

Section II – Part D Environmental
Assessment, Summary of Probable Impacts,
and Community Impacts

ENVIRONMENTAL ASSESSMENT

Village at Amsterdam

PREPARED FOR

GALLATIN COUNTY PLANNING DEPARTMENT

PREPARED BY

CTA ARCHITECTS ENGINEERS

AFFILIATED CONSULTANTS (from 2006)

MOORE ENGINEERING
ALPINE SURVEYING
PBS&J
PIONEER TECHNICAL SERVICES

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A. Description of Existing Conditions

The Village at Amsterdam Subdivision is located between the communities of Amsterdam and Churchill. Situated on a sloping piece of property, there is no significant upland sources of surface water, unique vegetation, or otherwise protected environments. Various homesteading families have mainly used the property for farming and ranching operations during the last one hundred years.

Land planning, civil engineering, biology, wildlife, geology, wetland, and vegetation specialists have researched the following existing conditions and estimated impacts. The supplementary materials included in this Environmental Assessment are presented to assist in the explanation of the conditions that existed at the time of data collection or research, which was done in the summer and fall of 2006 (as part of a previous subdivision application – ViaVerda Ranch).

1. Surface Water

a. Mapping

There are no known surface water features on the subject property as depicted in Exhibit 1 “Wetlands and Water of the U.S. Delineation Map” of this Environmental Assessment.

Artificial Water Systems: There are no open ditches within the property boundary.

b. Description

The Camp Creek drainage is located to the west of the site adjacent to Camp Creek Road. This creek regularly contains water. Godfrey Creek is located to the east of the site and runs through Churchill. USGS topography indicates a small tributary of Godfrey Creek may cross the very southeast corner of the property. No development is planned in this area.

Erosion will be minimized during infrastructure and road construction by utilizing Best Management Practices (BMP's). BMP's utilize controls to minimize possible contamination of any proximate surface waters. By utilizing BMP's for construction of internal roads, water quality will not be adversely affected.

c. Water Body Alteration

No alteration of water bodies is planned on the property.

d. Wetlands

No wetlands existing on the subject property as depicted on Exhibit 1 – Wetland and Water Delineation Map.

2. Ground Water

a. Depth

There are at least two defined aquifer zones below the site. One at approximately 100 feet and another at approximately 400 feet. See the Engineering Report for a more detailed description of groundwater quality and quantity in the area if the project.

Table 1: Total Well Depth and Static Water Levels

Sec	Wells	Depth (ft)			Yield (gpm)		
		Min	Max	Avg	Min	Max	Avg
10	15	100	359	192.8	20	1000	276.5
11	12	73	315	125.1	4	1500	153.3
12	4	80	160	117.0	30	40	35.0
13	106	55	453	188.4	2	500	49.4
14	40	20	460	95.6	3	300	36.4
15	4	143	216	179.8	15	75	37.0
22	2	75	100	87.5	18	25	21.5
23	7	35	410	139.7	10	600	150.4
24	12	23	238	139.2	12	65	30.7
Total	202	20	460	159.2	2	1500	67.3

b. Steps to Avoid Degradation

The Village at Amsterdam will discharge all wastewater into the municipal system through an 8" diameter sewer line that will service the development and connect to the 8" municipal line located in Amsterdam Road on the north perimeter of the project.

The Village at Amsterdam development will reduce the amount of irrigated land from 78 acres to 25 acres. This will significantly reduce the volume of pesticides/fertilizers applied from its current use. Much of the common open space area will utilize native grasses and drought-tolerant species which will reduce the need for the application of herbicides and fertilizers.

3. Geology, Soils and Slopes

a. Geologic Hazards

There are no geologic hazards known on site. The general area of the Gallatin Valley has been known to show seismic activity.

b. Protective Measures

The subdivider will implement measures to protect soil from all types of potential erosion, slumping and failure during construction on site due to building of structures, installation of utilities and infrastructure and large equipment operation. Topsoil will be stockpiled for future reuse in landscaped open space and park areas and will be protected from seed infiltration during storage.

Excavation will not take place in unsafe conditions or when rains have made slopes or areas unstable or compromised.

c. Unusual Features

There are no unusual site features. The site is characterized by gently sloping terrain.

d. Soils Map

A comprehensive soils map and descriptions are provided in Exhibit 2 of this Environmental Assessment. These maps outline the soil types; suitability for construction of roads, structures and other facilities and the description of soil composition.

The property contains uplands soils including Brocko silt loam (0-4 percent slopes, 4-8 percent slopes and 8-15 percent slopes) and Quagle silt loam (0-4 percent slopes and 4-8 percent slopes). These soils have been exposed to farming operations for almost 100 years. Soil borings revealed that these soils are deep.

e. Cuts and Fills

A topography map of the project site has been produced in both one-foot and five-foot contour intervals. The project site consists of a gentle slope with the high point on the south property line. The roads have been designed to take advantage of the existing slope to minimize cuts and fills.

4. Vegetation

a. Vegetation Map

The project site has been used for non-food crop production, including alfalfa and small grains. Currently the site is being used for agricultural purposes.

Critical Plant Communities: There are no known critical plant communities within the project site; no endangered, threatened or sensitive plant species are known to exist within the property (Montana Natural Heritage Program, Supplemental Information).

Noxious Weed Identification: There are three species of noxious weeds found on the property, including: Canada thistle (*Cirsium canadensis*, Category 1), musk thistle (Category 4), and spotted knapweed (*Centaurea maculosa*, Category 1). A draft weed management plan has been submitted with this application. A final plan cannot be submitted until a survey of vegetation can be complete when vegetative cover has been established. Noxious weeds should be treated prior to development in order to prevent dispersal of seeds and rhizomes.

b. Protective Measures

A Draft Weed Management Plan will be submitted to the Weed Management District for that agency's review and approval. This plan includes the recalling of past and current management practices, acknowledgement of current populations of noxious weeds, proposed plans for appropriate re-vegetation of disturbed areas, and the proposed plans for noxious weed management within the Subdivision.

As illustrated in Exhibit 3, "Noxious Weeds Map" there are populations of Canada thistle, Hounds Tongue, Musk Thistle, and Knapweed. Some of these populations are limited to isolated areas and others are distributed over large areas, with limited numbers inhabiting the delineated areas. In some cases, the plants are very young and immature, not posing a serious threat to expansion of the population.

5. Wildlife

In 2006, the Montana Natural Heritage Program found no records of Endangered, Threatened or Sensitive wildlife species within the property boundary.

a. Species

Wildlife sightings within the property boundary during the investigation included red fox (*Vulpes fulva*) and Richardson ground squirrel (*Citellus richardsoni*). White-tailed and mule deer were not observed during data collection.

Avian species noted at the time of investigation include: red-tailed hawk (*Buteo jamaicensis*), Savannah Sparrow (*Passerculus sandwichensis*), Eastern Kingbird (*Tyrannus tyrannus*), Mourning Dove (*Zenaida macroura*), Black-billed Magpie (*Pica hudsonia*), Horned Lark (*Eremophila alpestris*), and Killdeer (*Charadrius vociferous*). The investigation was conducted in late August when birds tend not to vocalize; it is probable that more species frequent the property at earlier times of the year. However, species diversity is likely not high given the current agricultural use, low occurrence of trees and shrubs, and lack of surface water resources.

The Montana Fish, Wildlife and Parks fisheries biologist, Bruce Rich, was contacted regarding species of concern in the Camp Creek drainage. Species within the creek include rainbow (*Oncorhynchus mykiss*), brook (*Salvelinus fontinalis*) and brown trout (*Salmo trutta*); no species of concern occur in this drainage.

b. Critical Areas

No critical areas are within or immediately adjacent to the subject project site.

c. Protective Measures

During construction or disturbance of the property, protective measures will be implemented to ensure that minimal disturbance to wildlife will occur. The developer will work cooperatively with local and state wildlife agencies to create a protection plan for the property if necessary.

d. Impact on fish and wildlife (FWP)

No known protective species inhabit the property or the adjacent drainages.

6. Historical Features

a. Affected Areas

No known possible historic, paleontological, archeological, or cultural sites, structures, or objects are present on the subject property.

b. Protective Measures

During construction, all potential significant features or sites will be accounted for and investigated. If significant and potentially important features or sites are found to exist, appropriate methods for protecting these will be instituted. This would include an immediate consultation with the Montana Historical Society and the State Historic Preservation Office.

7. Visual Impact

The Montana Historical Society and the State Historic Preservation Office was contacted in 2006 regarding historic or archaeological sites in the designated search locale. Damon Murdo, Cultural, Records Manager, performed a resource file search on the project site. It was determined that no significant resources would be impacted by the proposed development.

With respect to surrounding cities, towns, developments or homes, the proposed subdivision is bordered by agricultural property to the south; residential development to the east; agricultural and residential to the north; and agricultural to the west. As with any new development, it is expected that the visual impacts will alter the original view sheds of adjacent properties and landowners. The Applicant has taken great care to incorporate public input about views and impacts in this respect. An area of limited-height residential units is planned adjacent to Churchill Road in order to protect existing views to the west. Roads are planned to affect the natural terrain as little as possible with grades and alignment designed to reduce cuts and fills. All excavated areas will be reseeded and returned to the natural vegetation during construction. Utilities are anticipated to be underground with boxes and structures positioned out of sight as much as possible or designed to fit into the character of the land.

B. Summary of Probable Impacts Criteria

Note: Responses have been provided in italics text.

1. The effect on agriculture and proposed mitigation of impacts.
 - a. Number of acres in type of production. *Approximately 78 acres.*
 - b. The productivity of the land. *Currently used for non-food crops and grazing.*
 - c. Whether or not the property is part of a viable farm unit. Was the property under production during the last regular season? *Property has been under agricultural production through 2014*
 - d. Agricultural operations and other uses of land in the general locality. *Yes, agricultural operations dominate this area of the County, including non-food and food crops, grazing, ranching, and dairy cows.*
 - e. What measures will be taken, if any, to control family pets. *Underground fences designed to contain animals in yards, leash law enforced through CC&R's and education about respecting neighbors.*
 - f. Fencing of Agricultural Land.
 - g. Additional information as needed.
2. The effect on agricultural water user facilities and proposed mitigation of impacts.
 - a. Type, description ownership, and users of facilities. *Wells will service potable water needs of the project. The CCR's will limit irrigation and promote drought tolerant species for yards. Irrigation water will be provided via the existing system with seasonal water rights for spray application to open space.*
 - b. Additional information as needed.
3. The effect on local services and proposed mitigation of impacts.
 - a. Methods of water supply and sewage disposal. *Drinking water will be provided via individual wells. Sewage collection will be completed through the municipal sewer system adjacent to the property.*
 - b. Provision of law enforcement services and fire protection services, and projected costs to providers. *Law enforcement services and fire protection services have been contacted. Protection arrangements will be made for the new residents of the Subdivision.*
 - c. Costs of upgrading or extending off-site public roads and costs of annual road maintenance. *The Subdivider will pay all costs associated with on-site and off-site roads and mitigation. Annual road maintenance will be provided up front by the Subdivider and then managed by the Property Owners Association.*
 - d. Provision of educational services and projected costs to providers. *Educational services will be provided by the Amsterdam School District.*
 - e. Current amount of local property taxes, projected amount land and improvements will pay in local property taxes. *The current property taxes are approximately \$1,700.00/per year.*
 - f. Provision of utilities and easements. *Utilities will be installed by developer to the standards of the utility provider, County, and State. Utilities will be placed in utility easements provided on-site. The Subdivider will dedicate the easements necessary for this to occur.*
 - g. Additional information as needed.

