Santa Rosa Subregional Long-Term Wastewater Project

DRAFT EIR/EIS COMMENT FORM

DUE OCTOBER 7, 1996 4:30 PM

Name: Colleen Briggs / Melvin Stump Trust Date: 10/7/96

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How to use:
Please fill out the above and provide your written comments about the Draft EIR/EIS in the space provided below. You may add additional pages if needed. Please write legibly. If you prefer to type your comments on a separate page, please attach to this form. Where possible, please reference the page to which the comment refers. When you have completed your comments, please fold the form so the City's address is showing, tape the edges together, (**Do not use staples**), and place in the mail.

The information contained in this document are questions, statements and comments related to property referred to as Bloomfield Dam Site in the draft EIR/EIS. 001

The contents are as follows:

Environmental and Cultural History

A Personal Note

Questions Not Sufficiently and/or Accurately addressed by the EIR or Representatives of the City of Santa Rosa

Enclosed References

CITY OF SANTA ROSA
P.O. Box 1678
Santa Rosa, CA 95402
OCT 07 1996
DEPARTMENT OF COMMUNITY DEVELOPMENT

ENVIRONMENTAL AND CULTURAL HISTORY

The property, referred to as Bloomfield site in the EIR, has been in my family for over a century. In the mid 1800's, a seventeen year old man, John Mills, crossed the Atlantic looking for a place to call his own. Eventually he made his way to west Sonoma County where he fell in love with the land and a beautiful young lady. They were the first generation, my granddaughter is now the sixth. Over the years many types of animals have been raised, various crops have been grown, and many changes to improve the property have been done. My family's influence and support of the community continues to this day. Despite natural disasters, disease, wars, and a depression, the ranch has been passed down generation to generation. 001(cont.)

Throughout the last one hundred-fifty years, there has been poultry, sheep, swine, beef cows, and dairy cows raised on the property. The ranch was a prominent dairy for the majority of the twentieth century. The families here grew potatoes to sell and maintained an apple orchard for their own consumption. The animals were fed from crops of barley and oats grown on the ranch.

Improvements to decrease the effects of erosion continue to be completed. Land conservation has always been a priority. The creeks have been improved by a series of small dams and spillways, and fencing built to prevent the animals from wearing down the banks. A dam was built to catch excess water run-off from English hill, and the fields are re-seeded and fertilized yearly.

The wildlife is abundant due to the care and time that has been put into the land. Currently there are various birds, blue herons, egrets, hawks, owls, quail and pheasants, that make their home on the ranch. Small fish live in the creeks, along with many turtles. Small animals such as foxes and bobcats prance around looking for food and shelter. The deer population has increased recently due to the lack of hunting on the property. This is just an example of how many creatures inhabit this area.

Despite the never-ending work to be done, time has always been set aside for community involvement. Aileen Stump, my granddaughter's name sake, was an active member of the Two Rock Presbyterian church volunteering as an elder and/or deacon. During the depression, food was donated for the bread line in San Francisco. At war time, while the Stumps worried about their own sons and ranch hands taken into battle, soldiers were housed and cared for, letters written, and time made for airplane watch. Melvin Stump mowed and assisted in caretaking of the Bloomfield Cemetery. He was the Bloomfield Fire Chief until his death in 1991. The water truck and fire truck belonging to the Bloomfield Volunteer Fire Department have been housed here for the last twenty years. Membership in various organizations, such as the Rebecca Club of Bloomfield, Goldridge Soil Conservation, Petaluma Co-op, Sonoma-Marin Cattlemen Association, Dairymans Feed and Supply, have been held by family members. Currently, hay belonging to a neighboring dairyman is stored in one of our barns rent free along with another neighbor's heavy equipment. My son and daughter in law are involved in the Presbyterian Church and the Ranch supports local groups and fund-raisers.

The weather has always been a menace to the area. Floods were a part of life. The winds were a destructive force that threatened structures and property. In the houses, furniture was bolted to the walls due to the continual threat of earth quakes. Families were stranded frequently, without electricity and telephones, and no way to get produce to town. The cows had to be kept on schedule so the milk was tossed into the creek. Nothing has changed today on the ranch, we continue to have floods, monitor the wind, and have special locks on our cabinets.

Each generation has made improvements using the available technology. Before electricity was available, the wells were dug by hand and ran by windmills, and the cows were milked by hand. Horses were used for transportation and as a source of labor, plowing, hauling hay and equipment, grinding the grain, on a daily basis. There was a blacksmith shop on the ranch in the barn for shoeing horses and for making and maintaining equipment. The only phone in the area was on this ranch, Stump family members would have to tell neighbors their messages good and bad.

Currently, the property is used to support a cow-calf business. It provides the income to pay for inheritance, property, and governmental taxes. The ranch financially supports two families and provides a home to wearily wander to at night after a long day of work. Everyday we are up before the sun is, not because we believe we will get rich, but because we believe in what we do. If a dam is built on the property, there will not be enough money to maintain a herd large enough to pay for the managing expenses. Everything will be gone, our business, our jobs, our income, and our home.

Part of the legacy passed down along with the property is strength and conviction. My predecessors have fought many battles against tough forces and won. Now it is my turn to fight for the land and heritage that is a part of me. Imagine, a tombstone difficult to read because of time and weather. If you look close enough the name of John Mills can be made out. That tombstone sets in a cemetery, on a hill, overlooking my ranch. The man who started it all, never really left.

A PERSONAL NOTE

Two people who have been very generous and influential to the city of Santa Rosa have also played a significant roll in our lives. Ernest Briggs was named after the man his father worked fifty years for, Ernest Finley. A relative of Lurther Burbank, Alice Mary Burbank was maid of honor in our wedding. 002

QUESTIONS NOT SUFFICIENTLY AND/OR ACCURATELY ADDRESSED BY THE EIR OR REPRESENTATIVES OF THE CITY OF SANTA ROSA

The following questions refer to the Williamson Act: 003

- If property is taken, how do we stand in regards to the remaining property?

- Who will pay cancellation fees for the portion of the property taken? 004

- Who will give notification required to cancel contract? 005

- Who will pay the cancellation fee? 006

- Who will pay for the cost of the new deeds of trust for the property? 007
  Parcel Numbers:
  027-030-002 Ag pres 2-424-77 2603/883
  027-020-006 Ag pres 2-424-72 2603/887
  024-030-003 Ag pres 2-424-72 2603/883

Where are the houses and buildings going to be in relationship to the Dam? In EIR 008 009
#4.14-15, a picture of property before and one year later, all structures are missing. Who 010
will pay for new housing and barns and/or moving existing structures.

