

Soil Map Units Crossed by the Project

Map Unit Symbol	Map Unit Name	Farmland Class <sup>1</sup>	Hydric Rating	Drainage Class	Depth to Bedrock	Electrical Conductivity (dS/m)	Sodium Adsorption Rate	Kw Factor <sup>2</sup>	Wind Erodibility Group <sup>3</sup>	Crop Productivity Index	Clay Minerals with Swell Potential	Project Components	Operation Impacts Acreage <sup>4</sup>	Construction Impacts Acreage <sup>5</sup>
Aa	Aastad loam	Yes	No	Moderately well drained	No Bedrock Identified	0	0	0.32	6	94	Montmorillonitic	Pipeline	0.0	0.508085
G193A	Aastad-Forman loams, 0 to 3 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	1.3	0.6	0.32	6	92	Smectitic	Pipeline	0.0	15.004641
At	Aastad-Tonka complex	Yes, if drained	No	Moderately well drained	No Bedrock Identified	0	0	0.32	6	83	Smectitic	Pipeline	0.0	0.583989
G195A	Aastad-Tonka complex, 0 to 3 percent slopes	Yes, if drained	No	Moderately well drained	No Bedrock Identified	1.3	0.6	0.32	6	79	No	Pipeline	0.0	1.503062
G473A	Aberdeen-Nahon silt loams, till substratum, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.7	6.2	0.43	6	59	Smectitic	Pipeline	0.0	0.284354
G472A	Aberdeen-Nahon silty clay loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.8	6.2	0.49	6	59	Smectitic	Access Road	1.411401	1.567649
G472A	Aberdeen-Nahon silty clay loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.8	6.2	0.49	6	59	Smectitic	Launcher/Receiver	0.010604	0.010604
G472A	Aberdeen-Nahon silty clay loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.8	6.2	0.49	6	59	Smectitic	MLV	0.057392	0.057392
G472A	Aberdeen-Nahon silty clay loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.8	6.2	0.49	6	59	Smectitic	Pipeline	0.0	67.211544
G475A	Aberdeen-Nahon-Heil silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.8	6.2	0.49	6	50	No	Pipeline	0.0	13.048164
G476A	Aberdeen-Nahon-Hiel silt loams, till substratum, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.7	6.1	0.43	6	59	Smectitic	Pipeline	0.0	0.931512
AcA	Alcester silty clay loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	97	No	Pipeline	0.0	0.322614
AcB	Alcester silty clay loam, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	92	Montmorillonitic	Pipeline	0.0	0.217385
AcB	Alcester silty clay loam, cool, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	92	Montmorillonitic	Pipeline	0.0	0.836908
Ar	Arlo clay loam	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	1.4	0.4	0.28	4L	44	No	Pipeline	0.0	6.874009
Vo	Arlo silty clay loam	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	1.7	0.7	0.28	4L	46	No	Pipeline	0.0	0.980824
Ba	Badger-Tonka silty clay loams, coteau, 0 to 1 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	3.3	1.8	0.49	6	64	Smectitic	Pipeline	0.0	0.475561
Ba	Badus silty clay loam	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	3.3	1.8	0.43	4L	64	Montmorillonitic	Access Road	0.72551	0.945112
Ba	Badus silty clay loam	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	3.3	1.8	0.43	4L	64	Montmorillonitic	Pipeline	0.0	7.479715
Ba	Baltic silty clay loam	No	Yes	Poorly drained	No Bedrock Identified	3.3	1.8	0.32	4L	64	Montmorillonitic	Pipeline	0.0	3.303383
Bc	Baltic silty clay loam	No	Yes	Poorly drained	No Bedrock Identified	2.6	0.8	0.32	4L	32	Montmorillonitic	Pipeline	0.0	3.445837