4. The effect on the natural environment and proposed mitigation of impacts.
 - a. Road drainage and erosion. *Roads have been designed to drain properly into swales, which will then channel runoff to detention ponds and then systematic release into the ground or other historic drainage paths. Additionally drainage water from the upper portion of the development will augment the fire pond reservoir.*
 - b. Terrain and surface runoff effects. *Surface runoff in the Amsterdam and Churchill communities is an issue. The Subdivider intends to capture this runoff and recharge it into the groundwater or detain it and discharge it to historic surface conveyance paths.*
 - c. Grading and drainage plan. *A preliminary drainage plan has been prepared for this submittal and is included with the engineering plans.*
 - d. Effects on native vegetation, soils, quality or quantity of surface or ground waters. *Currently the site is covered by a cultivated crop and non native vegetation. The project will maintain a large area in cultivated crop with the homes and businesses being landscaped per the CCR's. During construction the vegetation and soil will be protected by an erosion control plan filed with the State. There are no surface waters on the site and a drainage plan is proposed to control and treat run-off. All wells will be installed by a licensed driller per local requirements.*
 - e. Weed control. *A draft Weed Management Plan has been developed to address noxious weeds on the property.*
 - f. Light pollution. *"Dark Skies" techniques for lighting is enforced in the CC&R's.*
 - g. Additional information as needed.
5. The effect on wildlife and wildlife habitat and proposed mitigation of impacts.
 - a. Proximity to area of significant wildlife habitat or critical wildlife areas. *As indicated in this Environmental Assessment, the wildlife consultant did not locate any significant wildlife habitat on the property.*
 - b. Expected effects of pets and human activity on wildlife. *No adverse effects are expected.*
 - c. Effects on fisheries. *No fisheries will be effected with this proposed development.*
 - d. Effects on public access to public lands, trails, hunting or fishing areas. *No impacts to access to public lands, trails, hunting, or fishing areas is anticipated.*
 - e. Additional information as needed.
6. The effect on public health and safety and proposed mitigation of impacts.
 - a. Potential natural hazards; flooding, snow or rock slides, high winds, wildfire, excessive slopes, etc. *No known natural hazards exist or are anticipated to cause concern on the property. Defensive landscaping and construction will help prevent wildfire concerns on the project site.*
 - b. Potential man-made hazards; high voltage power lines, high pressure gas lines, nearby industrial or mining activity, high traffic volumes, lack of fire protection, inadequate traffic safety, etc. *No man-made hazards exist or are anticipated with this project.*
 - c. Additional information as needed.

C. Community Impact Report

1. Water Supply

a. Description of Use

Potable Water: Potable, drinking water will be supplied through individual residential wells at each lot.

Irrigation Water: The property currently holds shares in the Low Line Canal Company. This irrigation water is available for use in agricultural applications from May to June. This irrigation water is supplied through a nine-inch, underground, pressurized pipe. The pipe is located to the east of the property, running north-south beginning at a control box to the east and to the south of the property and terminating at a riser to the east at the north end of the property.

Water Treatment: As potable water will be provided by individual wells, centralized water treatment will not be provided. Individual homeowners can select from a myriad of technologies to treat water for multiple parameters.

b. Capacity

Data available through the Montana Bureau of Mines and Geology (MBMG) shows an average well depth of 160 feet in the area with average flows of 67 gpm. These flows are sufficient for a single family home. Additional information is contained in the Engineering Report on water capacity.

c. State Standards

Applications to the MDEQ and the DNRC will be submitted for water quality, quantity and water system construction criteria in conjunction with the Preliminary Plat submittal.

d. Existing Public System

There are no public water systems within 400 feet of the subdivision.

e. Individual System

Individual water systems will be developed. For specific adequacy requirements see the Engineering Report.

2. Sewage Disposal

a. Method

The communities of Church Hill and Amsterdam have an agreement with the Town of Manhattan to treat wastewater. The developer plans to connect to the existing community system with final treatment by the Town of Manhattan.

b. Capacity

The proposed development (58 residences, 2 commercial lots) will generate wastewater quantities of approximately 23,690, GPD. The proposed gravity flow transport system will

consist of 8-inch PVC line with reasonable slopes between 0.5 percent and 5 percent. An 8-inch PVC line between these slopes will discharge between .838 cfs and 2.649 cfs at 80% full. This range contains the projected peak flow of .156 cfs with infiltration.

c. Existing System

Currently the area is served by the Churchill Sewer District which has a contract with the Town of Manhattan to provide 75,000 gpd of reserved wastewater treatment. There is an existing 8" collection main in Amsterdam Road just to the north of the project.

d. New System

The proposed system will be designed in accordance with all Montana DEQ, local sewer district, and Gallatin County standards. The new system will be an 8" SDR 35 PVC gravity main installed per the requirements of the Montana Public Works Standards.

3. Solid Waste Disposal

a. Collector System

The existing private solid waste disposal service, BFI/Republic, will provide contracted pick up and disposal services for the Village at Amsterdam. No alternative system is necessary given written commitment from BFI/Republic. This proposed method of solid waste disposal meets the standards of MDEQ.

4. Roads

a. Description

Approximately 33,000 linear feet of roadway will be constructed and dedicated to the public as a part of this development. The design of the entire roadway system will be completed within the initial phase of the development. Actual construction will be completed as each phase of the project is developed.

Final road grades will follow the natural ground to the extent practical. Preliminary Plan and Profile sheets have been submitted with the accompanying Subdivision application. Final Plan and Profile sheets will be developed for final approval and construction of the project. All roads within the development will be paved with roadside ditches with the exception of roadways serving commercial properties. Roadways serving commercial properties will include a curb and gutter section.

The Village at Amsterdam project will include two accesses onto Churchill Road. These encroachment permits will be filed following preliminary approval by MDT. One accesses will be provided onto Amsterdam Road. The Village at Amsterdam project will add one new ingress/egress point on Amsterdam Road. This will have limited traffic on them that basically serves a small number of vehicle trips per day. This is reinforced in the Traffic Impact Study, which accompanies this submittal.

b. Access to Arterial

The project will include three accesses onto existing public roads. Two accesses will extend west from Hwy 288 (Churchill Road), and one will extend south from Amsterdam Road. Modifications are not planned to the existing roadway network. A full traffic study has been completed for this project and is included in the accompanying subdivision submittal.

56 residential and 2 commercial lots within the Village at Amsterdam will have direct access to Amsterdam Road or Churchill Road.

c. Modification of the Existing Roads

There will be no modifications to the existing roadway network serving the area, with the exception of requested road edge improvements required by MDT or the County Roads Superintendent.

d. Dust

Roads will be paved within the Village at Amsterdam Subdivision. Dust control during construction will be achieved using mechanical and watering methods.

e. Pollution and Erosion

No adverse pollution is planned as a result of the proposed development. Erosion will be prevented aforementioned, using BMP's and careful excavation of soils. Re-vegetating disturbed areas will be a priority during construction of infrastructure and utilities.

f. Installation and Maintenance

Installation of roads will take place appropriately within the phase in which they have been designed. Maintenance will be performed by the subdivider and eventually the POA.

g. Traffic Generation

Traffic generation issues have been addressed in the Traffic Impact Study which accompanies this application. Table below from TIS:

Use	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
	Enter	Exit	Total	Enter	Exit	Total
210 SF House	11	33	44	37	21	58
710 General Office	12	2	14	2	12	14
853 Conv. Market w/Gas	103	102	205	128	127	255
TOTAL (unadjusted)			263			327

h. Capacity

The existing road network in the vicinity of the proposed development has adequate capacity to accommodate the trips generated by the proposed development. The Traffic Impact Study includes detailed analyses of adjacent and proposed intersections with regards to Level of Service.

i. Year Round Access

The adjacent State and County highways have paved surfaces, as will the proposed internal plat roads. Internal road grades and surfaces will allow year round access to all lots created in the proposed development.

Year round access will be provided to all streets, drives and parking lots/areas.

5. Utilities

a. Affected Utilities

As presented in the previously submitted agency response letters, all utility providers have been notified of the Applicant's intent to secure services from those providers. These include telephone, cable, high speed Internet, electric, and gas. The application has contacted the Water and Sewer District for sewer service. A formal application will be completed after the preliminary plat application has been reviewed by the County. There are no community water systems available.

b. Description of Utilities

Utility companies have been contacted, with the previous application, about providing service to the subdivision. Northwestern Energy can and will provide power to the property. They can also provide gas service. Bresnan (Charter) will provide cable, high speed Internet and digital phone to the property. Qwest will provide telephone service to the property. Utility easements will be provided as required.

6. Emergency Services

a. Description of Emergency Services

- (1) Fire Protection will be provided by the Amsterdam Rural Fire Department as indicated in their review comments.
- (2) Police protection will be provided by the Gallatin County Sheriff's Department as indicated in their review comments.
- (3) American Medical Response (AMR) will provide ambulance service as indicated in their review comments.
- (4) Medical service can be provided via a combination of general physicians, out-patient emergency care and advanced care (Bozeman Deaconess Hospital).

b. Response Time

- (1) Fire Protection response time is approximately 15 minutes, given a mostly volunteer fire department. However, there may exist mutual aid agreements with larger fire departments, such as Belgrade and Bozeman. This would not improve response time, but would provide additional support for more serious incidents.
- (2) Police response time is approximately 15 minutes.
- (3) Ambulance response time is approximately 15 minutes.
- (4) Medical services are approximately 15 to 25 minutes away.

c. Additional Services Needed

No additional services are deemed necessary at this time.

7. Schools

a. Available Facilities

The existing Amsterdam School is located on a 2.875-acre site, which does not include the baseball diamond. Water for the school is provided by a well, which is located just east of the original school. Sewer service is provided by the community sewer system. The facility includes

four classrooms, located in the 1996 built structure (5,768 square feet) in addition to two classrooms, an inadequate music room and the combination library/computer room, which are located in the 1970's-1980's built structure. Currently there is no space for a gym, cafeteria, library, music, special education, or adequate administrative or counseling offices.

These facilities house limited resources for a kindergarten through sixth grade student body. The School Charter allows kindergarten through eighth grade, however students in the seventh and eighth grades attend Manhattan schools instead of Amsterdam School. Enrollment is very steady throughout the year.

The School District's boundary range is 100 square miles. Expansion of the current facilities is limited by aging infrastructure and utilities, limited space and limited resources.

Positive aspects of the school include small class sizes, a tight knit and local teacher base, group developed curriculum, and abundant community support.

b. School Children

Currently, approximately 167 students attend Amsterdam School.

It is projected that the Village at Amsterdam community will generate approximately 15 new students. It is possible that with other larger subdivisions in the area, there may be an even larger influx of students into the School District and into Amsterdam School.

c. Impact of Subdivision on Schools

The proposed Village at Amsterdam community will have an effect on the Amsterdam School and possibly even the Manhattan School District, given the possible influx of approximately 15 new students, grades kindergarten through sixth. That approximates to 1 student per grade. Students are projected to likely enter the school system over a five to ten year period, which coincides with the build-out of the Village at Amsterdam Subdivision.

The district voted 348 to 245 to pass a \$1.9 million dollar bond to expand capacity for the growing school district. The improvements should be complete prior to subdivision build out. The additional residents will create increased tax revenue and allow for early bond retirement should the district elect to do so.

