils in the area fall into soil Class D.

A more complete breakdown of map symbol 1-10 is presented in Table I-A. Table I-A gives the above information plus the classifications of the remaining 30 percent of the soils in the area that are not included in the map symbol. Table I-A also gives the irrigability subclassification of all soils in the area. The county location of the area is also given in Table I-A. The following is an example from Table I-A:

(Example) Table I-A - Percentage by Soil Class and Subclass
 for Each Climatic Zone and Delineation
 Climatic Zone 1

Map Symbol		Location Counties	Irrigable Soil Class, Subclass and Percent				
Climatic Zone and Delin. No.	Irrigable Soil Class and Percent		A	B	C	D	E
1-10	C-35	Campbell Converse Johnson	10	p-10	s-35	ps-10	10 s-25

Following is the explanation of the example above:

1-10 given in previous paragraphs.
 C-35 given in previous paragraphs.
 D-35 given in previous paragraphs.

Location - Counties the area is located in Campbell,
 Converse and Johnson Counties.

Irrigable Soil Class,
 Subclass, and Percent

Soil Class A

10 10 percent of the soils in the
 area are Class A.

Soil Class B

p-10 10 percent of the soils in the
 area are Class B and all of the
 Class B soils are in subclass p.

Soil Class C

s-35 35 percent of the soils in the
 area are Class C and all of the
 Class C soils are in subclass s.

Soil Class D

ps-10 10 percent of the soils in the
 area are Class D and subclassed ps.

s-25 25 percent of the soils in the
 area are Class D and subclassed s;
 this results in a total of 35 per-
 cent of the soils in the area being
 Class D.

Soil Class E

10 10 percent of the soils in the
 area are Class E.

A close examination of the irrigable soils map reveals that there are five areas with the map symbol:

1-10
C-35
D-35

These five areas have the same percentage makeup of the various soil irrigability classes and subclasses.

Addendum to Map:

Some omissions have been noticed on the map.

Area 1-9, the narrow area in Sheridan County along Tongue River and Goose Creek should be colored green.

A narrow area along Buffalo Creek in northwest Natrona County has no symbol. It is a segment of delineation 1-59, C-60, A-30 and should be colored red.

(Note: A small area east of Barnum in southwest Johnson County has no symbol. This area is part of delineation 1-58, E-55, D-25.)

**TABLE I-A - PERCENTAGE BY SOIL CLASS AND SUBCLASS
FOR EACH CLIMATIC ZONE AND DELINEATION NUMBER¹**

Climatic Zone 1

Climatic Zone & Delin. No.	Map Symbol Irrig. Soil Class and Percent	Location - Counties	Irrigable Soil Class, Subclass, and Percent				
			A	B	C	D	E
1-1	E-75	Campbell, Converse, Crook, Johnson, Sheridan, Weston, Niobrara		s-10	s-10	75	r-5
1-2	D-35 E-30 C-15	Crook, Weston	5	p-15	p-15	ps-35	30
1-3	B-100	Crook		p-100			
1-4	E-60 D-30	Crook			s-10	s-30	60
1-5	A-70	Crook	70		s-10	wf-5	15
1-6	D-40 E-35	Campbell, Crook, Sheridan	5		s-20	s-40	35
1-7	A-40 D-35	Campbell	40	p-10 s-5	p-5 x-25	ps-10	5
1-8	C-60 E-20	Campbell, Sheridan	10		p-20 s-40	s-10	20
1-9	A-65 C-20	Campbell, Johnson, Sheridan	65	p-15	s-10 wx-10		
1-10	C-35 D-35	Campbell, Converse, Johnson	10	p-10	s-35	ps-10 s-25	10
1-11	D-45 E-35	Campbell, Converse, Johnson	5		s-10	s-45 x-5	35
1-12	D-75 A-25	Campbell, Crook	25			wf-5 x-70	
1-13	C-35 D-30 E-25	Crook, Weston	10		s-35	ds-30	25
1-14	B-50 C-30	Weston	10	p-50	s-30	x-10	