Ba	Baltic silty clay loam, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	3.3	1.8	0.32	4L	64	Smectitic	Pipeline	0.0	3.019414
Bb	Baltic silty clay loam, ponded	No	Yes	Very poorly drained	No Bedrock Identified	2.8	0.9	0.32	4L	9	No	Pipeline	0.0	2.633098
G612C	Barnes-Buse loams, 3 to 9 percent slopes, very stony	SWI	No	Well drained	No Bedrock Identified	1.5	0.5	0.32	6	39	No	Pipeline	0.0	0.701418
BbC	Barnes-Buse loams, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.9	0.4	0.37	6	60	No	Pipeline	0.0	7.182964
BbB	Barnes-Buse loams, coteau, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.9	0.4	0.37	6	75	No	Pipeline	0.0	1.329421
BcB	Barnes-Buse-Svea loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.9	0.4	0.37	6	74	No	Access Road	0.029474	0.029474
BcB	Barnes-Buse-Svea loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.9	0.4	0.37	6	74	No	MLV	0.057392	0.057392
BcB	Barnes-Buse-Svea loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.9	0.4	0.37	6	74	No	Pipeline	0.0	41.05793
BcC	Barnes-Buse-Svea loams, 2 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.9	0.4	0.37	6	62	Montmorillonitic	Pipeline	0.0	2.098405
G123B	Barnes-Cavour loams, 3 to 6 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	1.4	0	0.32	6	61	Smectitic	Pipeline	0.0	6.019619
G131A	Barnes-Cresbard-Tonka complex, 0 to 3 percent slopes	Yes, if drained	No	Well drained	No Bedrock Identified	1.4	0	0.32	6	72	Smectitic	Access Road	0.0	0.000092
G131A	Barnes-Cresbard-Tonka complex, 0 to 3 percent slopes	Yes, if drained	No	Well drained	No Bedrock Identified	1.4	0	0.32	6	72	Smectitic	Pipeline	0.0	10.323329
G131B	Barnes-Cresbard-Tonka complex, 0 to 6 percent slopes	Yes, if drained	No	Well drained	No Bedrock Identified	1.4	0	0.32	6	69	Smectitic	Pipeline	0.0	6.668103
BdA	Barnes-Svea loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.8	0.9	0.37	6	79	Montmorillonitic	Pipeline	0.0	1.141166
G143A	Barnes-Svea loams, 0 to 3 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	1.5	0.5	0.32	6	85	None	Access Road	0.0	0.165044
G155B	Barnes-Svea loams, 0 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.5	0.5	0.32	6	82	No	Access Road	0.0	0.186373

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G155B	Barnes-Svea loams, 0 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.5	0.5	0.32	6	82	No	Pipeline	0.0	3.790889
BdB	Barnes-Svea loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.9	0.4	0.37	6	83	No	Pipeline	0.0	3.889247
Z141A	Barnes-Svea loams, coteau, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.3	0.4	0.37	6	87	No	Pipeline	0.0	2.287671
BdA	Beadle clay loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.8	0.9	0.28	6	79	Montmorillonitic	Pipeline	0.0	0.922448
BaC	Beadle loam, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	54	No	Pipeline	0.0	6.615456
BdA	Beadle-Dudley complex, 0 to 2 percent slopes	No	No	Well drained	No Bedrock Identified	1.8	0.9	0.32	6	79	Montmorillonitic	Pipeline	0.0	167.440991
BeA	Beadle-Dudley complex, 0 to 2 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.32	6	74	Montmorillonitic	Pipeline	0.0	20.196315
BfA	Beadle-Dudley complex, 0 to 2 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.32	6	61	Montmorillonitic	Pipeline	0.0	0.450028
BaA	Beadle-Stickney complex, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	71	Smectitic	Pipeline	0.0	8.016718