8. Land Use

a. Planning

The Village at Amsterdam project site is currently within the jurisdiction of Gallatin County. The Gallatin County Growth Policy applies to this property. In addition to the Growth Policy the County has adopted the Amsterdam/Churchill Community Plan. The plan defines the area of the project as Category C: Ecton Ranch. This category is defined by the principles of the original application which include a mix of uses. This project proposes both residential and commercial uses and complies with the community plan. The applicant does not propose annexation into an incorporated city or town and there is no zoning for the land.

b. Public Lands

The proposed Subdivision will not adversely affect access to any public lands.

c. Adjacent Land Use

Adjacent land uses are similar to the east. These will be most affected by possible view shed disruptions.

d. Hazards

No hazards are anticipated as part of this proposed Subdivision.

e. Nuisance

The current and historical use of this land is agricultural.

Lot owners and residents of the Subdivision will be informed through the CC&R's that adjacent uses may be agricultural, involving standard agricultural and farming practices, which can result in dust, animal odors, flies, smoke, and machinery noise (sometimes early in the morning and late into the evening).

There is no known health or safety hazards on or near the subdivision, nor any nuisances being created.

9. Housing

a. Proposed Uses

Table 2, which follows, is a summary of the lot types associated with the Village at Amsterdam portion of the Subdivision.

Table 2: Lot Types

Land Use	Number of Lots
Residential Single-Family	58
Commercial	2
Total#ofLots	60

b. Type of Subdivision

The Subdivision contains a mixture of land uses, aforementioned and described. Table 2 provides a breakdown of the number of lots associated with the various land use types.

10. Parks and Recreational Facilities

The subdivider has designed the Village at Amsterdam community to include an abundance of open space and highly accessible public facilities and amenities. Approximately 7.12 acres of parkland will be officially dedicated to the County. The subdivider is providing an excess of the equivalent parkland requirement, to be provided as commonly owned and maintained open space that is available for use by the general public, the communities of Amsterdam and Churchill and the Village at Amsterdam residents.

Recreational facilities include developed and undeveloped open space; several smaller park-like areas, pedestrian amenities and landscaping; and a network of trails and

connector paths. Reference the Master Plan Map (submitted with this application), for locations of recreational facilities within the Village at Amsterdam.

11. Taxation

Acreage: 78 acres

Existing Taxes: Approximately \$1,700 per year (2005)

12. Accessibility of Service Systems and Facilities

Table 4: Distance from Service Systems

Service System	Unimproved*	Graded*	Graveled *	Paved*	Total	Town Where Located
Fire Protection	X	X	X	.25	X	Amsterdam, Montana
Police Protection	X	X	X	16	X	Bozeman, Montana
Hospital Facilities	X	X	X	17	X	Bozeman, Montana
Elementary School	X	X	X	.25	X	Amsterdam, Montana
High School	X	X	X	7	X	Manhattan, Montana

*Denotes type of road system used to access the site for each service system.

D. Exhibits

Exhibit 1: Wetland and Water of the U.S. Delineation Map

Exhibit 2: NRCS Soils

Exhibit 3: Noxious Weed Map

Exhibit 1 -USFW Wetlands Map

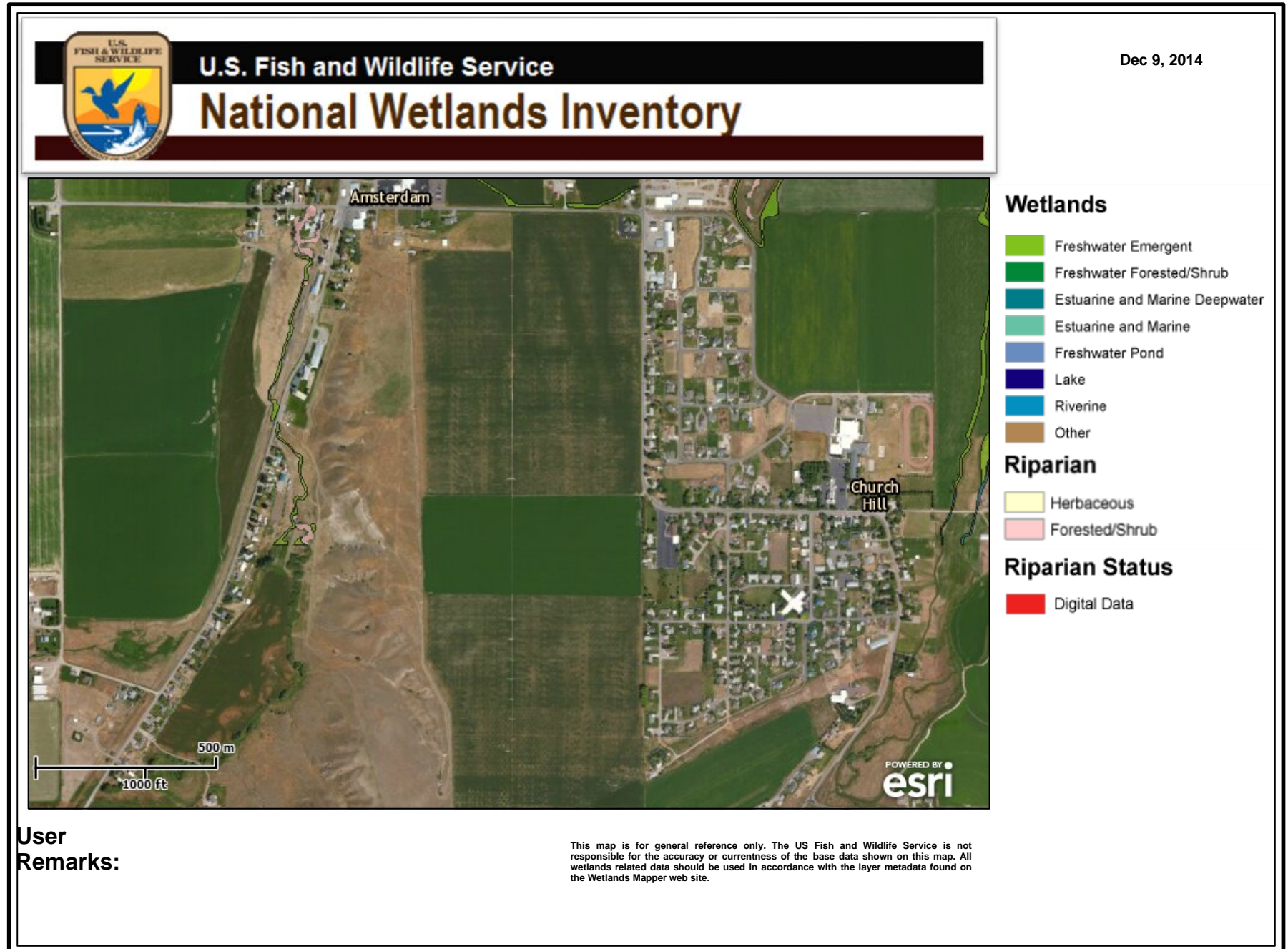
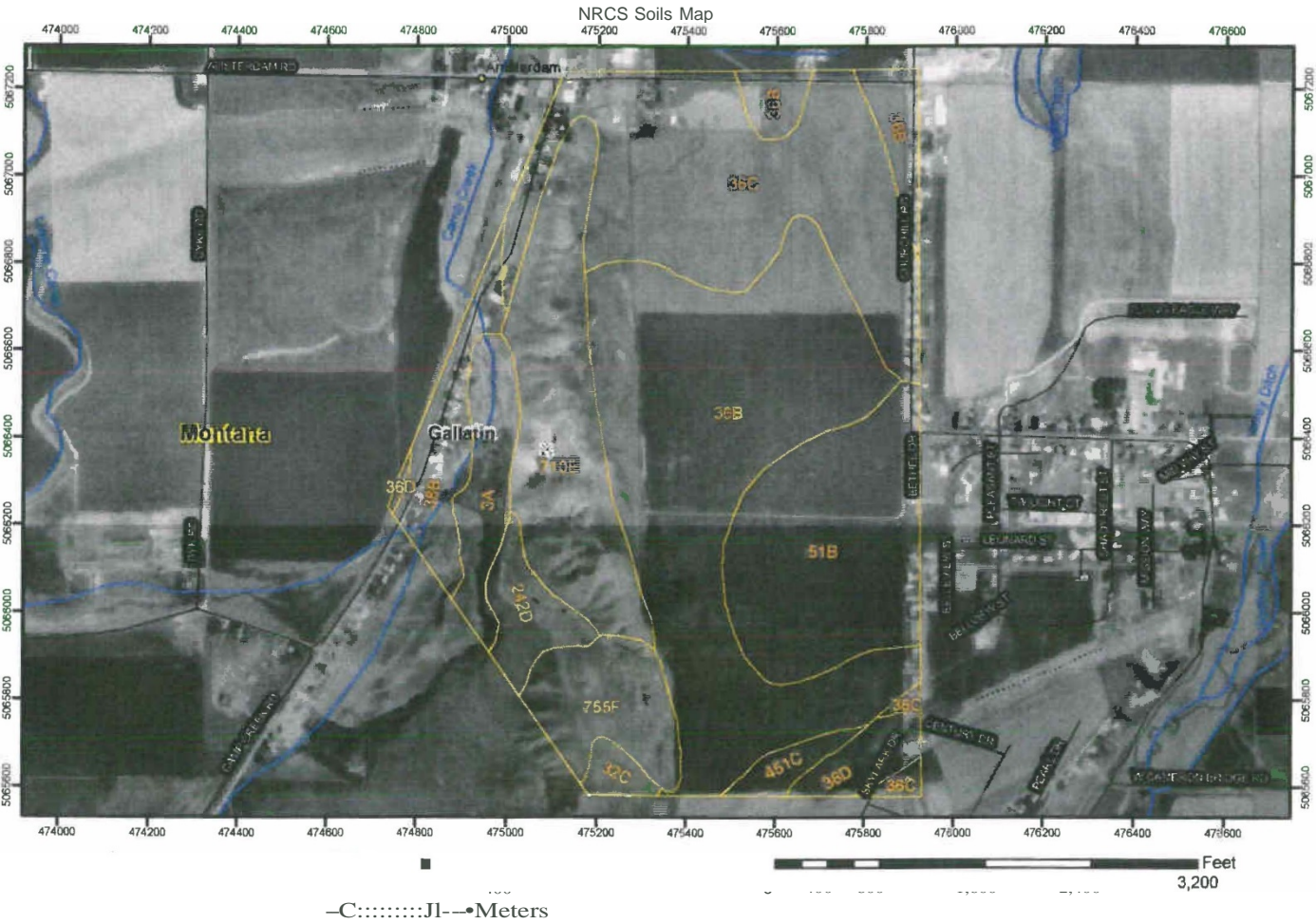


Exhibit 2 – NRCS Soils Data

SOIL SURVEY OF GALLATIN COUNTY AREA, MONTANA



SOIL SURVEY OF GALLATIN COUNTY AREA, MONTANA

NRCS Soils Ma

MAP LEGEND

- Soil Map Unit*
o Cities
c:::J Detailed Counties
c::J Detailed States
Interstate Highways
Roads
Ralls
Water
Hydrography
Oceans
A f A f A f A T Escarpment bedrock
Escarpment, non-bedrock
GuHey
||||| Levee
Slope
Blowoot
;)I Borrow Prt
>< Clay Spot
Depression closed
Eroded Spot
:X. Gravel Ph
Gravelly Spot
GuHey

- A. Lava Flow
G Landfill
.... Marsh or Swamp
@ Miscellaneous water
Rock Outcrop
&thne Spot
Sandy Spot
Slide or Slip
Sinkhole
Sadle Spot
Spoil Area
Stony Spot

- @ Perennial Water
I/Vet Spot

MAP INFORMATION

Source of Map: Natural Resources Conservation SeN1ce
Web Soil SuNey URL: <http://websoilsuNey.nrcs.usda.gov>
Coordinate System UTM Zone 12
Soil SuNey Area: Gallatin County Area, Montana
Spatial Version of Data: 2
Soil Map Compilation Scale: 1:24000