In regards to the remaining land above 300 feet, where will the surface run-off water 011
go? Who will be financially responsible for its diversion? 012

How are we going to access the remaining property? Who will be financially 013 014
responsible for bridges, fences, roads and water sources needed? The water troughs, 015
roads fencing and gates, PG&E exist below 300 feet.

Will we have access to our well in front of the Dam? If well water is contaminated, 016 017
who will pay for the piping necessary to receive clean water to the ranch? Will there be 018
monthly or yearly water charges?

What happens to the 144 thousand or more gallons of fresh spring water that runs off 019
the ranch? the State of California states we can not stop fresh water from flowing into the
Americano.

During construction of the Dam and following its completion, how is silt going to be 020
contained? Where will a silt pond be located? Will it be on the Ranch?

Why was farmland excluded from the EIR table 4.2-6? Where the Dam will be built is 021
the majority of farmland. According to included references, we do have farmland.

How long will it take to build the Dam? How will we be compensated for lost income 022 023
due to herd reduction? Who will be financially responsible for temporary fences and water 024
lines necessary to keep business productive? How will we move cows and access barns 025
during construction?

Where will the water from spillways flow? How will flooding be prevented during the wet season when the ground in already saturated? 026 027

How will waste water be prevented from contaminating fresh water? We use fresh water for the animals, and the water from this ranch flows into the Americano. 028

Why would you want to build a Dam on fault lines and put this area at risk for destruction. The Dunham fault, Americano Creek fault and Bloomfield fault are documented to exist. The elevation of the Dam is over 255 feet, the areas of Bloomfield, St. Anthonys, Mafia dairy, Lepori dairy and towards Valley Ford are below that elevation. 029

ENCLOSED REFERENCES

ENCLOSURES

Prime Farmland

US Department of Agriculture
Soil Conservation Service

Soil texture class descriptions
CA Sec 506.17(K)

Soil Document, (II-V (NCPM), Supplement CA-4, February 1981)

Land Capability classification
Map B
Soil Legend

Sonoma County California - Soil Survey
US. Department of Agriculture
Forest Service and Soil Conservation Service
Issued May 1972 - reprinting 1990

Map A

EIR

U.S. Department of Agriculture
Soil Conservation Service

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6/24/93

PRIME FARMLAND

Survey Area- SONOMA COUNTY, CALIFORNIA

Map Symbol	Prime Farmland Code	Soil Mapunit Name
AeA	7	ALLUVIAL LAND, CLAYEY
AgB	4	ARBUCKLE GRAVELLY SANDY LOAM, 0 TO 5 PERCENT SLOPES
AkB	4	ARBUCKLE GRAVELLY LOAM, 0 TO 5 PERCENT SLOPES
AkC	4	ARBUCKLE GRAVELLY LOAM, 5 TO 9 PERCENT SLOPES
BaC	4	BAYWOOD LOAMY SAND, 2 TO 9 PERCENT SLOPES
BcA	7	BLUCHER FINE SANDY LOAM, OVERWASH, 0 TO 2 PERCENT SLOPES
BhA	4	BLUCHER LOAM, 0 TO 2 PERCENT SLOPES
BhB	4	BLUCHER LOAM, 2 TO 5 PERCENT SLOPES
BlA	4	BLUCHER CLAY LOAM, 0 TO 2 PERCENT SLOPES
BlB	4	BLUCHER CLAY LOAM, 2 TO 5 PERCENT SLOPES
CcA	4	CLEAR LAKE CLAY LOAM, 0 TO 2 PERCENT SLOPES
CcB	6	CLEAR LAKE CLAY LOAM, 2 TO 5 PERCENT SLOPES
CeA	6	CLEAR LAKE CLAY, 0 TO 2 PERCENT SLOPES
CeB	6	CLEAR LAKE CLAY, 2 TO 5 PERCENT SLOPES
CnA	6	COLE SILT LOAM, 0 TO 2 PERCENT SLOPES
CnB	6	COLE SILT LOAM, 2 TO 5 PERCENT SLOPES
CoA	6	COLE CLAY LOAM, 0 TO 2 PERCENT SLOPES
CoB	6	COLE CLAY LOAM, 2 TO 5 PERCENT SLOPES
DbC	4	DIABLO CLAY, 2 TO 9 PERCENT SLOPES
GdC	4	GOLDRIDGE FINE SANDY LOAM, 2 TO 9 PERCENT SLOPES
LuA	4	LOS ROBLES GRAVELLY CLAY LOAM, 0 TO 2 PERCENT SLOPES
LvB	4	LOS ROBLES GRAVELLY CLAY LOAM, MODERATELY DEEP, 0 TO 5 PERCENT SLOPES
MbC	4	MANZANITA GRAVELLY SILT LOAM, 0 TO 9 PERCENT SLOPES
PaA	6	PAJARO FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES
PaB	4	PAJARO FINE SANDY LOAM, 2 TO 5 PERCENT SLOPES
PbB	4	PAJARO GRAVELLY LOAM, 0 TO 5 PERCENT SLOPES
PcA	7	PAJARO CLAY LOAM, OVERWASH, 0 TO 2 PERCENT SLOPES
PcB	7	PAJARO CLAY LOAM, OVERWASH, 2 TO 5 PERCENT SLOPES
PeA	4	PLEASANTON LOAM, 0 TO 2 PERCENT SLOPES
PeC	4	PLEASANTON LOAM, 2 TO 9 PERCENT SLOPES
PgB	4	PLEASANTON GRAVELLY LOAM, 2 TO 5 PERCENT SLOPES
PhB	4	PLEASANTON CLAY LOAM, 2 TO 5 PERCENT SLOPES
PkC	4	PLEASANTON GRAVELLY CLAY LOAM, 2 TO 9 PERCENT SLOPES
RrC	4	ROHNERVILLE LOAM, 0 TO 9 PERCENT SLOPES
SnC	6	STEINBECK LOAM, 2 TO 9 PERCENT SLOPES
YlA	4	YOLO SANDY LOAM, 0 TO 2 PERCENT SLOPES
YmB	7	YOLO SANDY LOAM, OVERWASH, 0 TO 5 PERCENT SLOPES
YnA	4	YOLO LOAM, 0 TO 2 PERCENT SLOPES
YoB	7	YOLO LOAM, OVERWASH, 0 TO 5 PERCENT SLOPES
YrB	4	YOLO GRAVELLY LOAM, 0 TO 5 PERCENT SLOPES

PRIME FARMLAND

Survey Area- SONOMA COUNTY, CALIFORNIA

Map Symbol	Prime Farmland Code	Soil Mapunit Name
YsA	4	YOLO SILT LOAM, 0 TO 2 PERCENT SLOPES
YtA	4	YOLO CLAY LOAM, 0 TO 2 PERCENT SLOPES
ZaA	4	ZAMORA SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES
ZaB	4	ZAMORA SILTY CLAY LOAM, 2 TO 5 PERCENT SLOPES

Prime Farmland Code	Description
4	Only irrigated areas are prime farmland.
6	Only irrigated areas that have been drained are prime farmland.
7	Only irrigated areas that are either protected from flooding or not frequently flooded during the growing season are prime farmland.