Table I-A -Continued-

Map Symbol		Location - Counties	Irrigable Soil Class, Subclass, and Percent				
Climatic Zone & Delin. No.	Irrig. Soil Class and Percent		A	B	C	D	E
1-15	D-40 E-35	Crook, Weston		p-10	p-20	x-40 ds-15	15
1-16	B-40 C-35	Sheridan, Johnson, Natrona	5	p-40	s-35	x-10	10
1-17	B-30 C-25 E-20	Sheridan	10	p-30	s-25	s-15	20
1-18	D-40 A-20 C-20	Johnson	20	p-5	s-20	k-10 s-30	15
1-19	E-60 D-25	Johnson	5		s-10	a-5 s-20	60
1-20	C-50 B-20	Johnson		p-20	ps-50	x-10	20
1-21	D-40 E-25 C-20	Johnson	15		s-20	ds-40	25
1-22	B-35 E-30 C-25	Johnson		p-35	s-20 wx-5	x-10	30
1-23	E-55 D-25	Johnson, Natrona			ds-10 s-5 wx-5	ds-10 s-15	55
1-24	C-35 E-30 D-25	Crook	10		s-35	s-25	30
1-25	D-55 C-20	Niobrara, Weston		p-10	p-20	ds-15 x-40	15
1-26	E-60 D-20	Converse, Niobrara, Weston	5		s-15	r-20	60
1-27	A-40 D-30	Converse, Niobrara, Weston	40		s-20	x-30	10
1-28	D-65 C-20	Niobrara		p-3	p-20	ps-45 x-20	12

Table I-A -Continued-

Map Symbol		Location - Counties	Irrigable Soil Class, Subclass, and Percent				
Climatic Zone & Delin. No.	Irrig. Soil Class and Percent		A	B	C	D	E
1-29	D-45 B-30	Converse		p-30	p-10 s-10	x-45	5
1-30	C-75	Converse		5	s-75	ds-10	10
1-31	D-40 C-35	Converse, Niobrara, Platte		10	s-35	s-30 x-10	15
1-32	C-50 D-30	Goshen, Niobrara, Platte		10	a-5 s-45	ds-30	10
1-33	E-75	Goshen, Niobrara, Platte			s-5	ds-20	75
1-34	A-40 D-25 C-20	Goshen		40	a-20	a-10 ds-15	15
1-35	C-45 D-45	Goshen		10	s-45	a-10 s-35	
1-36	E-80	Goshen, Platte			s-10	s-10	80
1-37	C-80	Goshen, Platte			s-80	ds-20	
1-38	A-45 C-45	Goshen, Platte		45	a-25 c-20	w-10	
1-39	C-64 D-30	Goshen	3	s-3	a-64	a-30	
1-40	C-40 A-35	Converse		35	s-40	k-10	15
1-41	D-40 C-30	Converse, Platte			s-15 k-15	ds-40	30
1-42	A-55 B-30	Converse, Natrona, Platte	55	d-10 w-10 x-10	s-10		5
1-43	D-90	Platte	5		a-5	k-90	
1-44	D-50 A-35	Platte		35	s-15	a-25 ds-25	

Table I-A -Continued-

Climatic Zone & Delin. No.	Map Symbol Irrig. Soil Class and Percent	Location - Counties	Irrigable Soil Class, Subclass, and Percent				
			A	B	C	D	E
1-45	C-40 A-30	Platte	30		s-40	ds-20	10
1-46	A-85	Platte	85			ds-5	10
1-47	C-60 D-35	Goshen			s-60	s-35 ds-5	
1-48	C-50 D-30	Goshen		p-20	x-50	d-20 ds-10	
1-49	A-65 C-30	Goshen, Platte	65		s-30	d-5	
1-50	C-60 D-20	Goshen	10		a-15 s-45	s-20	10
1-51	C-35 A-25 B-20	Goshen, Laramie, Platte	25	s-20	a-15 s-20		20
1-52	A-60 D-35	Goshen, Laramie	60			k-35	5
1-53	C-40 D-30	Albany, Platte		10	ps-15 s-25	k-30	20
1-54	E-75	Laramie				r-25	75
1-55	A-60 C-30	Laramie	60		w-20	k-10 s-5	5
1-56	E-95	Albany, Laramie, Platte				r-5	95
1-57	C-35 E-30 D-25	Laramie	10		s-35	k-10 s-15	30
1-58	E-55 D-25	Johnson, Natrona	5		s-15	ds-25	55
1-59	C-60 A-30	Johnson, Natrona	30	a-10	s-55 wx-5		
1-60	E-75	Johnson, Natrona			wx-5	s-10 x-10	75