Map comprised of aerial images photographed on these dates:
8/12/1995; 8/11/1995

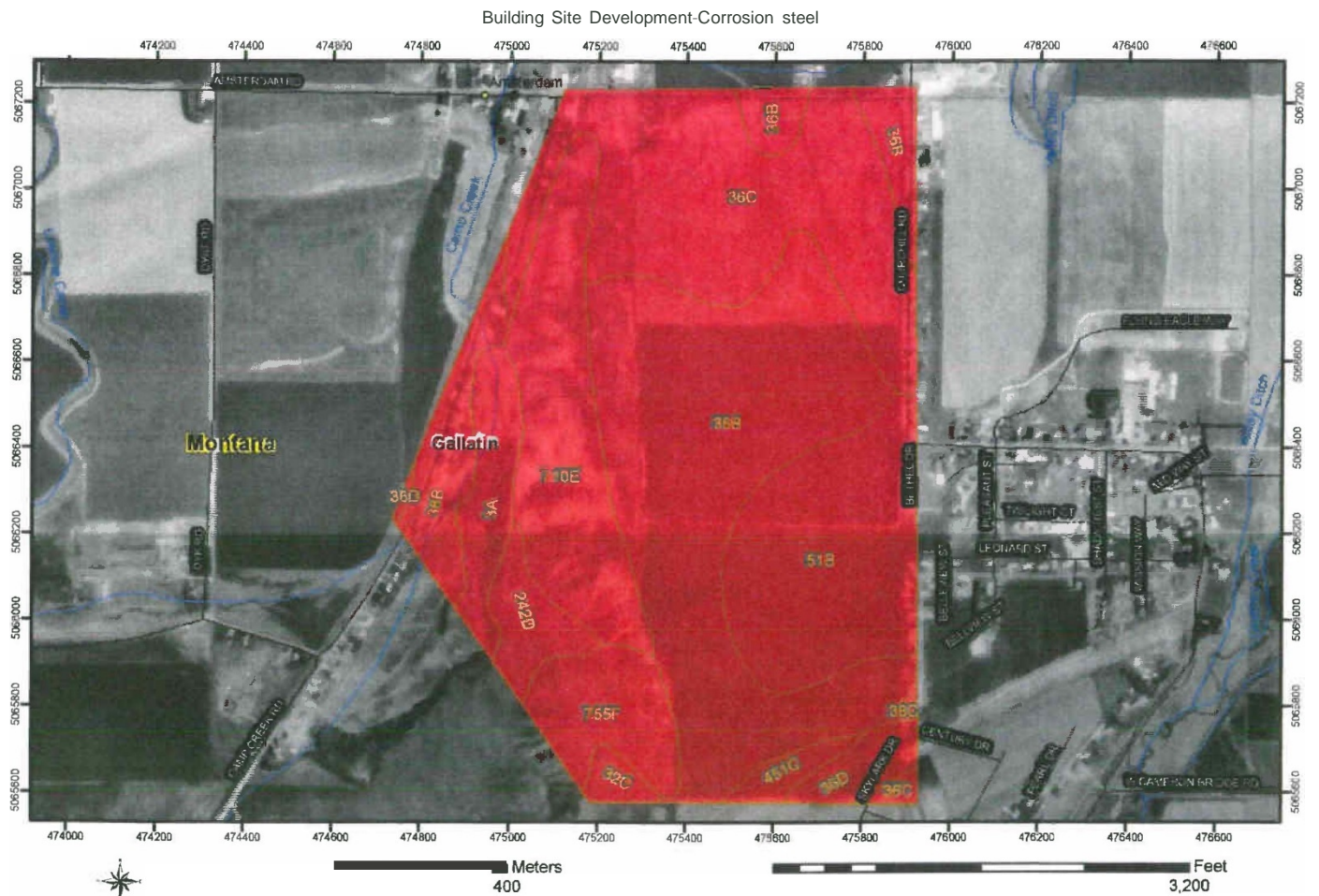
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident

Map Unit Legend Summary

Gallatin County Area, Montana

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3A	Glendive sandy loam, 0 to 2 percent slopes	16.3	3.9
32C	Amesha loam, 4 to 8 percent slopes	3.8	0.9
36B	Brocko silt loam, 0 to 4 percent slopes	136.0	32.6
36C	Brocko silt loam, 4 to 8 percent slopes	89.3	21.4
360	Brocko silt loam, 8 to 15 percent slopes	8.8	2.1
388	Chinook fine sandy loam, 0 to 4 percent slopes	18.0	4.3
SIB	Quagle silt loam, 0 to 4 percent slopes	57.4	13.8
242D	Trimad cobbly loam, 8 to 15 percent slopes	11.2	2.7
451C	Quagle-Brodyk silt loams, 4 to 8 percent slopes	5.0	1.2
710E	Cabbart-Amesha-Trimad complex, 15 to 45 percent slopes	50.4	12.1
755F	Anceney-Trimad-Meagher complex, 15 to 60 percent slopes	21.2	5.1

CORROSION STEEL RATING FOR GALLATIN COUNTY AREA, MONTANA



CORROSION STEEL RATING FOR GALLATIN COUNTY AREA, MONTANA

Buildin Site Develo ment-Corrosion Steel

MAP LEGEND

Corrosion Steel

{Dominant Condition, >}

-High

C:::J Moderate

C:::J Not rated or not available

Soil Map Units

o Cities

Detailed Counties

C:::J Detailed States

-Interstate Highways

— Roads

-+--+ Rails

vwater

— Hydrography

Oce111s

MAP INFORMATION

Source of Map:Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System:UTM Zone 12

Soil Survey Area Gallatin County Area Montana

Spatial Version of Data- 2

Soil Map Compilation Scale. 1:24000

Map comprised of aerial images photographed on these dates
8/12/1995 , 8/15/1995

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

Tables - Corrosion Steel

Summary by Map Unit - Gallatin County Area, Montana

Soil Survey Area Map Unit Symbol	Map Unit Name	Rating	Total Acres in AOI	Percent of AOI
3A	Glendive sandy loam, 0 to 2 percent slopes	High	16.3	3.9
32C	Amesha loam, 4 to 8 percent slopes	High	3.8	0.9
36B	Brocko silt loam, 0 to 4 percent slopes	High	136.0	32.6
36C	Brocko silt loam, 4 to 8 percent slopes	High	89.3	21.4
36D	Brocko silt loam, 8 to 15 percent slopes	High	8.8	2.1
38B	Chinook fine sandy loam, 0 to 4 percent slopes	High	18.0	4.3
51B	Quagle silt loam, 0 to 4 percent slopes	High	57.4	13.8
242D	Trimad cobbly loam, 8 to 15 percent slopes	High	11.2	2.7
451C	Quagle-Brodyk silt loams, 4 to 8 percent slopes	High	5.0	1.2
71OE	Cabbart-Amesha - Trimad complex, 15 to 45 percent slopes	High	50.4	12.1
755F	Anceuey-Trimad-Meagher complex, 15 to 60 percent slopes	High	21.2	5.1

Description - Corrosion Steel

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "Low," "Moderate," or "High."

Parameter Summary - Corrosion Steel

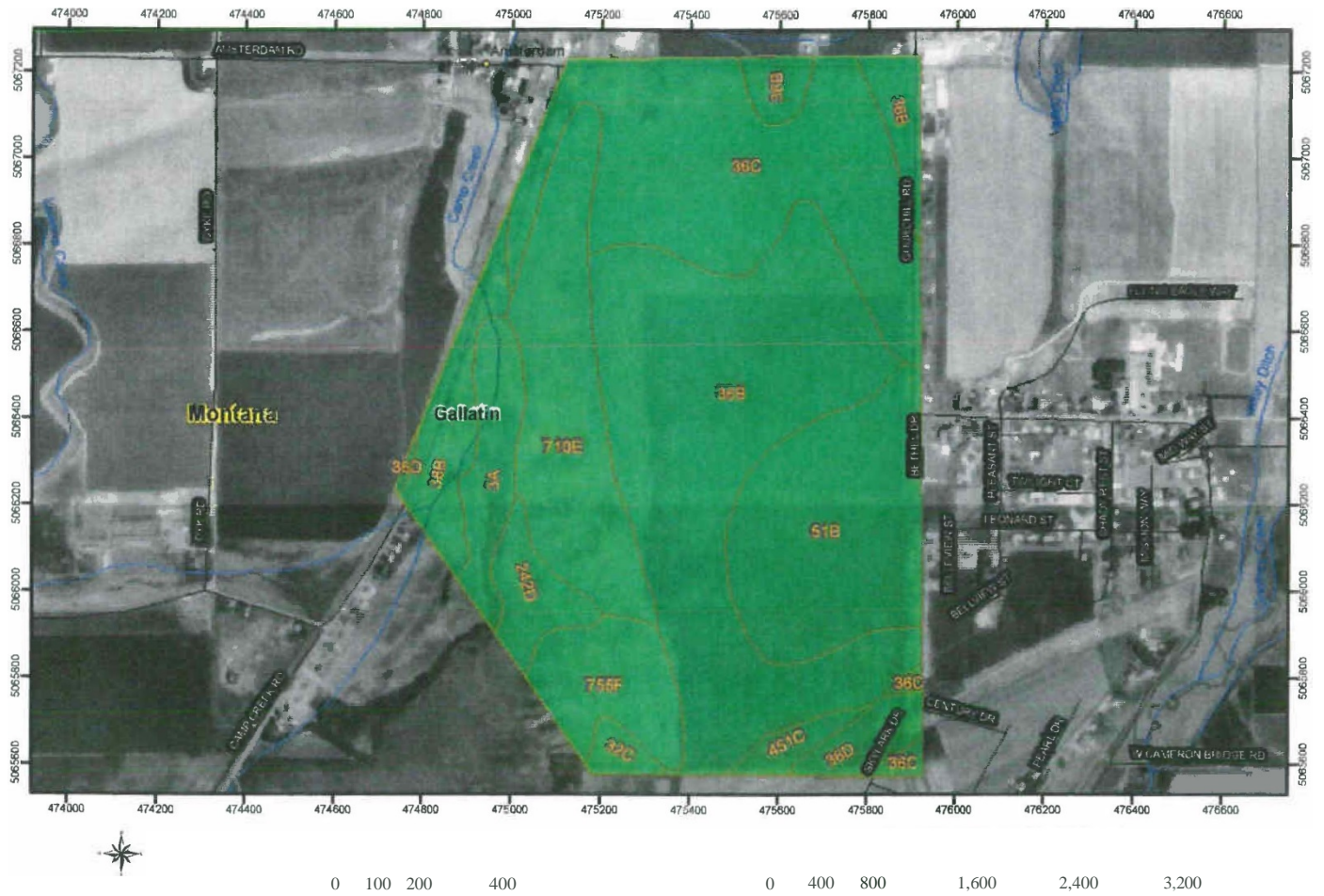
Aggregation Method :Dominant Condition

Component Percent Cutoff:

Tie-break Rule: Higher

CORROSION CONCRETE RATING FOR GALLATIN COUNTY AREA, MONTANA

Building Site Development-Corrosion Concrete



CORROSION CONCRETE RATING FOR GALLATIN COUNTY AREA, MONTANA

Building Site Development-Corrosion Concrete

MAP LEGEND

Corrosion Concrete
{DominantCondition,>}

-High

C::



Low

C::=J Not rated or not available

Sail Map Units

Cities

I::=J Detailed Counties

C::J Detailed States

-Interstate Hfghways

Roads

---+---+ Rails

Water

Hydrography

Oceans

MAP INFORMATION

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System UTM Zone 12

Soil Survey Area Gallatin County Area Montana
Spatial Version of Data 2
Soil Map Compilation Scale 1:24000

Map comprised of aerial images photographed on these dates:
8/12/1995, 8/15/1995

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.