SOIL TEXTURE CLASS DESCRIPTIONS

SAND

Soil consisting mostly of coarse and fine sand, and containing so little clay that it is loose when dry and not sticky at all when wet. When rubbed it leaves no film on the fingers.

• LOAMY SAND

Consisting mostly of sand, but with sufficient clay to give slight plasticity and cohesion when very moist. Leaves a slight film of fine materials on the fingers when rubbed.

• SANDY LOAM

Soil in which the sand fraction is still quite obvious, which moulds readily when sufficiently moist, but in most cases does not stick appreciably to the fingers. Threads do not form easily.

LOAM

Soil in which the fractions are so blended that it moulds readily when sufficiently moist, and sticks to the fingers to some extent. It can with difficulty be moulded into threads but will not bend into a small ring.

• SILT LOAM

Soil that is moderately plastic without being very sticky and in which the smooth, soapy feel of the silt is the main feature.

• SANDY CLAY LOAM

Soils containing sufficient clay to be distinctly sticky when moist, but in which the sand fraction is still an obvious feature.

• CLAY LOAM

The soil is distinctly sticky when sufficiently moist, and the presence of sand fractions can only be detected with care.

SILTY CLAY LOAM

This contains quite subordinate amounts of sand, but sufficient silt to confer something of a smooth, soapy feel. It is less sticky than silty clay or clay loam.

SILT

Soil in which the smooth, soapy feel of silt is dominant.

SUBPART B - GENERAL ASPECTS OF ASSISTANCE

CA Sec. 506.17(k)

IMPORTANT FARMLANDS INVENTORY AS APPLIED TO THE STATE OF CALIFORNIA

PRIME FARMLANDS

Prime Farmland is land best suited for producing food, feed, forage, fiber and oilseed crops and also available for these uses (the land could be cropland, pastureland, rangeland, forest land, or other land but not urban builtup land or water). It has the soil quality, growing season and moisture supply needed to produce sustained high yields of crops economically when treated and managed, including water management, according to modern farming methods.

Prime Farmland meet all the following criteria:*

1. The soils have:

   A. Aquic, udic, ustic or xeric moisture regimes and an available water capacity of at least 4 inches (10 cm) per 40 to 60 inches (1 to 1.52 meters) of soil to produce the commonly grown cultivated crops (cultivated crops include, but are not limited to, grain, forage, fiber, oilseed, sugarbeets, vegetables, orchard, vineyard, and bush fruit crops) adapted to the region in 7 or more years out of 10; or

   B. Xeric, ustic, aridic or torric moisture regimes in which the available water capacity is at least 4 inches (10 cm) per 40 to 60 inches (1 to 1.52 meters) of soil and the area has a developed irrigation water supply that is dependable (a dependable water supply is one in which enough water is available for irrigation in 8 out of 10 years for the crops commonly grown) and of adequate quality; and,

2. The soils have a temperature regime that is frigid, mesic, thermic or hyperthermic (pergelic and cryic regimes are excluded). These are soils that, at a depth of 20 inches (50 cm), have a mean annual temperature higher than 32° F (0° C). In addition, the mean summer temperature at this depth in soils with an O horizon is higher than 47° F (8° C); in soils that have no O horizon, the mean summer temperature is higher than 59° F (15° C); and,

3. The soils have a pH between 4.5 and 8.4 in all horizons within a depth of 40 inches (1 meter); and,

*The national LIM definitions have been slightly modified for California standards: criterion 10 is a California definition, not a national one. Part 1A which reads "AWC of at least 4 inches (10 cm), per 40 to 60 inches (1 to 1.52 meters) of soil" is a California definition.

4. The soils either have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow cultivated crops common to the area to be grown; and,

5. The soils can be managed so that, in all horizons within a depth of 40 inches (1 meter), during part of each year the conductivity of the saturation extract is less than 4 mmhos/cm and the exchangeable sodium percentage (ESP) is less than 15; and,

6. The soils are not flooded frequently during the growing season (less often than once in 2 years); and,

7. The product of K (erodibility factor) x percent slope is less than 2.0; and,

8. The soils have a permeability rate of at least 0.06 inch (0.15 cm) per hour in the upper 20 inches (50 cm) and the mean annual soil temperature at a depth of 20 inches (50 cm) is less than 59° F (15° C); the permeability rate is not a limiting factor if the mean annual soil temperature is 59° F (15° C) or higher; and,

9. Less than 10 percent of the surface layer (upper 6 inches (15 cm)) in these soils consists of rock fragments coarser than 3 inches (7.6 cm); and,

10. The soils have a minimum rooting depth of 40 inches (1 meter).

ADDITIONAL FARMLAND OF STATEWIDE IMPORTANCE

Farmland of Statewide Importance is land other than Prime Farmland that has a good combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops and is available for these uses (the land could be cropland, pastureland, rangeland, forest land or other land, but not urban builtup land or water).

Farmland of Statewide Importance meets all the following criteria:

1. The soils have:

   A. Aquic, udic, ustic or xeric moisture regimes and an average available water capacity of at least 3.5 inches (8.8 cm) within a depth of 60 inches (1.52 meters), or in the root zone (root zone is the part of the soil that is penetrated by plant roots) if the root zone is less than 60 inches deep to produce the commonly grown cultivated crops (cultivated crops include, but are not limited to, grain, forage, fiber, oilseed, sugarbeets, vegetables, orchard, vineyard and bush fruit crops) adpated to the region in 7 or more years out of 10; or

   B. Xeric, utstic, aridic or torric moisture regimes in which the available water capacity is at least 3.5 inches (8.8 cm) within a depth of 60 inches (1.52 meters) deep and the area has developed irrigation water supply that is dependable (a dependable water supply is one in which enough water is available for irrigation in 8 out of 10 years for the crops commonly grown) and of adequate quality; and,

2. The soils have a soil temperature regime that is frigid, mesic, thermic or hyperthermic (pergelic and cryic regimes are excluded). These are soils that at a depth of 20 inches (50 cm) have a mean annual temperature higher than 32° F (0° C). In addition, the mean summer temperature at this depth in soils with an O horizon is higher than 47° F (8° C); in soils that have no O horizon the mean summer temperture is higher than 59° F (15° C); and,

3. The soils have a pH between 4.5 and 9.0 in all horizons within a depth of 40 inches (1 meter) or in the root zone if the root zone is less than 40 inches deep; and,

4. The soils either have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow cultivated crops common to the area to be grown; and,

5. The soils can be managed so that, in all horizons within a depth of 40 inches (1 meter), or in the root zone if the root zone is less than 40 inches deep, during part of each year the conductivity of the saturation extract is less than 16 mmhos/cm and the exchangeable sodium percentage (ESP) is less than 25; and,

6. The soils are not flooded frequently during the growing season (less often than once in 2 years); and,

7. The product of K (erodibility factor) x percent slopes is less than 3.0; and,

8. Less than 10 percent of the surface layer (upper 6 inches (15 cm)) in these soils consists of rock fragments coarser than 3 inches (7.6 cm).