Table I-A -Continued-

Climatic Zone & Delin. No.	Map Symbol Irrig. Soil Class and Percent	Location - Counties	Irrigable Soil Class, Subclass, and Percent				
			A	B	C	D	E
1-61	D-70 B-15	Natrona		p-15	ds-5 s-5	ds-65 x-5	5
1-62	C-55 D-15	Natrona	5	d-10	ds-15 s-30 k-10	ds-15	15
1-63	C-65 B-15	Converse, Natrona	10	w-10 x-5	a-65	d-10	
1-64	C-40 B-40	Natrona	10	wx-15 x-25	ds-35 s-5	s-5	5
1-65	A-55 B-30	Natrona	55	d-10 w-10 x-10	s-10		5
1-66	E-50 B-25	Park		k-25	ds-5 s-15	ds-5	50
1-67	C-73	Park	7		a-70 x-3	ds-5 s-5	10
1-68	D-45 C-45	Park	5		ds-25 wx-5 x-15	d-15 ds-10 s-20	5
1-69	D-45 E-35	Park			ds-20	d-15 ds-10 s-15 x-5	35
1-70	A-50 B-40	Park	50	a-40	ds-10		
1-71	E-40 C-30	Big Horn, Park	5		ds-30	d-10 ds-10 s-5	40
1-72	C-50 A-25	Big Horn, Park	25	p-15	ds-10 s-10 wx-25 x-5	ds-5	5
1-73	E-45 C-25	Big Horn		p-10	ds-25	ds-20	45

Table I-A -Continued

Map Symbol		Location - Counties	Irrigable Soil Class, Subclass, and Percent				
Climatic Zone & Delin. No.	Irrig. Soil Class and Percent		A	B	C	D	E
1-74	A-55 B-20	Big Horn, Park	55	a-5 p-5 wx-10	a-10 x-5		10
1-75	C-52 B-33	Big Horn		a-20 ds-13 x-10	as-30 ds-12		15
1-76	D-55 E-35	Big Horn, Park, Washakie	5		s-5	d-30 p-5 s-10 x-10	35
1-77	E-45 D-35	Big Horn			ds-15 s-5	s-35	45
1-78	D-35 C-25 E-20	Big Horn, Park	15	p-5	ds-25	s-20 x-15	20
1-79	E-75	Park	5		s-5 x-5	ds-10	75
1-80	B-75	Big Horn, Park	20	a-45 p-15 w-15			5
1-81	C-30 A-25 D-15	Big Horn, Hot Springs, Washakie	25	a-15	ds-20 s-10	x-15	15
1-82	A-55 C-25	Big Horn, Hot Springs, Washakie	55	a-5 w-5 x-15	d-5 w-5	p-10	
1-83	E-80	Big Horn, Washakie	5		s-10 x-5		80
1-84	C-50 D-30	Big Horn, Hot Springs, Washakie			ds-10 s-25 x-15	ds-10 s-20	20
1-85	A-30 C-25 D-25	Fremont	30	wx-5 x-5	ds-15 s-10	ds-15 s-10	10
1-86	D-58 E-30	Fremont		w-2	s-10	ds-50 x-8	30

Table I-A -Continued-

Map Symbol		Location - Counties	Irrigable Soil Class, Subclass, and Percent				
Climatic Zone & Delin. No.	Irrig. Soil Class and Percent		A	B	C	D	E
I-87	D-87	Fremont	8			a-50 as-22 x-15	5
1-88	A-40 B-35	Fremont	40	a-20 w-6 wx-9	s-13	s-7	5
I-89	C-80	Fremont, Natrona	5		ds-60 s-15 x-5	d-5 ds-10	
I-90	D-45 C-35	Fremont, Natrona	10	w-10	ds-5 s-25 x-5	a-40 d-5	