Tables - Corrosion Concrete

Summary by Map Unit - Gallatin County Area, Montana

Soil Survey Area Map Unit Symbol	Map Unit Name	Rating	Total Acres in AOI	Percent of AOI
3A	Glendive sandy loam, 0 to 2 percent slopes	Low	16.3	3.9
32C	Amesha loam, 4 to 8 percent slopes	Low	3.8	0.9
36B	Brocko silt loam, 0 to 4 percent slopes	Low	136.0	32.6
36C	Brocko silt loam, 4 to 8 percent slopes	Low	89.3	21.4
360	Brocko silt loam, 8 to 15 percent slopes	Low	8.8	2.1
38B	Chinook fine sandy loam, 0 to 4 percent slopes	Low	18.0	4.3
S1B	Quagle silt loam, 0 to 4 percent slopes	Low	57.4	13.8
242D	Trimad cobbly loam, 8 to 15 percent slopes	Low	11.2	2.7
451C	Quagle-Brodyk silt loams, 4 to 8 percent slopes	Low	5.0	1.2
710E	Cabbart-Amesba - Trimad complex, 15 to 45 percent slopes	Low	50.4	12.1
755F	Anceney-Trimad - Meagher complex, 15 to 60 percent slopes	Low	21.2	5.1

Description - Corrosion Concrete

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens concrete. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the concrete in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "Low," "Moderate," or "High."

Parameter Summary - Corrosion Concrete

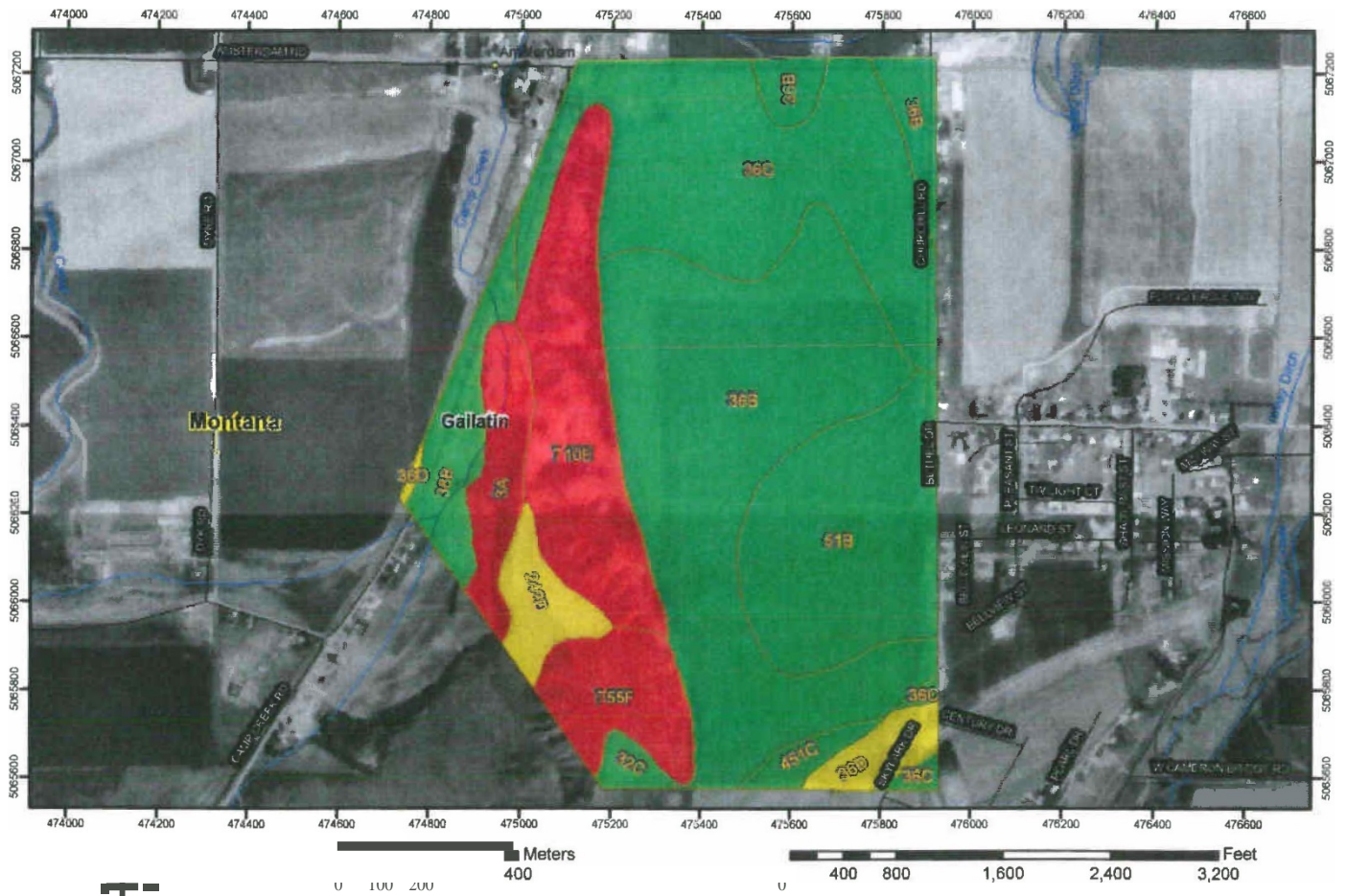
Aggregation Method: Dominant Condition

Component Percent Cutoff:

Tie-break Rule: Higher

DWELLINGS WITHOUT BASEMENTS RATING FOR GALLATIN COUNTY AREA, MONTANA

Building Site Development-Buildings w/out Basements



DWELLINGS WITHOUT BASEMENTS RATING FOR GALLATIN COUNTY AREA, MONTANA

Buildina Site Develooment-Buildinos w/out Basements

MAP LEGEND

Dwellings Without Basements

{ Dominant Condition, > }

-Very limited

D Somewhat limited

-Not limited

D Not rated or not available
Soil Map U...ts

o Cities

CJ Detailed Coooties

c::J Detailed States

-Interstate Highways

-Roads

Rails

Water

-Hydrography

Oceais

MAP INFORMATION

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System UTM Zone 12

Soil Survey Area: Gallatin County Area, Montana

Spatial Version of Data 2

Soil Map Compilation Scale: 1:24000

Map comprised of aerial images photographed on these dates
8/12/1995; 8/11/1995

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

Tables - Dwellings Without Basements

Summary by Map Unit - Gallatin County Area, Montana

Soil Survey Area Map Unit Symbol	Map Unit Name	Rating	Component Name (Percent)	Rating Reasons	Total Acres in AOI	Percent of AOI
3A	Glendive sandy loam, 0 to 2 percent slopes	Very limited	Glendive (85%)	Flooding	16.3	3.9
32C	Amesha loam, 4 to 8 percent slopes	Not limited	Amesha (85%)		3.8	0.9
36B	Brocko silt loam, 0 to 4 percent slopes	Not limited	Brocko (90%)		136.0	32.6
36C	Brocko silt loam, 4 to 8 percent slopes	Not limited	Brocko (90%)		89.3	21.4
36D	Brocko silt loam, 8 to 15 percent slopes	Somewhat limited	Brocko (90%)	Slope	8.8	2.1
38B	Chinook fine sandy loam, 0 to 4 percent slopes	Not limited	Chinook (90%)		18.0	4.3
518	Quagle silt loam, 0 to 4 percent slopes	Not limited	Quagle (85%)		57.4	13.8
242D	Trimad cobbly loam, 8 to 15 percent slopes	Somewhat limited	Trimad (85%)	Slope	11.2	2.7
451C	Quagle- Brodyk silt loams, 4 to 8 percent slopes	Not limited	Quagle (70%)		5.0	1.2
			Brodyk (20%)			
710E	Cabbart- Amesha- Trimad complex, 15 to 45 percent slopes	Very limited	Cabbart (50%)	Slope	50.4	12.1
				Shrink-swell		
				Depth to soft bedrock		
			Amesha (25%)	Slope		

Summary by Map Unit - Gallatin County Area, Montana

Soil Survey Area Map Unit Symbol	Map Unit Name	Rating	Component Name (Percent)	Rating Reasons	Total Acres in AOI	Percent of AOI
755F	Anceney- Trimad- Meagher complex, 15 to 60 percent slopes	Very limited	Trimad (15%)	Slope		
			Anceney (40%)	Slope	21.2	5.1
				Large stones content		
			Trimad (30%)	Slope		
			Meagher (20%)	Slope		

Summary by Rating Value

Rating	Total Acres in AOI	Percent of AOI
Not limited	309.4	74.1
Very limited	87.9	21.1
Somewhat limited	20.0	4.8

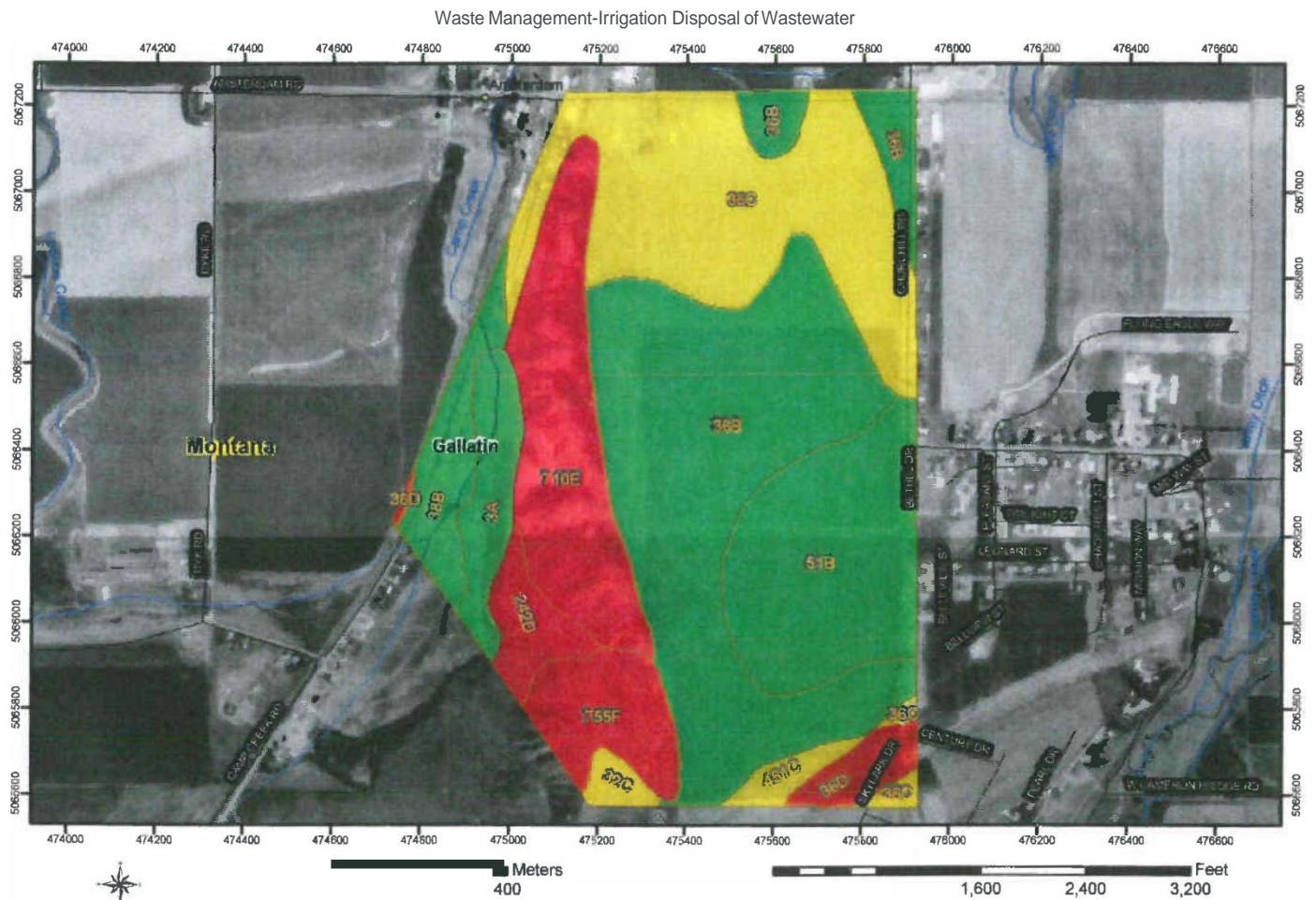
Description - Dwellings Without Basements

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper.