BaB	Beadle-Stickney complex, 1 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	66	Smectitic	Access Road	0.014533	0.014533
BaB	Beadle-Stickney complex, 1 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	66	Smectitic	Launcher/Receiver	0.516529	0.516529
BaB	Beadle-Stickney complex, 1 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	66	Smectitic	Pipeline	0.0	67.460169
BeB	Beadle-Stickney complex, 1 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	66	Smectitic	Pipeline	0.0	2.458355
G431A	Bearden silt loam, 0 to 2 percent slopes	Yes	No	Somewhat poorly drained	No Bedrock Identified	3.9	3.1	0.49	4L	81	Smectitic	Pipeline	0.0	4.099107
G453A	Bearden silt loam, saline, 0 to 2 percent slopes	No	No	Somewhat poorly drained	No Bedrock Identified	10.4	7.3	0.43	4L	56	Smectitic	Pipeline	0.0	1.059227
G432B	Bearden-Huffton silt loams, 1 to 6 percent slopes	SWI	No	Somewhat poorly drained	No Bedrock Identified	3.2	4.2	0.49	4L	72	Smectitic	Pipeline	0.0	1.287216
G439A	Bearden-Tonka, silty substratum silt loams, 0 to 2 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	3.9	3.1	0.49	4L	73	Smectitic	Pipeline	0.0	2.981455
C190C	Bearpaw loam, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.7	0.8	0.32	6	62	No	Pipeline	0.0	3.966663
C192A	Bearpaw-Greenway loams, 0 to 3 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.7	0.8	0.32	6	81	No	Pipeline	0.0	2.798782
C192B	Bearpaw-Greenway loams, 3 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.7	0.8	0.32	6	79	No	Pipeline	0.0	14.495166
G871A	Beotia silt loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.6	1.2	0.49	6	98	No	Pipeline	0.0	16.361969
G872A	Beotia-Rondell silt loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.6	1.2	0.49	6	91	No	Pipeline	0.0	2.678698
G873A	Beotia-Winship silt loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.6	1.2	0.49	6	93	Montmorillonitic	Pipeline	0.0	7.332484
G874A	Beotia-Winship silt loams, till substratum, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.6	0.9	0.49	6	92	No	Pipeline	0.0	0.522635
BeE	Betts loam, 6 to 25 percent slopes	No	No	Well drained	No Bedrock Identified	3	0.5	0.37	4L	23	No	Pipeline	0.0	5.645368
BeD	Betts stony loam, 6 to 40 percent slopes	No	No	Well drained	No Bedrock Identified	2.7	0.5	0.37	8	10	No	Pipeline	0.0	2.4648
BeE	Betts-Ethan loams, 15 to 40 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.32	4L	18	No	Pipeline	0.0	0.738076
EoF	Betts-Ethan loams, 15 to 40 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.32	4L	18	No	Pipeline	0.0	0.466861
ZsD	Betts-Talmo loams, hilly	No	No	Well drained	No Bedrock Identified	3	0.5	0.37	4L	20	No	Pipeline	0.0	0.67776
BnA	Blendon fine sandy loam, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.28	3	66	No	Pipeline	0.0	0.004669
Bn	Bon loam, 0 to 2 percent slopes, rarely flooded	Yes	No	Moderately well drained	No Bedrock Identified	1	0.5	0.37	6	84	No	Pipeline	0.0	9.831295
La	Bon loam, 0 to 2 percent slopes, rarely flooded	Yes	No	Moderately well drained	No Bedrock Identified	1	0	0.37	6	70	No	Pipeline	0.0	1.226347
LbA	Bon loam, 0 to 2 percent slopes, rarely flooded	Yes	No	Moderately well drained	No Bedrock Identified	1	0.5	0.37	6	84	No	Pipeline	0.0	6.336142
Bo	Bon loam, channeled, 0 to 2 percent slopes, frequently flooded	No	No	Moderately well drained	No Bedrock Identified	1	0.5	0.37	6	34	No	Pipeline	0.0	2.630178