Table I-A -Continued-

Climatic Zone 2

Map Symbol		Location - Counties	Irrigable Soil Class, Subclass, and Percent				
Climatic Zone & Delin. No.	Irrig. Soil Class and Percent		A	B	C	D	E
2-1	E-60 C-25	Crook, Weston			s-25	ds-15	60
2-2	C-35 D-35 E-25	Crook, Weston	5		s-35	ds-5 s-30	25
2-3	E-100	Johnson, Sheridan					100
2-4	E-85	Johnson, Natrona			ds-15		85
2-5	E-55 D-25	Natrona	5		s-15	ds-25	55
2-6	C-55 D-15	Natrona	5	d-10	ds-15 k-10 s-30	ds-15	15
18	2-7	E-40 C-25 D-20	Natrona	d-5 x-10	ds-10 s-15	ds-20	40
	2-8	C-80	Natrona	5	k-20 s-60	ds-15	
	2-9	C-60 B-20	Natrona	5	x-20	ds-25 s-35	ds-15
	2-10	C-65 D-35	Natrona	x-5	ds-35 s-30	ds-30	
	2-11	D-45 C-35	Converse, Natrona	8	w-2	ds-15 s-20	ds-25 s-20
	2-12	E-45 D-35	Big Horn, Washakie			s-5 ds-15	s-35
	2-13	D-50 C-30	Hot Springs, Washakie			s-15 ds-15	ds-40 s-10
	2-14	C-55 B-15	Fremont, Natrona	15	x-10 w-5	ds-15 s-40	s-10
							5

Table I-A -Continued-

Climatic Zone & Delin. No.	Map Symbol Irrig. Soil Class and Percent	Location - Counties	Irrigable Soil Class, Subclass, and Percent				
			A	B	C	D	E
2-15	E-60 D-40	Park				ds-20 s-20	60
2-16	D-41 E-35	Park	3	a-7	ds-14	d-9 ds-13 s-19	35
2-17	E-75	Park	2	s-3 w-5	a-5 k-10		75
2-18	C-30 E-30 B-20	Park	5	a-15 w-5	s-15 ds-5 k-10	d-15	30
2-19	A-55 C-25	Hot Springs	55	a-5 p-15	ds-10 x-15		
2-20	E-43 D-31	Fremont	5	w-6 wx-2	s-13	ds-31	43
2-21	B-50 C-25	Fremont	5	a-30 w-12 wx-8	k-5 s-20	s-10 w-5	5
2-22	C-55 D-25	Fremont	10		d-30 s-25	ds-15 s-10	10
2-23	E-57 D-35	Fremont	3		s-5	k-10 ds-15 s-10	57
2-24	C-65 D-25	Fremont	5	x-5	ds-35 s-30	ds-25	
2-25	C-50 D-30	Fremont	5	x-5	ds-30 wx-5 s-15	d-5 ds-15 s-10	10
2-26	A-35 D-25 C-25	Fremont	35	wx-10	ds-10 s-15	ds-5 s-5 x-15	5

Table I-A -Continued-

Climatic Zone 3

Map Symbol		Location - Counties	Irrigable Soil Class, Subclass, and Percent				
Climatic Zone & Delin. No.	Irrig. Soil Class and Percent		A	B	C	D	E
3-1	E-80	Crook, Weston			s-5	s-15	80
3-2	E-95	Fremont, Hot Springs		w-2	r-3	95	
3-3	E-95	Carbon, Fremont, Sweetwater			r-5	95	
3-4	D-50 C-40	Fremont, Natrona			ds-10 s-30	d-15 r-20 s-15	10
3-5	E-95	Albany, Converse, Natrona, Platte			r-2 ds-3	95	
3-6	C-83	Carbon, Fremont, Natrona, Sublette, Sweetwater	s-5 wx-5	d-8 s-75	d-5	2	
3-7	E-100	Fremont, Natrona				100	
3-8	E-75	Carbon, Natrona	a-10	s-15		75	
3-9	B-70	Carbon, Natrona	a-30 d-40	ds-15 d-10		5	
3-10	D-75	Albany, Carbon	10		ds-35 s-40	15	
3-11	E-75	Albany, Converse, Natrona	5		ps-20	75	
3-12	C-50 D-40	Albany, Carbon			ps-25 s-25	s-30 x-10	10
3-13	C-65 B-30	Albany	a-30	p-35 s-30	s-4 x-1		
3-14	D-50 E-40	Albany		s-10	ds-50	40	
3-15	E-60 D-30	Albany, Laramie		s-10	s-30	60	
3-16	C-45 A-40	Albany	40	s-45	ds-10	5	