The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

IRRIGATION DISPOSAL OF WASTEWATER RATING FOR GALLATIN COUNTY AREA, MONTANA



IRRIGATION DISPOSAL OF WASTEWATER RATING FOR GALLATIN COUNTY AREA, MONTANA

Waste Management-Irrigation Disposal of Wastewater

MAP LEGEND

Irrigation Disposal of Wastewater

(Dominant Condition, >)

Very limited

Somewhat limited

Not rated or not available

Soil Map Units

Cities

Detailed Counties

C:J Detailed States

Interstate Highways

Roads

Rails

water

Hydrography

Oceans

MAP INFORMATION

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 12

Soil Survey Area: Gallatin County Area, Montana

Spatial Version of Data: 2

Soil Map Compilation Scale: 1:24000

Map comprised of aerial images photographed on these dates:
8/12/1995; 8/15/1995

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.

Tables - Irrigation Disposal of Wastewater

Summary by Map Unit - Gallatin County Area, Montana

Soil Survey Area Map Unit Symbol	Map Unit Name	Rating	Component Name (Percent)	Rating Reasons	Total Acres in AOI	Percent of AOI
3A	Glendive sandy loam, 0 to 2 percent slopes	Not limited	Glendive (85%)		16.3	3.9
32C	Amesha loam, 4 to 8 percent slopes	Somewhat limited	Amesha (85%)	Too steep	3.8	0.9
36B	Brocko silt loam, 0 to 4 percent slopes	Not limited	Brocko (90%)		136.0	32.6
36C	Brocko silt loam, 4 to 8 percent slopes	Somewhat limited	Brocko (90%)	Too steep	89.3	21.4
360	Brocko silt loam, 8 to 15 percent slopes	Very limited	Brocko (90%)	Too steep	8.8	2.1
				Too steep		
38B	Chinook fine sandy loam, 0 to 4 percent slopes	Not limited	Chinook (90%)		18.0	4.3
SIB	Quagle silt loam, 0 to 4 percent slopes	Not limited	Quagle (85%)		51.4	13.8
2420	Trimad cobbly loam, 8 to 15 percent slopes	Very limited	Trimad (85%)	Too steep	11.2	2.7
				Too steep		
				Droughty		
				Cobble content		
451C	Quagle-Brodyk silt loams, 4 to 8 percent slopes	Somewhat limited	Quagle (70%)	Too steep	5.0	1.2
			Brodyk (20%)	Too steep		

Summary by Map Unit - Gallatin County Area, Montana

Soil Survey Area Map Unit Symbol	Map Unit Name	Rating	Component Name (Percent)	Rating Reasons	Total Acres in AOI	Percent of AOI
71OE	Cabbart- Amesha- Trimad complex, 15 to 45 percent slopes	Very limited	Cabbart (50%)	Depth to bedrock	50.4	12.1
				Too steep		
				Too steep		
				Droughty		
				Cobble content		
			Amesha (25%)	Too steep		
				Too steep		
			Trimad (15%)	Too steep		
				Too steep		
				Droughty		
				Cobble content		

Summary by Map Unit - Gallatin County Area, Montana

Soil Survey Area Map Unit Symbol	Map Unit Name	Rating	Component Name (Percent)	Rating Reasons	Total Acres in AOI	Percent of AOI
755F	Anceney- Trimad- Meagher complex, 15 to 60 percent slopes	Very limited	Anceney (40%)	Too steep	21.2	5.1
				Too steep		
				Cobble content		
				Droughty		
			Trimad (30%)	Too steep		
				Too steep		
				Droughty		
				Cobble content		
			Meagher (20%)	Too steep		
				Too steep		

Summary by Rating Value

Rating	Total Acres in AOI	Percent of AOI
Not limited	227.7	54.6
Somewhat limited	98.0	23.5
Very limited	91.6	22.0

Description - Irrigation Disposal of Wastewater

Wastewater includes municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. The effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, heavy metals, and salts are not added in excessive amounts.

"Disposal of wastewater by irrigation" not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, Ksat, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding. The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

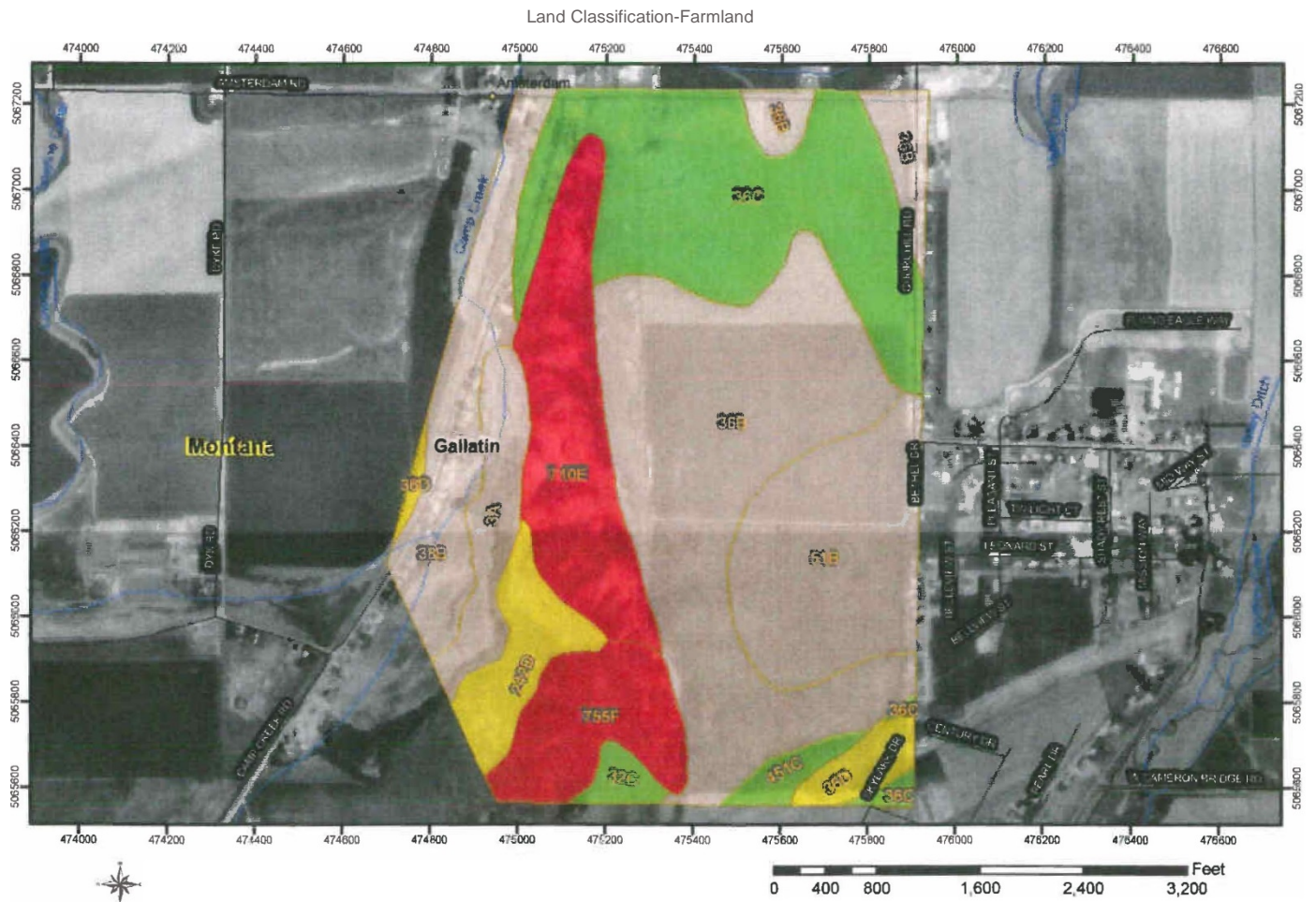
Parameter Summary - Irrigation Disposal of Wastewater

Aggregation Method :Dominant Condition

Component Percent Cutoff:

Tie-break Rule: Higher

FARMLAND CLASSIFICATION RATING FOR GALLATIN COUNTY AREA, MONTANA



FARMLAND CLASSIFICATION RATING FOR GALLATIN COUNTY AREA. MONTANA

Land Classification-Farmland

MAP LEGEND

Farmland Classification

{No Aggregation Necessary, <}

Not prime farmland

IAJ1 areas are prime farmland

Prime farmland if drained

Prime farmland if protected from flooding or not frequently flooded during the growing season

Prime farmland if irrigated

Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Prime farmland if irrigated and drained

Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Prime farmland if eutsoiled, completely removing the root inhibiting soil layer

Prime farmland if irrigated and the product of I (soil erodibility) x C (clay factor) does not exceed 60

Prime farmland if irrigated and reclaimed of excess salts and sodium

Farmland of statewide importance

Farmland of local importance

Farmland of unique importance

Not rated or not available

Soil Map Units

Other

Other Counties

Other States

Interstate Highways

Roads

Rails

Water

Hydrography

Oceans

MAP INFORMATION

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 12

Area: Gallatin County Area, Montana

Scale: 1:24000

Map Date: 8/15/1995

Map comprised of aerial images photographed on these dates:

8/12/1995; 8/15/1995

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.

Tables - Farmland Classification

Summary by Map Unit - Gallatin County Area, Montana

Soil Survey Area Map Unit Symbol	Map Unit Name	Rating	Total Acres in AOI	Percent of AOI
3A	Glendive sandy loam, 0 to 2 percent slopes	Prime farmland if irrigated	20.0	4.3
32C	Amesha loam, 4 to 8 percent slopes	Farmland of statewide importance	4.6	1.0
36B	Brocko silt loam, 0 to 4 percent slopes	Prime farmland if irrigated	137.3	29.7
36C	Brocko silt loam, 4 to 8 percent slopes	Farmland of statewide importance	92.0	19.9
36D	Brocko silt loam, 8 to 15 percent slopes	Farmland of local importance	9.6	2.1
388	Chinook fine sandy loam, 0 to 4 percent slopes	Prime farmland if irrigated	39.4	8.5
SIB	Quagle silt loam, 0 to 4 percent slopes	Prime farmland if irrigated	56.2	12.1
242D	Trimad cobbly loam, 8 to 15 percent slopes	Farmland of local importance	18.4	4.0
451C	Quagle-Brodyk silt loams, 4 to 8 percent slopes	Farmland of statewide importance	5.6	1.2
710E	Cabbart-Amesha-Trimad complex, 15 to 45 percent slopes	Not prime farmland	50.4	10.9
755F	Anceney-Triinad-Meagher complex, 15 to 60 percent slopes	Not prime farmland	29.1	6.3

Description - Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. Farmland classification identifies the location and extent of the most suitable land for producing food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the Federal Register, Vol. 43, No. 21, January 31, 1978.