UNIQUE FARMLAND

Unique Farmland is land other than Prime and Additional Farmland of Statewide Importance, that is currently used for the production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season and moisture supply needed to produce sustained high quality and/or high yields of a specific crop when treated and managed according to modern farming methods. Examples of such crops are citrus, olives, avocados, fruit and vegetables.

Characteristics of unique farmland:

(a) It is used for a specific high value food or fiber crop;

(b) It has a moisture supply that is adequate for the specific crop; the supply is from stored moisture, precipitation, or a developed irrigation system;

(c) Combines favorable factors of soil quality, growing season, temperature, humidity, air drainage, elevation, aspect, or other conditions, such as nearness to market, that favor the growth of a specific food or fiber crop.

These lands are currently producing the following crops of high economic importance to California as identified in the annual report of the Department of Food and Agriculture:

Fruit Orchard Crops

Apples
Apricots
Avocados
Cherries
Citrus
Dates
Figs
Nectarines
Olives
Peaches
Pears
Persimmons
Plums
Pomegranates
Prunes

Tree Nuts

Almonds
Walnuts
Pistachio

Vineyard and Caneberries

Bushberries
Grapes
Kiwi Fruit

Vegetable Crops

Artichokes
Asparagus
Beans (Dry & Snap)
Broccoli
Brussels Sprouts
Cabbage
Carrots
Cauliflower
Celery
Cucumber
Garlic
Lettuce
Melons
Onions
Peas
Peppers
Potatoes
Spinach
Sweet Potatoes
Tomatoes

Irrigated Field Crops

Alfalfa
Barley
Corn
Cotton
Oats
Rice
Safflower
Sorghum
Sugarbeets
Wheat

Specialties (not elsewhere classified)

Cut Flowers
Hops
Ladino Clover Seed
Nursery Products
Strawberries

ADDITIONAL FARMLAND OF LOCAL IMPORTANCE

In some local areas there is concern for certain Additional Farmlands for the production of food, feed, fiber, forage and oilseed crops, even though these lands are not identified as having national or statewide importance. These lands are to be identified by a local committee made up of concerned agencies, and called together by the SCS District Conservationist designated as county representative. The local committee will review the lands under this category on at least a five-year basis.

THE LAND-CAPABILITY CLASSIFICATION

Land Facts Are Organized for Convenient Use

The land-capability classification is a systematic arrangement of the different kinds of land according to those properties that determine its ability to produce permanently. Experience has shown that for practical purposes all land can be placed in eight broad land-capability classes. The eight classes range from the best, most easily farmed land (Class I) to land which has no value for cultivation, grazing or forestry use but may be suitable for wild life, recreation, or protection of water supplies (Class VIII).

The eight land-capability classes are *briefly* defined.

Land Suited for Cultivation

Class I. Very good cultivable land.

Class II. Good cultivable land with minor limitations in use.

Class III. Moderately good cultivable land with major limitations in use.

Class IV. Fairly good land suited only for limited or occasional cultivation.

Land Not Suited for Cultivation

Class V. Very well suited for grazing or forestry.

Class VI. Well suited for grazing or forestry with minor limitations in use.

Class VII. Fairly well suited for grazing or forestry with major limitations in use.

Class VIII. Land not suited for cultivation, grazing or forestry. It may be used for wild life, recreation, or protection of water supplies.

The kind of problems or limitations of the land included in any one of the capability classes (except Class I) may vary considerably from place to place. For example, one piece of land may be in Class II because of a drainage problem, while another may be in Class II because of slope that brings about an erosion problem.

Since drainage problems require corrective practices that are distinctly different from erosion-control practices, it is helpful to divide the land-capability classes into subclasses based on the kind of limitations. The four most commonly recognized subclasses are briefly defined:

e—Land limited in use by erosion or slope or both.

w—Land limited in use by excessive water in the soil, or by flooding.

s—Land limited in use by unfavorable soil conditions such as shallowness, coarse texture, alkalinity or salinity.

c—Land limited in use by adverse climatic conditions, such as very low rainfall where water for irrigation is not expected in the foreseeable future.

0.—Indicates that a problem or limitation is caused by stony, cobbly, or gravelly material in the substratum.

1.—Indicates that a problem or limitation is caused by slope or by actual or potential erosion hazard.

2.—Indicates that a problem or limitation of wetness is caused by poor drainage or flooding.

3.—Indicates that a problem or limitation of slow or very slow permeability of the subsoil or substratum is caused by a clayey subsoil or a substratum that is semiconsolidated.

4.—Indicates that a problem or limitation is caused by sandy or gravelly soils with a low available water holding capacity.

5.—Indicates that a problem of limitation is caused by a fine-textured or very fine-textured surface layer.

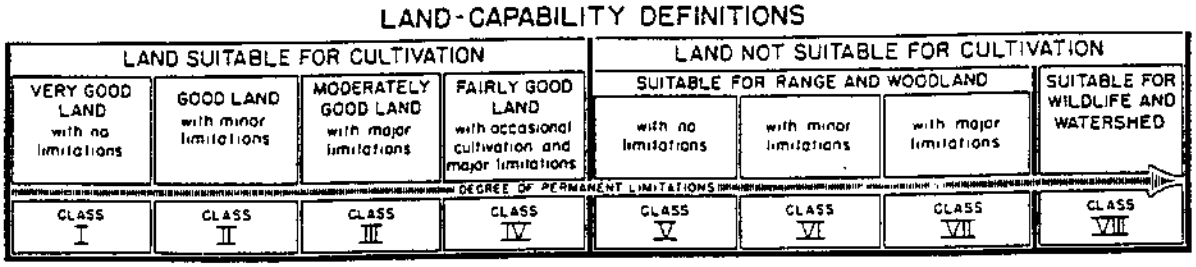
6.—Indicates that a problem or limitation is caused by salt or alkali.

7.—Indicates that a problem or limitation is caused by rocks, stones, or cobblestones.