Table I-A -Continued-

Map Symbol		Location - Counties	Irrigable Soil Class, Subclass, and Percent				
Climatic Zone & Delin. No.	Irrig. Soil Class and Percent		A	B	C	D	E
3-17	A-55 B-25	Albany	55	a-25	w-10 wx-10		
3-18	C-80	Albany, Carbon	20		w-50 wx-30		
3-19	A-35 C-30 B-15	Albany	35	a-15	s-30	ds-10	10
3-20	C-45 B-25 D-20	Albany, Carbon		k-25	k-40 w-5	s-20	10
3-21	D-50 B-40	Albany, Carbon		a-40		k-15 w-25 wx-10	10
3-22	D-40 E-25	Albany, Carbon	15	s-20	s-40	25	
21	3-23	C-65 D-15	Carbon	5	p-5	ds-40 p-25	10
	3-24	E-60 C-35	Carbon		p-5	d-20 ds-15	60
	3-25	D-50 E-35	Carbon	15		s-40 x-10	35
	3-26	D-55 E-35	Carbon			s-10	s-35 x-20
	3-27	D-50 E-50	Carbon				a-50
	3-28	E-75	Carbon, Sweetwater		a-10	x-15	75
	3-29	E-75	Carbon			ds-20 r-5	75
	3-30	D-45 C-40	Carbon		s-40	ds-25 x-20	15
	3-31	E-100	Carbon				100
	3-32	A-55 C-20	Carbon	55	s-20	s-15	10

Table I-A -Continued-

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Map Symbol		Location - Counties	Irrigable Soil Class, Subclass, and Percent				
Climatic Zone & Delin. No.	Irrig. Soil Class and Percent		A	B	C	D	E
3-33	C-35 E-25 A-20	Carbon	20		s-35	ds-20	25
3-34	E-60 D-25	Carbon			s-15	s-25	60
3-35	A-60 D-40	Carbon	60			w-15 wx-25	
3-36	C-50 A-35	Carbon	35		s-50		15
3-37	C-40 A-30	Carbon	30		s-30 w-10	ds-15	15
3-38	E-55 C-15	Carbon	15		s-15	ds-15	55
3-39	E-40 D-40	Carbon, Sweetwater			s-20	ps-10 s-30	40
3-40	E-75	Carbon				s-10 ds-15	75
3-41	D-48 C-25	Carbon, Fremont, Sweetwater	2	p-5	a-5 ds-12 s-8	d-25 ds-5 s-8 x-10	20
3-42	E-75 D-20	Carbon, Sweetwater			a-5	d-10 r-5 x-5	75
3-43	D-55 E-20	Sublette, Lincoln, Sweetwater, Uinta	3	wx-5	s-2 d-5 ds-10	d-25 ds-15 s-5 x-10	20
3-44	B-36 E-30 C-23	Sublette			a-24 w-10 wx-2	a-5 w-2 wx-1	30
3-45	B-35 D-34	Lincoln			a-20 w-10 wx-5	w-2 x-10	a-9 d-5 ds-15 x-5