Parameter Summary - Farmland Classification

Aggregation Method: No Aggregation Necessary Tie-

break Rule: Lower

Physical Soil Properties

Gallatin County Area, Montana

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erod- ibility g/OUF	Wind erod- ibility index
										K _w	Q _s	T		
3A: Glendive	In	Pct	Pct	Pct	glee	miao mlsec	ln/ln	Pct	Pct					
	6-46			5-18	1.30-1.50	14.00-42.00	0.13-0.16	0.0-2.9	0.5-2.0	.20	.20	5	3	86
				5-18	1.30-1.50	14.00-42.00	0.15-0.18	0.0-2.9	0.5-1.0	.32	.32			
				5-18	1.35-1.60	14.00-42.00	0.10-0.14	0.0-2.9	0.5-1.0	.20	.20			
32C: Amasha	0-7			15-25	1.25-1.45	4.00-14.00	0.16-0.20	0.0-2.9	1.0-3.0	.37	.37	5	4L	86
	7-25			10-18	1.30-1.55	4.00-14.00	0.14-0.17	0.0-2.9	0.5-1.0	.37	.37			
	25-60			10-18	1.35-1.60	4.00-14.00	0.12-0.15	0.0-2.9	0.0-0.5	.28	.28			
366: Brocko	0-7			8-18	1.10-1.30	4.00-14.00	0.17-0.19	0.0-2.9	1.0-3.0	.37	.37	5	4L	86
	NiO			8-18	1.20-1.40	4.00-14.00	0.15-0.18	0.0-2.9	0.5-1.0	.37	.37			
36C: Brocko	0-7			8-18	1.10-1.30	4.00-14.00	0.17-0.19	0.0-2.9	1.0-3.0	.37	.37	5	4L	86
	7-25			8-18	1.20-1.40	4.00-14.00	0.15-0.18	0.0-2.9	0.5-1.0	.37	.37			
36D: Brocko	0-7			8-18	1.10-1.30	4.00-14.00	0.17-0.19	0.0-2.9	1.0-3.0	.37	.37	5	4L	86
	7-60			8-18	1.20-1.40	4.00-14.00	0.15-0.18	0.0-2.9	0.5-1.0	.37	.37			
386: Chinook	0-4			5-18	1.25-1.45	14.00-42.00	0.13-0.16	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	4-22			5-18	1.40-1.60	14.00-42.00	0.12-0.15	0.0-2.9	0.0-1.0	.20	.20			
	22-25			5-18	1.40-1.60	14.00-42.00	0.12-0.15	0.0-2.9	0.0-1.0	.20	.20			

Physical Soil Properties

Gallatin County Area, Montana

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K _w	1	T		
518: Quagle	0-6			18-25	1.10-1.30	4.00-14.00	0.18-0.20	0.0-2.9	1.0-3.0	.37	.37	5	4L	86
	6-9			18-25	1.15-1.35	4.00-14.00	0.18-0.19	0.0-2.9	1.0-2.0	.37	.37			
	9-60			10-18	1.20-1.40	4.00-14.00	0.16-0.19	0.0-2.9	0.0-1.0	.37	.37			
2420: Trimad	0-5			20-27	1.20-1.40	4.00-14.00	0.12-0.15	0.0-2.9	2.0-4.0	.20	.37	3	6	48
	5-19			10-27	1.35-1.55	4.00-14.00	0.09-0.13	0.0-2.9	1.0-2.0	.20	.37			
	19-25			10-15	1.45-1.65	4.00-42.00	0.04-0.08	0.0-2.9	0.5-1.0	.10	.37			
	25-60			10-15	1.50-1.70	14.00-42.00	0.04-0.07	0.0-2.9	0.0-0.5	.05	.24			
451C: Quagle	0-6			18-25	1.10-1.30	4.00-14.00	0.18-0.20	0.0-2.9	1.0-3.0	.37	.37	5	4L	86
	6-9			18-25	1.15-1.35	4.00-14.00	0.16-0.19	0.0-2.9	1.0-2.0	.37	.37			
	9-60			10-18	1.20-1.40	4.00-14.00	0.16-0.19	0.0-2.9	0.0-1.0	.37	.37			
Brodyk	0-6			18-22	1.10-1.30	4.00-14.00	0.17-0.19	0.0-2.9	1.0-3.0	.37	.37	5	4L	86
	6-30			10-18	1.15-1.35	4.00-14.00	0.17-0.19	0.0-2.9	0.5-2.0	.37	.37			
	30-60			10-18	1.20-1.40	4.00-14.00	0.15-0.18	0.0-2.9	0.0-0.5	.37	.37			
710E: Cabbart	0-3			15-27	1.20-1.40	4.00-14.00	0.11-0.14	0.0-2.9	1.0-2.0	.20	.37	2	4L	86
	3-19			18-35	1.30-1.50	4.00-14.00	0.16-0.20	3.0-5.9	0.5-1.0	.32	.32			
	19-60													
Amesha	0-7			15-25	1.25-1.45	4.00-14.00	0.16-0.20	0.0-2.9	1.0-3.0	.37	.37	5	4L	86
	7-25			10-18	1.30-1.55	4.00-14.00	0.14-0.17	0.0-2.9	0.5-1.0	.37	.37			
	25-60			10-18	1.35-1.60	4.00-14.00	0.12-0.15	0.0-2.9	0.0-0.5	.28	.28			

Physical Soil Properties

Gallatin County Area, Montana

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K _w	1 T			
	<i>In</i>	<i>Pct</i>	<i>Pct</i>	<i>Pct</i>	<i>glee</i>	<i>micro m/sec</i>	<i>In/in</i>	<i>Pct</i>	<i>Pct</i>					
710E:														
Trimad	0-5			10-20	1.30-1.50	14.00-42.00	0.09-0.12	0.0-2.9	2.0-4.0	.10	.24	3	3	86
	5-19			10-27	1.35-1.55	4.00-14.00	0.09-0.13	0.0-2.9	1.0-2.0	.20	.37			
	19-25			10-15	1.45-1.65	4.00-42.00	0.04-0.08	0.0-2.9	0.5-1.0	.10	.37			
	25-60			10-15	1.50-1.70	14.00-42.00	0.04-0.07	0.0-2.9	0.0-0.5	.05	.24			
755F:														
Anceney	0-5			18-27	1.10-1.30	4.00-14.00	0.12-0.16	0.0-2.9	2.0-4.0	.24	.37	5	6	48
	6-10			18-27	1.25-1.45	4.00-14.00	0.08-0.12	0.0-2.9	1.0-2.0	.10	.37			
	11-14			15-27	1.40-1.60	14.00-42.00	0.05-0.10	0.0-2.9	0.5-1.0	.02	.37			
Trimad	0-5			10-20	1.30-1.50	14.00-42.00	0.09-0.12	0.0-2.9	2.0-4.0	.10	.24	3	3	86
	5-19			10-27	1.35-1.55	4.00-14.00	0.09-0.13	0.0-2.9	1.0-2.0	.20	.37			
	19-25			10-15	1.45-1.65	4.00-42.00	0.04-0.08	0.0-2.9	0.5-1.0	.10	.37			
	25-60			10-15	1.50-1.70	14.00-42.00	0.04-0.07	0.0-2.9	0.0-0.5	.05	.24			
Meagher	0-5			18-27	1.15-1.35	4.00-14.00	0.15-0.19	0.0-2.9	2.0-4.0	.37	.37	2	6	48
	6-19			27-35	1.25-1.45	4.00-14.00	0.12-0.18	3.0-5.9	1.0-3.0	.32	.32			
	19-31			18-27	1.40-1.60	4.00-14.00	0.10-0.14	0.0-2.9	0.5-1.0	.37	.37			
	31-60			10-25	1.45-1.65	14.00-42.00	0.05-0.09	0.0-2.9	0.0-0.5	.10	.37			

Ponds and Embankments

Gallatin County Area, Montana

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3A: Glendive	85	Very limited Seepage		Somewhat limited Seepage	0.06	Very limited Depth to water	
32C: Amesha	85	Somewhat limited Seepage	0.7	Very limited Piping		Very limited Depth to water	
368: 8rocko	90	Somewhat limited Seepage	0.7	Very limited Piping		Very limited Depth to water	
36C: 8rocko	90	Somewhat limited Seepage	0.7	Very limited Piping		Very limited Depth to water	
36D: 8rocko	90	Somewhat limited Seepage Slope	0.7 0.01	Very limited Piping		Very limited Depth to water	
388: Chinook	90	Very limited Seepage		Not limited		Very limited Depth to water	
518: Quagle	85	Somewhat limited Seepage	0.7	Very limited Piping		Very limited Depth to water	
242D: Trimad	85	Very limited Seepage Slope	1 0.01	Somewhat limited Seepage	0.06	Very limited Depth to water	
451C: Quagle	70	Somewhat limited Seepage	0.7	Very limited Piping		Very limited Depth to water	
8rodyk	20	Somewhat limited Seepage	0.7	Very limited Piping		Very limited Depth to water	

Ponds and Embankments

Gallatin County Area, Montana

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and	Value	Rating class and	Value	Rating class and	Value
		limiting features		limiting features		limiting features	
710E:							
Cabbart	50	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.5	Thin layer		Depth to water	
		Slope	0.5	Piping			
Amesha	25	Somewhat limited		Very limited		Very limited	
		Seepage	0.7	Piping		Depth to water	
		Slope	0.5				
Trimad	15	Very limited		Somewhat limited		Very limited	
		Seepage		Seepage	0.06	Depth to water	
		Slope	0.5				
755F:							
Anceney	40	Very limited		Somewhat limited		Very limited	
		Seepage_		Large stones content	0.01	Depth to water	
		Slope	0.82				
Trimad	30	Very limited		Somewhat limited		Very limited	
		Seepage	0.82		0.06	Depth to water	
		Slope					
Meagher	20	Very limited		Somewhat limited		Very limited	
		Seepage		Seepage	0.13	Depth to water	
		Slope	0.28				

Engineering Properties

Gallatin County Area, Montana

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percent passing sieve number-				Liquid limit	Plasticity index
			Unified	AASHTO	>10	3-10 inches	4	10	40	200		
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
3A: Glendive	0-6	Sandy loam	ML, SM	A-2, A-4	0	0	100	100	65-85	30-55	15-20	NP-5
	6-16	Loam, Silt loam, Sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	100	100	65-95	40-70	15-25	NP-10
	46-60	Stratified <i>loamy</i> fine sand to day loam	SC-SM, SM	A-2, A- 4	0	0	95-100	75-100	60-90	25-50	15-25	NP-10
32C: Amesha	0-7	Loam	CL, CL-ML	A-4, A- 6	0	0	90-100	80-100	70-90	55-75	25-35	5-15
	7-25	Loam, Silt loam, Sandy loam	CL-ML, ML	A-4	0	0-5	95-100	90-100	70-90	55-75	20-30	NP-10
	25-60	Fine sandy loam, Gravelly sandy loam, Loam	CL-ML, ML, SC-SM, SM	A-2, A- 4	0	0-10	65-100	55-100	45-85	25-65	20-30	NP-10
368: Bracko	0-7	Silt loam	CL-ML, ML	A-4	0	0	100	100	85-95	70-90	20-30	NP-10
	7-60	Loam, Silt loam, Very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	95-100	70-90	20-30	NP-10
36C: Bracko	0-7	Silt loam	CL-ML, ML	A-4	0	0	100	100	85-95	70-90	20-30	NP-10
	7-60	Loam, Silt loam, Very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	95-100	70-90	20-30	NP-10