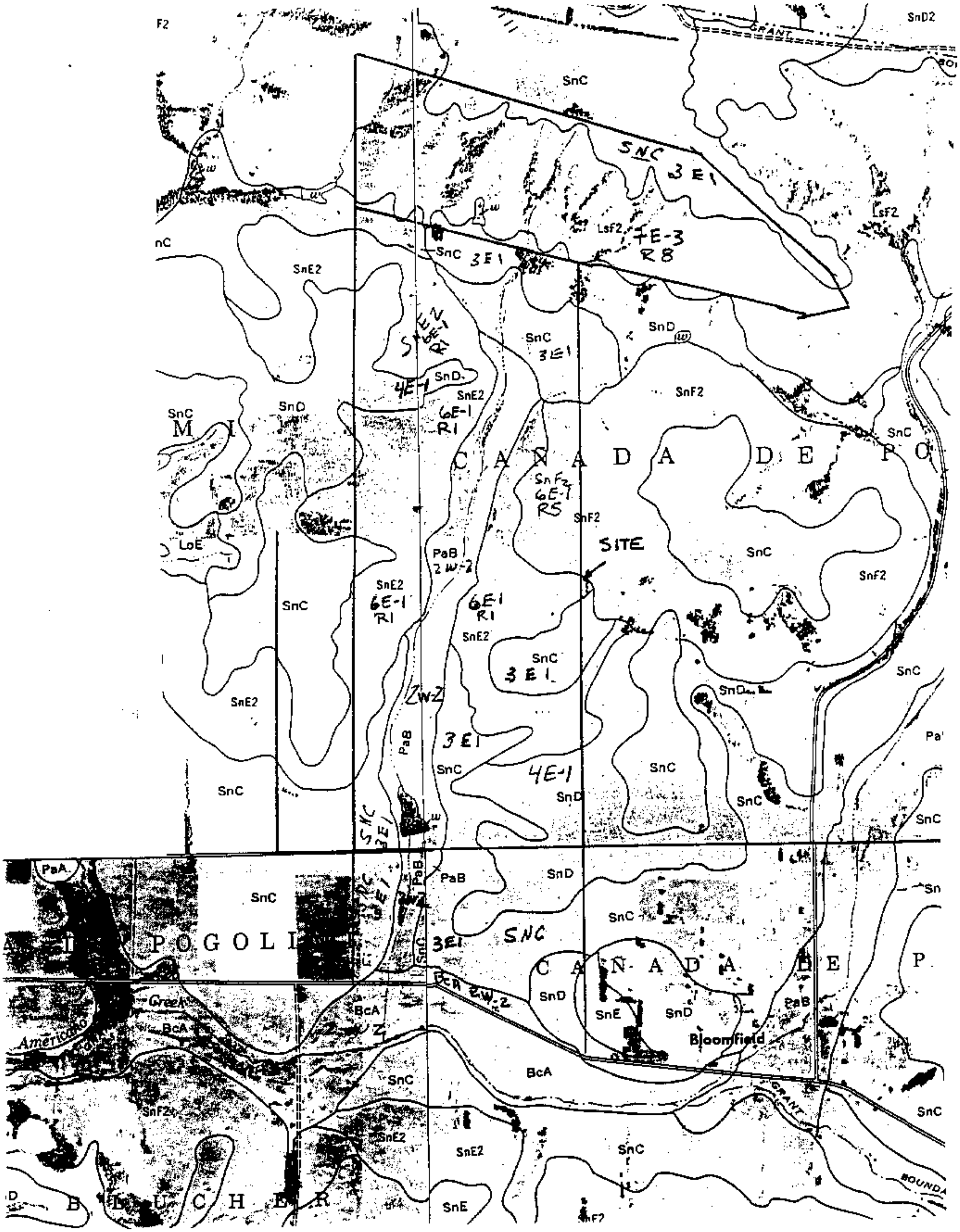
8.—Indicates that a problem or limitation exists in the root zone, which generally is less than 40 inches over massive bedrock and lacks moisture for plants.

9.—Indicates that a problem or limitation is caused by low or very low fertility, acidity, or toxicity that cannot be corrected by adding normal amounts of fertilizer, lime, or other amendments.

LAND-CAPABILITY DEFINITIONS



MAP B


SnC
SNC 3E1
LsF2 7E-3 R8
SnC 3E1
SnE2
SnD
SnC 3E1
4E-1
SnF2
SnE2 6E-1 R1
CAÑADA DE PO
SnF2 6E-1 R5
SITE
SnC
PaB 2W-2
SnE2 6E-1 R1
6E1 R1
SnC 3E1
ZW-Z
3E1
4E-1
SnC
SnD
PaB
POGOLI
CAÑADA DE P
Bloomfield
BcA
Creek
Americano
BLUCHER
GRANT
BOUNDA

AgA	Alluvial land, sandy
AeA	Alluvial land, clayey
AgB	Arbuckle gravelly sandy loam, 0 to 5 percent slopes
AgD	Arbuckle gravelly sandy loam, 5 to 15 percent slopes
AgE	Arbuckle gravelly sandy loam, 15 to 30 percent slopes
AkB	Arbuckle gravelly loam, 0 to 5 percent slopes
AkC	Arbuckle gravelly loam, 5 to 9 percent slopes
ArF	Atwell clay loam, 30 to 50 percent slopes
AtG	Atwell clay loam, 50 to 75 percent slopes
BaC	Baywood loamy sand, 2 to 9 percent slopes
BaE	Baywood loamy sand, 9 to 30 percent slopes
BcA	Blucher fine sandy loam, overwash, 0 to 2 percent slopes
BhA	Blucher loam, 0 to 2 percent slopes
BhB	Blucher loam, 2 to 5 percent slopes
BlA	Blucher clay loam, 0 to 2 percent slopes
BlB	Blucher clay loam, 2 to 5 percent slopes
BoE	Boomer loam, 15 to 30 percent slopes
BoF	Boomer loam, 30 to 50 percent slopes
BoG	Boomer loam, 50 to 75 percent slopes
CaE	Caspar sandy loam, 15 to 30 percent slopes
CaF	Caspar sandy loam, 30 to 50 percent slopes
CbF	Ciba clay, 15 to 50 percent slopes
CcA	Clear Lake clay loam, 0 to 2 percent slopes
CcB	Clear Lake clay loam, 2 to 5 percent slopes
CeA	Clear Lake clay, 0 to 2 percent slopes
CeB	Clear Lake clay, 2 to 5 percent slopes
CfA	Clear Lake clay, ponded, 0 to 2 percent slopes
CgC	Clough gravelly loam, 2 to 9 percent slopes
CgD	Clough gravelly loam, 9 to 15 percent slopes
CgE	Clough gravelly loam, 15 to 30 percent slopes
ChA	Coastal beaches
CmE	Cohasset gravelly loam, 15 to 30 percent slopes
CmF	Cohasset gravelly loam, 30 to 50 percent slopes
CmG	Cohasset gravelly loam, 50 to 75 percent slopes
CnA	Cole silt loam, 0 to 2 percent slopes
CnB	Cole silt loam, 2 to 5 percent slopes
CoA	Cole clay loam, 0 to 2 percent slopes
CoB	Cole clay loam, 2 to 5 percent slopes
CpG	Comptche gravelly loam, 30 to 75 percent slopes
CrA	Cortina very gravelly sandy loam, 0 to 2 percent slopes
CsA	Cortina very gravelly loam, 0 to 2 percent slopes
CtC	Corati fine sandy loam, 2 to 9 percent slopes
CtD	Corati fine sandy loam, 9 to 15 percent slopes
CtE	Corati fine sandy loam, 15 to 30 percent slopes
DbC	Diablo clay, 2 to 9 percent slopes
DbD	Diablo clay, 9 to 15 percent slopes
DbE	Diablo clay, 15 to 30 percent slopes
DbE2	Diablo clay, 15 to 30 percent slopes, eroded
DbF	Diablo clay, 30 to 50 percent slopes
DbF2	Diablo clay, 30 to 50 percent slopes, eroded
DcC	Dibble clay loam, 2 to 9 percent slopes
DcD	Dibble clay loam, 9 to 15 percent slopes
DcE	Dibble clay loam, 15 to 30 percent slopes
DcE2	Dibble clay loam, 15 to 30 percent slopes, eroded
DcF	Dibble clay loam, 30 to 50 percent slopes
DcF2	Dibble clay loam, 30 to 50 percent slopes, eroded
DuE	Dune land
EmE	Empire loam, 9 to 30 percent slopes
EmF	Empire loam, 30 to 50 percent slopes
EpF	Empire–Caspar complex, 9 to 50 percent slopes
FaD	Felta very gravelly loam, 5 to 15 percent slopes
FaE	Felta very gravelly loam, 15 to 30 percent slopes
FaF	Felta very gravelly loam, 30 to 50 percent slopes
FaG	Felta very gravelly loam, 50 to 75 percent slopes
FoE	Forward gravelly loam, 9 to 30 percent slopes
FoG	Forward gravelly loam, 30 to 75 percent slopes
FrG	Forward-Kidd complex, 30 to 75 percent slopes