Table I-A -Continued-

Climatic Zone & Delin. No.	Map Symbol Irrig. Soil Class and Percent	Location - Counties	Irrigable Soil Class, Subclass, and Percent				
			A	B	C	D	E
3-46	C-70	Lincoln		a-8 w-5	a-5 d-10 ds-5 s-10 w-30 x-10	ds-2 s-10	5
3-47	B-48 E-17 A-15	Uinta	15	w-30 wx-18	w-10	d-2 ds-8	17
3-48	D-51 C-30	Lincoln, Uinta	3	w-1	d-3 ds-2 s-5 wx-15 x-5	d-30 ds-19 s-2	15
23	3-49	Uinta		a-18	a-5 d-2 k-15 wx-40	d-10	10
	C-62 B-18						
3-50	D-35 B-30 C-20	Lincoln, Sweetwater	5	a-10 wx-20	d-2 ds-5 w-3 x-10	d-10 ds-15 s-5 r-5	10
3-51	D-45 C-30	Sweetwater	5		d-15 ds-10 x-5	d-30 ds-10 x-5	20
3-52	D-45 A-20 B-20	Sweetwater	20	d-20	s-5 wx-8	a-30 d-10 ds-5	2
3-53	D-80	Fremont			s-5	d-25 k-55	15
3-54	B-50 C-25	Sweetwater	10	a-20 d-20 w-10	s-25	a-5	10
3-55	E-83	Sweetwater	2		s-5 x-1	r-2 s-5 x-2	83

Table I-A -Continued-

Climatic Zone & Delin. No.	Map Symbol Irrig. Soil Class and Percent	Location - Counties	Irrigable Soil Class, Subclass, and Percent				
			A	B	C	D	E
3-56	E-50 C-20	Sweetwater	10 w-1	d-15 x-5	s-15	x-4	50
3-57	D-45 B-25	Sweetwater	20	d-25		d-20 x-25	10
3-58	D-43 C-26	Sweetwater	5 x-6	d-6 s-20	d-15 ds-25 r-3	20	
3-59	D-42 B-20 E-15	Sweetwater	10	d-20	s-13	d-30 ds-10 r-2	15
3-60	C-75	Sweetwater		w-5	a-20 as-50 w-5		20
3-61	E-65	Carbon			s-15	s-20	65
3-62	D-65	Carbon			p-25	ps-40 s-15 x-10	10

Table I-A -Continued-

Climatic Zone 4

Climatic Zone & Delin. No.	Map Symbol Irrig. Soil Class and Percent	Location - Counties	Irrigable Soil Class, Subclass, and Percent					
			A	B	C	D	E	
4-1	E-80	Big Horn, Johnson, Sheridan, Washakie			w-5	s-10 k-5	80	
4-2	D-45 C-30	Johnson			s-30	s-40 w-5	25	
4-3	D-40 C-35	Johnson, Natrona, Washakie			s-35	s-40	25	
4-4	E-85	Fremont, Johnson, Natrona, Washakie			s-5	s-10	85	
4-5	E-60 C-30	Hot Springs, Washakie			d-10 ds-5 s-12 w-3	s-10	60	
25	4-6	E-95	Fremont, Hot Springs, Park		w-2	r-3	95	
	4-7	E-85	Sublette, Lincoln, Teton	2	p-1 w-2	d-3 s-1 w-3	s-3	85
	4-8	E-30 B-28 D-26	Sublette		a-16 w-10 wx-2	w-2 wx-1 a-13	a-5 r-20 x-1	30
	4-9	E-89	Sublette			k-5 w-1	a-5	89
	4-10	E-95	Albany, Carbon				s-5	95
	4-11	D-35 E-30 C-20	Carbon	15		s-20	s-35	30
	4-12	C-40 E-40	Carbon			s-40	ds-20	40
	4-13	D-40 B-25 E-25	Teton		w-25	a-4 s-5 w-1	a-35 s-4 w-1	25