Engineering Properties

Gallatin County Area, Montana

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percent passing sieve number-				Liquid limit	Plasticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
	In				Pct	Pct					Pct	
36D: Bnx:ko	0-7	Silt loam	CL-ML, ML	A-4	0	0	100	100	85-95	70-90	20-30	NP-10
	7-60	Loam, Silt loam, Very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	95-100	70-90	20-30	NP-10
388: Olinook	0-4	Fine sandy loam	SM	A-2, A-4	0	0	80-100	75-100	65-85	30-50	15-25	NP-5
	4-22	Fine sandy loam, Sandy loam	SM	A-2, A-4	0	0	80-100	75-100	55-85	30-50	15-25	NP-5
	22-60	Fine sandy loam, Sandy loam	SM	A-2, A- 4	0	0	80-100	75-100	55-85	30-50	15-25	NP-5
518: Quagle	0-6	Silt loam	CL-ML	A-4	0		100	100	95-100	75-85	25-30	5-10
	6-9	Silt loam	CL-ML	A-4	0	0	100	100	95-100	80-90	25-30	5-10
	9-60	Silt loam	CL-ML, ML	A-4	0	0	100	95-100	90-95	80-90	20-30	NP-10
2420: Tilman	0-5	Cobbly loam	CL-ML, SC, SM	A-4	0	15-25	75-95	70-90	55-80	40-65	20-30	5-10
	5-19	Cobbly loam, Gravelly loam, Gravelly sandy loam	CL-ML, GM, SC, SM	A-2-4, A- 4	0	10-15	65-90		35-75	25-60	20-25	5-10
	19-25	Very cobbly loam, Very gravelly sandy loam, Extremely gravelly loam	GM, GM	A-2-4, A- 4	0	20-30	30-65	25-60	15-55	10-45	20-25	5-10
	25-60	Very cobbly sandy loam, Very gravelly sandy loam, Extremely gravelly loam	GM, SM	A-1	0	20-30	30-65	25-60	15-40	10-25	20-25	NP-5

Engineering Properties

Gallatin County Area, Montana

Map symbol and son name	Depth	USDA texture	Classification		Fragments		Percent passing sieve number-				Liquid limit	Plasticity index
			Unified	AASHTO	>10	3-10 Inches	4	10	40	200		
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
451C: Quagle		Silt loam	CL-ML	A-4	0	0	100	100	95-100	75-85	25-00	5-10
	6-9	Silt loam	CL-ML	A-4	0	0	100	100	95-100	80-90	25-30	5-10
	9-60	Silt bam	CL-ML, ML	A-4	0	0	100	95-100	90-95	80-90	20-30	NP-10
Brodyk		Silt loam	CL-ML	A-4	0	0	100	100	95-100	75-85	25-30	5-10
		Silt loam	CL-ML	A-4	0	0	100	100	95-100	80-90	20-25	5-10
	30-60	Silt loam, Very fine sandy loam	CL-ML	A-4	0	0	100	95-100	90-95	80-90	20-25	5-10
710E: Cabbart	0-3	Cobbly loam	CL-ML, GC-GM, SC-SM	A-4	0	15-00	70-95	65-90	55-85	40-70	25-00	5-10
	3-19	Loam, Silty clay loam	CL, CL-ML	A-4, M	0	0-10	90-100	65-100	70-95	55-85	25-35	5-15
	19-60	Unweathered bedrock										
Amesha	0-7	Loam	CL, CL-ML	A-4, A	0	0	90-100	80-100	70-90	55-75	25-35	5-15
	7-25	Loam, Silt loam, Sandy loam	CL-ML, ML	A-4	0	0-5	95-100	90-100	70-90	55-75	20-30	NP-10
	25-60	Fine sandy loam, Gravelly sandy loam, Loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0-10	65-100	55-100	45-85	25-65	20-30	NP-10

Engineering Properties

Gallatin County Area, Montana

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percent passing sieve number-				Liquid limit	Plasticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
	In				Pct	Pct					Pct	
710E: Trimad	0-6	Cobbly sandy loam	SCSM	A-2-4	0	15-30	75-95	70-90	40-65	20-35	20-25	5-10
	5-19	Cobbly loam, Gravelly loam, Gravelly sandy loam	0..-ML, GC-GM, SC-SM	A-2-4, A-4	0	10-15	65-90	60-85	35-75	25-00	20-25	5-10
	19-25	Very cobbly loam, Very gravelly sandy loam, Extremely gravelly loam	GC-GM	A-2-4, A-4	0	20-30	30-65	25-00	15-55	10-45	20-25	5-10
	25-00	Very cobbly sandy loam, Very gravelly sandy loam, Extremely gravelly loam	GM, SM	A-1	0	20-30	30-65	25-00	15-40	10-25	20-25	NP-0
755F: Anceney	0-6	Cobbly loam	0..-ML, SC-SM	A-4	0	15-30	75-95	70-90	60-85		25-30	5-10
	6-10	Very cobbly loam, Gravelly loam, Very gravelly loam	0..-ML, GC-GM	A-2-4, A-4	0	10-40	45-65	40-60	35-70	25-00	25-30	5-10
	10-60	Very cobbly loam, Very cobbly sandy loam, Extremely gravelly loam	Ge-GM	A-2, A- 4	0	20-35	30-70	25-00	15-00	10-45	25-30	5-10
Trimad	0-6	Cobbly sandy loam	SC-SM	A-2-4	0	15-30	75-95	70-90	5	20-35	20-25	5-10
	5-19	Cobbly loam, Gravelly loam, Gravelly sandy loam	CL-ML, GC-GM, SC-SM	A-2-4, A- 4	0	10-15	65-90	60-85	35-75	25-00	20-25	5-10
	19-25	Very cobbly loam, Very gravelly sandy loam, Extremely gravelly loam	GC-GM	A-2-4, A- 4	0	20-30	30-65	25-00	15-55	10-45	20-25	5-10
	25-00	Very cobbly sandy loam, Very gravelly sandy loam, Extremely gravelly loam	GM, SM	A-1	0	20-30	30-65	25-00	15-40	10-25	20-25	NP-5

Engineering Properties

Gallatin County Area, Montana

Map symbol and soil name	Depth	USDA texture	Oassification		Fragments		Percent passing sieve number-				Liquid limit	Plasticity index
			Unified	AASHTO	>10	3-10 hches	4	10	40	200		
<i>In</i>												
755F:					<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
Meagher	0-6	Loam	0..-ML	A-4	0	0-5	90-100	Sl>100	80-95	55-75	25-30	5-10
	S..19	ayy loam, Gravelly clay loam, Sandy clay loam	2... SC	A-2, A- 6	0	0-5	75-85	55-75	45-75	30-60	25-40	10-20
	19-31	Cobbly sandy loam, Gravelly loam, Loam	0..-ML, SC-SM	A-2-4, A- 4	0	0-20	75-95	65-90	45-85	25-70	25-30	5-10
	31-60	Very cobbly sandy clay loam. Very gravelly loam, Extremely gravelly sandy loam	GC-GM, GM, GP-GM	A-1, A-2-4, A-4	0	15-25	30-60	20-55	15-50	10-40	20-30	NP-10

Roads and Streets, Shallow Excavations, and Lawns and Landscaping

Gallatin County Area, Montana

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and	Value	Rating class and	Value	Rating class and	Value
		limiting features		limiting features		limiting features	
3A:							
Glendive	85	Somewhat limited		Very limited		Not limited	
		Frost action	0.5	Cutbanks cave			
		Flooding	0.4				
32C:							
Amesha	85	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.5	Cutbanks cave	0.1		
368:							
Brock.a	90	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.5	Cutbanks cave	0.1		
36C:							
Brocko	90	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.5	Cutbanks cave	0.1		
36D:							
Brocko	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.5	Cutbanks cave	0.1		
388:							
Chinook	90	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.5	Cutbanks cave	0.1		
518:							
Quagle	85	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.5	Cutbanks cave	0.1		
242D:							
Trimad	85	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Cutbanks cave		Large stones content	0.68
		Frost action	0.5	Slope	0.63	Slope	0.63
						Draughty	0.13
451C:							
Quagle	70	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.5	Cutbanks cave	0.1		
Brodyk	20	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.5	Cutbanks cave	0.1		

Roads and Streets, Shallow Excavations, and Lawns and Landscaping

Gallatin County Area, Montana

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
710E:							
Cabbart	50	Very limited		Very limited		Very limited	
		Slope		Depth to soft bedrock		Depth to bedrock	
		Depth to soft bedrock		Slope		Slope	
		Shrink-swell	0.5	Cutbanks cave	0.1	Large stones content	0.84
		Frost action	0.5			Draughty	0.26
Amesha	25	Very limited		Very limited		Very limited	
		Slope		Slope		Slope	
		Frost action	0.5	Cutbanks cave	0.1		
Trimad	15	Very limited		Very limited		Very limited	
		Slope		Slope		Slope	
		Frost action	0.5	Cutbanks cave		Large stones content	0.84
						Draughty	0.22
755F:							
Anceney	40	Very limited		Very limited		Very limited	
		Slope		Slope		Slope	
		Frost action	0.5	Cutbanks cave		Large stones content	0.84
		Large stones content	0.01	Large stones content	0.01	Draughty	0.08
Trimad	30	Very limited		Very limited		Very limited	
		Slope		Slope		Slope	1
		Frost action	0.5	Cutbanks cave		Large stones content	0.84
				Draughty	0.22		
Meagher	20	Very limited		Very limited		Very limited	
		Slope		Slope		Slope	
		Frost action	0.5	Cutbanks cave			

Dwellings and Small Commercial Buildings

Gallatin County Area, Montana

The information in this table indicates the dominant soil condition but does not eliminate the need for on-site investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations.]

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and	Value	Rating class and	Value	Rating class and	Value
		limiting features		limiting features		limiting features	
3A: Glendive	85	Very limited Flooding		Very limited Flooding		Very limited Flooding	
32C: Amesha	85	Not limited		Not limited		Somewhat limited Slope	0.5
368: Brocko	90	Not limited		Not limited		Not limited	
36C: Brocko	90	Not limited		Not limited		Somewhat limited Slope	0.5
36D: Brocko	90	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	
388: Chinook	90	Not limited		Not limited		Not limited	
518: Quagle	85	Not limited		Not limited		Not limited	
2420: Trimad	85	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	
451C: Quagle	70	Not limited		Not limited		Somewhat limited Slope	0.5
Brodyk	20	Not limited		Not limited		Somewhat limited Slope	0.5
710E: Cabbart	50	Very limited Slope Shrink-swell Depth to soft bedrock	1 0.5 0.5	Very limited Slope Depth to soft bedrock Shrink-swell	 0.5	Very limited Slope Depth to soft bedrock Shrink-swell	 0.5
Amesha	25	Very limited Slope		Very limited Slope		Very limited Slope	

Dwellings and Small Commercial Buildings

Gallatin County Area, Montana


Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
710E:							
Trimad	15	Very limited Slope		Very limited Slope		Very limited Slope	
755F:							
Anceney	40	Very limited Slope Large stones content	0.01	Very limited Slope Large stones content	0.01	Very limited Slope Large stones content	0.01
Trimad	30	Very limited Slope		Very limited Slope		Very limited Slope	
Meagher	20	Very limited Slope		Very limited Slope		Very limited Slope	



Canada Thistle:>100 plants/10ft²



Village at Amsterdam
Exhibit 3
■ Noxious Weed Map ■
Amsterdam-Churchill, Montana


NORTH
SCALE: 1" = 400'
December 15, 2014