SYMBOL	
GdC	Goldridge fine sandy loam, 2 to 9 percent slopes
GdD	Goldridge fine sandy loam, 9 to 15 percent slopes
GdD2	Goldridge fine sandy loam, 9 to 15 percent slopes, eroded
GdE	Goldridge fine sandy loam, 15 to 30 percent slopes
GdE2	Goldridge fine sandy loam, 15 to 30 percent slopes, eroded
GdF	Goldridge fine sandy loam, 30 to 50 percent slopes
GdF2	Goldridge fine sandy loam, 30 to 50 percent slopes, eroded
GgD	Goulding clay loam, 5 to 15 percent slopes
GgE	Goulding clay loam, 15 to 30 percent slopes
GgF	Goulding clay loam, 30 to 50 percent slopes
GgF2	Goulding clay loam, 30 to 50 percent slopes, eroded
GgG	Goulding clay loam, 50 to 75 percent slopes
GlD	Goulding cobbly clay loam, 5 to 15 percent slopes
GlE	Goulding cobbly clay loam, 15 to 30 percent slopes
GlF	Goulding cobbly clay loam, 30 to 50 percent slopes
GlF2	Goulding cobbly clay loam, 30 to 50 percent slopes, eroded
GlG	Goulding cobbly clay loam, 50 to 75 percent slopes
GoF	Goulding-Toomes complex, 9 to 50 percent slopes
GrE	Guenoc gravelly silt loam, 5 to 30 percent slopes
GrG	Guenoc gravelly silt loam, 30 to 75 percent slopes
GuF	Gullied land
HaB	Haire fine sandy loam, hummocky, 0 to 5 percent slopes
HbC	Haire gravelly loam, 0 to 9 percent slopes
HbD	Haire gravelly loam, 9 to 15 percent slopes
HbD2	Haire gravelly loam, 9 to 15 percent slopes, eroded
HbE	Haire gravelly loam, 15 to 30 percent slopes
HcC	Haire clay loam, 0 to 9 percent slopes
HcD	Haire clay loam, 9 to 15 percent slopes
HcD2	Haire clay loam, 9 to 15 percent slopes, eroded
HcE	Haire clay loam, 15 to 30 percent slopes
HcE2	Haire clay loam, 15 to 30 percent slopes, eroded
HeF	Hely silt loam, 30 to 50 percent slopes
HeG	Hely silt loam, 50 to 75 percent slopes
HgE	Henneke gravelly loam, 5 to 30 percent slopes
HgG2	Henneke gravelly loam, 30 to 75 percent slopes, eroded
HhF	Hugo loam, 30 to 50 percent slopes
HkF	Hugo very gravelly loam, 30 to 50 percent slopes
HkG	Hugo very gravelly loam, 50 to 75 percent slopes
HkG2	Hugo very gravelly loam, 50 to 75 percent slopes, eroded
HlF	Hugo-Atwell complex, 30 to 50 percent slopes
HlG	Hugo-Atwell complex, 50 to 75 percent slopes
HmF	Hugo-Boomer complex, 30 to 50 percent slopes
HmG	Hugo-Boomer complex, 50 to 75 percent slopes
HnE	Hugo-Josephine complex, 9 to 30 percent slopes
HnG	Hugo-Josephine complex, 50 to 75 percent slopes
HnG2	Hugo-Josephine complex, 50 to 75 percent slopes, eroded
HoG	Hugo-Laughlin complex, 30 to 75 percent slopes
HrG	Hugo-Los Gatos complex, 50 to 75 percent slopes
HsF	Hugo-Hely complex, 30 to 50 percent slopes
HsG	Hugo-Hely complex, 50 to 75 percent slopes
HtA	Huichica loam, 0 to 2 percent slopes
HtC	Huichica loam, 2 to 9 percent slopes
HtD	Huichica loam, 9 to 15 percent slopes
HuB	Huichica loam, ponded, 0 to 5 percent slopes
HvC	Huichica loam, shallow, 0 to 9 percent slopes
HwB	Huichica loam, shallow, ponded, 0 to 5 percent slopes
HyG	Huse stony clay loam, 30 to 75 percent slopes
JoE	Josephine loam, 9 to 30 percent slopes
JoF	Josephine loam, 30 to 50 percent slopes
JoF2	Josephine loam, 30 to 50 percent slopes, eroded
JoG	Josephine loam, 50 to 75 percent slopes
JsG	Josephine-Sites loams, 30 to 75 percent slopes