Table I-A -Continued-

Map Symbol		Location - Counties	Irrigable Soil Class, Subclass, and Percent				
Climatic Zone & Delin. No.	Irrig. Soil Class and Percent		A	B	C	D	E
4-14	C-41 D-30	Teton		a-25	k-3 s-37 w-1	s-30	4
4-15	D-55 E-20	Sublette	3	wx-5	d-5 ds-10 s-2		
4-16	C-53 D-18 A-15	Lincoln	15	w-4	a-34 as-6 s-7 w-6	s-18	10
4-17	D-44 E-40	Lincoln, Sublette, Uinta	2	w-2	d-5 ds-5 s-12	d-12 ds-30 s-2	40
4-18	C-45 D-32	Lincoln	2	p-10 w-1	d-20 ds-15 s-5 w-2 wx-3	d-10 ds-15 s-5 x-2	10
4-19	E-45 D-40	Lincoln, Uinta		w-3 wx-2	d-5 s-5	ds-25 s-15	45
4-20	B-70	Uinta		a-40 w-28 wx-2	w-10		20
4-21	E-100	Uinta, Sweetwater					100
4-22	B-33 E-30 C-27	Uinta	5	a-30 w-3	a-15 s-5 w-2 wx-5	d-2 ds-3	30
4-23	E-60 C-35	Sweetwater, Uinta		w-5	k-10 w-5 wx-20		60
4-24	D-43 C-30	Sweetwater		w-2	a-30	d-13 s-30	25

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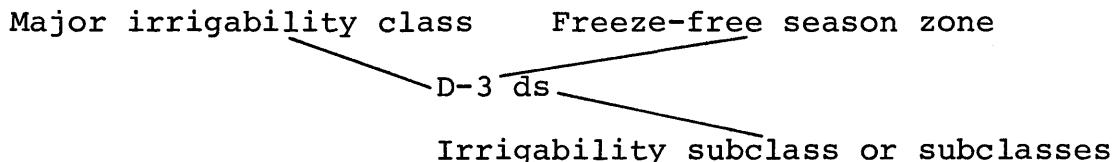
¹Source - USDA, Soil Conservation Service

Table II gives the irrigability classes and subclasses by hydrologic area. The State is divided into six hydrologic areas denoted by Roman numerals one through six (I, II, III, IV, V, VI).

<u>Hydrologic Area</u>	<u>River Drainages Included</u>
I	North Platte River Niobrara River South Platte River
II	Cheyenne River Belle Fourche River Little Missouri River Little Powder River Powder River Tongue River
III	Wind River Bighorn River Clarks Fork River Little Bighorn River
IV	Snake River
V	Bear River
VI	Green River Little Snake River Great Divide Basin

The data in Table II is presented in number of acres for each irrigability class, freeze-free zone, and subclass for each hydrologic area.

The symbols in Table II consist of three parts:



Each soil irrigability class includes many different kinds of soils with sometimes rather different properties. However, all the soils in a class offer about the same potential usefulness or degree of limitation. The soils of any one class should respond in similar manner to irrigation, but they might require somewhat different management. They are apt to be differently suited for other uses, such as roads, foundations, septic tank filter fields, or recreational areas. The criteria

by which the soil irrigability classes were assigned to soils were adapted with limited modification from Pacific Southwest Interagency Committee criteria used by the USDA Soil Conservation Service.

The soil irrigability subclasses are defined only to reflect soil and landscape conditions in Wyoming.

TABLE III

Table III shows the breakdown by irrigability class, freeze-free zone, and subclass of all soils for each county. The data are presented by acres of each class, freeze-free zone and subclass. The total acres of each irrigability class are given for each county.

TABLE IV

Table IV shows the total acres of each irrigability class for each hydrologic area. There is also a tabulation of total acres by each irrigability class.

TABLE V

Table V shows the total acres
of each irrigability class by county,
and the total acres in each irriga-
bility class for the State.

Table V—Acreage Totals of Irrigability Classes by County

<u>COUNTY</u>	<u>Irrigability Classes</u>				<u>TOTAL</u>	
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	
ALBANY	193,781	119,450	725,086	556,307	1,166,976	2,761,600
BIG HORN	224,425	168,410	284,879	530,792	824,774	2,033,280
CAMPBELL	225,653	103,478	664,035	916,298	1,134,376	3,043,840
CARBON	197,501	237,401	990,232	989,091	2,700,015	5,114,240
CONVERSE	207,859	132,330	719,075	749,559	932,297	2,741,120
CROOK	114,256	125,038	316,134	450,411	848,241	1,854,080
FREMONT	315,978	290,049	2,001,935	1,162,106	2,160,172	5,930,240
GOSHEN	261,430	8,480	654,502	306,006	196,782	1,427,200
HOT SPRINGS	156,043	54,774	264,028	287,969	531,266	1,294,080
JOHNSON	183,695	91,625	396,528	586,423	1,416,289	2,674,560
LARAMIE	614,809	-	227,003	347,166	542,222	1,731,200
LINCOLN	59,984	142,970	432,143	642,561	1,347,622	2,625,280
NATRONA	133,849	312,042	1,115,042	695,032	1,180,097	3,436,160
NIOBRAWA	125,671	15,337	493,170	613,420	425,362	1,672,960
PARK	205,581	165,207	373,953	404,475	2,199,904	3,349,120
PLATTE	296,799	29,010	331,627	332,467	367,537	1,357,440
SHERIDAN	108,716	105,188	202,624	219,695	984,257	1,620,480
SUBLETTE	46,029	251,551	396,826	758,365	1,693,469	3,146,240
SWEETWATER	273,064	409,357	1,356,127	2,791,137	1,876,875	6,706,560
TETON	796	43,719	54,201	117,509	1,622,495	1,838,720
UINTA	25,964	136,577	224,873	458,963	488,663	1,335,040
WASHAKIE	132,565	51,373	441,869	332,629	489,244	1,447,680
WESTON	93,726	58,219	376,256	533,794	479,125	1,541,120
	4,198,174	3,051,585	13,042,246	14,782,175	25,608,060	60,682,240
YELLOWSTONE PARK*						1,979,520

Approximate Total Area (Acres) --

62,661,760

* Unclassified as to irrigability

EXPLANATION

- A Soils that have slight or few limitations that restrict their use for irrigated agriculture.
- B Soils that have moderate limitations that reduce choice of crops or require moderate conservation practices.
- C Soils that have severe limitations that reduce choice of crops or require special conservation practices or both.
- D Soils that have very severe limitations that restrict the choice of crops or require special practices and management, or both.
- E Soils having properties that according to the criteria used in the development of this map indicate they should not be irrigated.

DRAINAGE BASINS AND SUBBASINS



I. Platte River Basin

- A. North Platte River & Tributaries above Pathfinder Dam
- B. North Platte River & Tributaries-PATHFINDER to Laramie River
- C. Laramie River Basin
- D. North Platte River & Tributaries-Laramie River to State Line
- E. South Platte River Basin
- F. Niobrara River Basin

II. Northeastern Wyoming

- A. Tongue River Basin
- B. Powder River Basin
- C. Little Powder River Basin
- D. Little Missouri River Basin
- E. Cheyenne River Basin
- F. Belle Fourche River Basin

III. Bighorn River Basin Area

- A. Upper Yellowstone and Missouri Rivers
- B. Clark Fork River Basin
- C. Wind River Basin
- D. Bighorn River Basin
- E. Little Bighorn River Basin

IV. Green River Basin

- A. Upper Green River Basin
- B. Lower Green River East
- C. Lower Green River West
- D. Great Divide Basin
- E. Little Snake River Basin

V. Bear River Basin

VI. Snake River Basin

MAP SYMBOLS

I - I	E - 75
Climatic Zone	Irrigable Soil Class and Percent

Note: Detailed explanation of map symbols provided in accompanying brochure.

This map is intended for use in general planning and reports irrigability of only the most common soils. Because the nature of the map is summary in nature of this map, each delineation contains some soils of irrigability classes different from that shown for the delineation. These soils are not necessarily irrigated separately in any particular irrigation structure. This map should be used for operational planning of irrigation projects. Detailed soil surveys and on-site inspection should be used for operational decisions concerning specific areas and fields.

IRRIGABLE SOILS OF WYOMING

MAP & BROCHURE PREPARED
BY THE
WYOMING WATER PLANNING PROGRAM
A DIVISION OF THE STATE ENGINEER'S OFFICE
IN COOPERATION WITH
THE WYOMING DEPARTMENT OF AGRICULTURE
COMPILED BY
THE UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

JULY 1974

SCALE 1:500,000
1 inch equals approximately 8 miles

BASED ON USGS TOPOGRAPHIC MAP OF WYOMING