SYMBOL	NAME
KdF	Kidd gravelly loam, 9 to 50 percent slopes
KeE	Kidd stony loam, 2 to 30 percent slopes
KkG	Kidd very rocky loam, 30 to 75 percent slopes
KlD	Kinman loam, 5 to 15 percent slopes
KlE	Kinman loam, 15 to 30 percent slopes
KlF	Kinman loam, 30 to 50 percent slopes
KmF	Kinman-Kneeland loams, 30 to 50 percent slopes
KnC	Kneeland loam, 5 to 9 percent slopes
KnD	Kneeland loam, 9 to 15 percent slopes
KnE	Kneeland loam, 15 to 30 percent slopes
KnF	Kneeland loam, 30 to 50 percent slopes
KoG	Kneeland rocky complex, 30 to 75 percent slopes
KsD	Kneeland sandy loam, sandy variant, 2 to 15 percent slopes
KsE	Kneeland sandy loam, sandy variant, 15 to 30 percent slopes
KvE	Kneeland rocky sandy loam, sandy variant, 9 to 30 percent slopes
LaC	Laniger loam, 5 to 9 percent slopes
LaD	Laniger loam, 9 to 15 percent slopes
LaE	Laniger loam, 15 to 30 percent slopes
LaE2	Laniger loam, 15 to 30 percent slopes, eroded
LaF	Laniger loam, 30 to 50 percent slopes
LgE	Laughlin loam, 2 to 30 percent slopes
LgF	Laughlin loam, 30 to 50 percent slopes
LgG	Laughlin loam, 50 to 75 percent slopes
LgG2	Laughlin loam, 50 to 75 percent slopes, eroded
LhG	Laughlin-Yorkville complex, 30 to 75 percent slopes
LkG	Los Gatos loam, 30 to 75 percent slopes
LmG	Los Gatos gravelly loam, 30 to 75 percent slopes
LnG	Los Gatos-Josephine complex, 30 to 75 percent slopes
LoD	Los Osos clay loam, 2 to 15 percent slopes
LoE	Los Osos clay loam, 15 to 30 percent slopes
LoF	Los Osos clay loam, 30 to 50 percent slopes
LoF2	Los Osos clay loam, 30 to 50 percent slopes, eroded
LsD	Los Osos clay loam, thin solum, 5 to 15 percent slopes
LsE	Los Osos clay loam, thin solum, 15 to 30 percent slopes
LsE2	Los Osos clay loam, thin solum, 15 to 30 percent slopes, eroded
LsF2	Los Osos clay loam, thin solum, 30 to 50 percent slopes, eroded
LuA	Los Robles gravelly clay loam, 0 to 2 percent slopes
LvB	Los Robles gravelly clay loam, moderately deep, 0 to 5 percent slopes
MbC	Manzanita gravelly silt loam, 0 to 9 percent slopes
McF	Maymen gravelly sandy loam, 30 to 50 percent slopes
MlG	Maymen-Los Gatos complex, 30 to 75 percent slopes
MmE	Mendocino sandy clay loam, 9 to 30 percent slopes
MmF	Mendocino sandy clay loam, 30 to 50 percent slopes
MnF	Mendocino-Empire complex, 0 to 50 percent slopes
MoE	Montara cobbly clay loam, 2 to 30 percent slopes
MoG	Montara cobbly clay loam, 30 to 75 percent slopes
NaD	Naya coarse sandy loam, 0 to 15 percent slopes
PaA	Pajaro fine sandy loam, 0 to 2 percent slopes
PaB	Pajaro fine sandy loam, 2 to 5 percent slopes
PbB	Pajaro gravelly loam, 0 to 5 percent slopes
PcA	Pajaro clay loam, overwash, 0 to 2 percent slopes
PcB	Pajaro clay loam, overwash, 2 to 5 percent slopes
PeA	Pleasanton loam, 0 to 2 percent slopes
PeC	Pleasanton loam, 2 to 9 percent slopes
PgB	Pleasanton gravelly loam, 2 to 5 percent slopes
PhB	Pleasanton clay loam, 2 to 5 percent slopes
PkC	Pleasanton gravelly clay loam, 2 to 9 percent slopes
PlC	Pleasanton-Haire complex, 0 to 9 percent slopes
PlD	Pleasanton-Haire complex, 9 to 15 percent slopes
PsC	Positas gravelly loam, 0 to 9 percent slopes
PsD	Positas gravelly loam, 9 to 15 percent slopes
RaC	Raynor clay, 2 to 9 percent slopes
RaD	Raynor clay, 9 to 15 percent slopes
RaE	Raynor clay, 15 to 30 percent slopes

HEL
Highly Erodible
1 to 3
1 = Highly Ero
2 = Fairly E
3 - Not

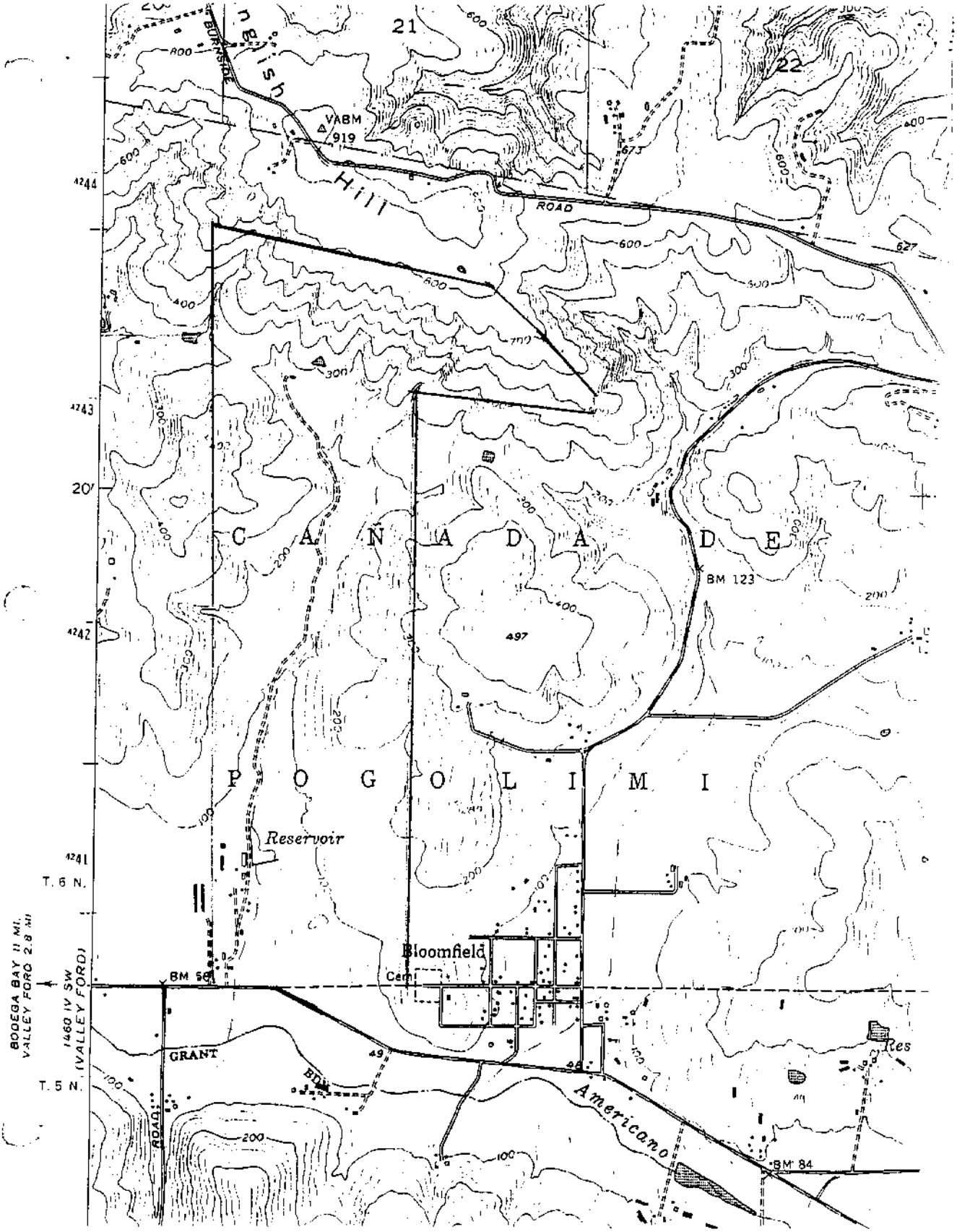
Not Highly Erodible 7E-3

2W-2 — PaB — Pajaro fine sandy loam, 2 to 5 percent slopes
2W-2 — PbB — Pajaro gravelly loam, 0 to 5 percent slopes
2W-2 PcA

R8

SYMBOL	NAME
RcD	Raynor clay, seeped, 2 to 15 percent slopes
ReE	Raynor-Montara complex, 0 to 30 percent slopes
RhD	Red Hill clay loam, 2 to 15 percent slopes
RhE	Red Hill clay loam, 15 to 30 percent slopes
RhF	Red Hill clay loam, 30 to 50 percent slopes
RlG	Red Hill cobbly clay loam, 30 to 75 percent slopes
RmA	Reyes silty clay, 0 to 2 percent slopes
RnA	Riverwash
RoG	Rock land
RrC	Rohnerville loam, 0 to 9 percent slopes
RrD	Rohnerville loam, 9 to 15 percent slopes
SbC	Sebastopol sandy loam, 2 to 9 percent slopes
SbD	Sebastopol sandy loam, 9 to 15 percent slopes
SbD2	Sebastopol sandy loam, 9 to 15 percent slopes, eroded
SbE	Sebastopol sandy loam, 15 to 30 percent slopes
SeE	Sheridan coarse sandy loam, 2 to 30 percent slopes
SfE	Sites loam, 5 to 30 percent slopes
SfF	Sites loam, 30 to 50 percent slopes
ShE	Sobrante loam, 15 to 30 percent slopes
ShF	Sobrante loam, 30 to 50 percent slopes
ShG	Sobrante loam, 50 to 75 percent slopes
SkC	Spreckels loam, 2 to 9 percent slopes
SkD	Spreckels loam, 9 to 15 percent slopes
SkE	Spreckels loam, 15 to 30 percent slopes
SkE2	Spreckels loam, 15 to 30 percent slopes, eroded
SkF	Spreckels loam, 30 to 50 percent slopes
SnC	Steinbeck loam, 2 to 9 percent slopes
SnD	Steinbeck loam, 9 to 15 percent slopes
SnD2	Steinbeck loam, 9 to 15 percent slopes, eroded
SnE	Steinbeck loam, 15 to 30 percent slopes
SnE2	Steinbeck loam, 15 to 30 percent slopes, eroded
SnF	Steinbeck loam, 30 to 50 percent slopes
SnF2	Steinbeck loam, 30 to 50 percent slopes, eroded
SoF	Stonyford gravelly loam, 30 to 50 percent slopes
SoG	Stonyford gravelly loam, 50 to 75 percent slopes
SrG	Stonyford-Broomer complex, 30 to 75 percent slopes
SsG	Supan silt loam, 30 to 75 percent slopes
StE	Suther loam, 15 to 30 percent slopes
StE2	Suther loam, 15 to 30 percent slopes, eroded
StF	Suther loam, 30 to 50 percent slopes
SuF	Suther-Laughlin loams, 15 to 50 percent slopes
SuG	Suther-Laughlin loams, 50 to 75 percent slopes
TeG	Terrace escarpments
TmA	Tidal marsh
ToE	Toomes rocky loam, 2 to 30 percent slopes
ToG	Toomes rocky loam, 30 to 75 percent slopes
TuC	Tuscan cobbly clay loam, 0 to 9 percent slopes
TuE	Tuscan cobbly clay loam, 9 to 30 percent slopes
WgC	Wright loam, 0 to 9 percent slopes
WhA	Wright loam, wet, 0 to 2 percent slopes
WmB	Wright loam, shallow, 0 to 5 percent slopes
WoA	Wright loam, shallow, wet, 0 to 2 percent slopes
YlA	Yolo sandy loam, 0 to 2 percent slopes
YmB	Yolo sandy loam, overwash, 0 to 5 percent slopes
YnA	Yolo loam, 0 to 2 percent slopes
YoB	Yolo loam, overwash, 0 to 5 percent slopes
YrB	Yolo gravelly loam, 0 to 5 percent slopes
YsA	Yolo silt loam, 0 to 2 percent slopes
YtA	Yolo clay loam, 0 to 2 percent slopes
YuE	Yorkville clay loam, 5 to 30 percent slopes
YuF	Yorkville clay loam, 30 to 50 percent slopes
YvF	Yorkville-Laughlin complex, 30 to 50 percent slopes
YwF	Yorkville-Suther complex, 0 to 50 percent slopes
YwG	Yorkville-Suther complex, 50 to 75 percent slopes
ZaA	Zamora silty clay loam, 0 to 2 percent slopes
ZaB	Zamora silty clay loam, 2 to 5 percent slopes

MAP A


21
22
20
BURNSIDE
English
Hill
VABM
919
ROAD
673
627
CANADA DE
POGOLIMI
BM 123
497
Reservoir
Bloomfield
Cem
BM 56
GRANT
ROAD
Americano
BM 84
Res
T. 6 N.
T. 5 N.
BODEGA BAY 11 MI.
VALLEY FORD 2.8 MI
1460 IV SW
(VALLEY FORD)