Bx	Bon loam, channeled, 0 to 2 percent slopes, frequently flooded	No	No	Moderately well drained	No Bedrock Identified	1	0.5	0.37	6	34	No	Pipeline	0.0	1.761828
LIA	Bon loam, channeled, 0 to 2 percent slopes, frequently flooded	Yes	No	Moderately well drained	No Bedrock Identified	1	0.5	0.37	6	34	No	Pipeline	0.0	0.923609
Bo	Bon soils, frequently flooded	No	No	Moderately well drained	No Bedrock Identified	1	0.5	0.32	6	34	No	Pipeline	0.0	0.259086

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LeA	Bon-Northville complex, nearly level	SWI	No	Moderately well drained	No Bedrock Identified	1	0.2	0.49	6	91	No	Pipeline	0.0	2.015891
C201A	Bowbells loam, 0 to 3 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	1	1	0.32	6	95	No	Pipeline	0.0	11.036007
C201B	Bowbells loam, 3 to 6 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	1	1	0.32	6	89	None	Pipeline	0.0	0.17906
C810B	Bowdle loam, 2 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.37	5	54	No	Pipeline	0.0	1.19806
G305B	Brantford, loamy skeletal-Vang loams, 2 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.28	6	44	No	Pipeline	0.0	1.792304
G305A	Brantford-Brantford, loamy-skeletal loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	0	0	0.28	5	44	No	MLV	0.016176	0.016176
G305A	Brantford-Brantford, loamy-skeletal loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	0	0	0.28	5	44	No	Pipeline	0.0	3.012578
Z190A	Brookings silty clay loam, 0 to 2 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	1	0	0.49	6	96	No	Pipeline	0.0	0.860851
C732B	Bryant silt loam, 2 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.49	6	83	No	Pipeline	0.0	8.985383
C732C	Bryant silt loam, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.49	6	67	No	Pipeline	0.0	1.790203
BtD	Buse-Barnes loams, 9 to 20 percent slopes	No	No	Well drained	No Bedrock Identified	0	0	0.32	4L	34	No	Pipeline	0.0	3.633154
Z144E	Buse-Barnes loams, coteau, 9 to 20 percent slopes	No	No	Well drained	No Bedrock Identified	1.3	0.6	0.32	4L	41	No	Pipeline	0.0	2.944332
G613F	Buse-Barnes loams, very stony, 9 to 40 percent slopes	No	No	Well drained	No Bedrock Identified	1.7	0	0.32	4L	14	No	Pipeline	0.0	0.204706
G147D	Buse-Barnes-Darnen loams, 6 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	1.4	0.4	0.32	6	46	No	Pipeline	0.0	0.331223
G583F	Buse-Kloten-Edgeley complex, 9 to 40 percent slopes	No	No	Well drained	1 to 2 feet	1.7	0	0.37	6	15	No	Pipeline	0.0	2.051653
Z140F	Buse-Langhei complex, coteau, 15 to 40 percent slopes	No	No	Well drained	No Bedrock Identified	1.3	0.6	0.32	4L	11	No	Pipeline	0.0	2.216769
G194F	Buse-Langhei-Forman loams, 15 to 40 percent slopes	No	No	Well drained	No Bedrock Identified	1.7	0	0.32	4L	23	No	Pipeline	0.0	0.908555
ByC	Buse-Poinsett complex, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	0	0	0.37	4L	66	Smectitic	Pipeline	0.0	6.107959
ByD	Buse-Poinsett complex, 9 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	0	0	0.37	4L	50	Smectitic	Pipeline	0.0	0.690716
G193E	Buse-Vida, moist-Forman loams, 9 to 25 percent slopes	No	No	Well drained	No Bedrock Identified	1.7	0	0.32	6	29	No	Access Road	0.011975	0.011975
G193E	Buse-Vida, moist-Forman loams, 9 to 25 percent slopes	No	No	Well drained	No Bedrock Identified	1.7	0	0.32	6	29	No	Pipeline	0.0	4.045552
CaA	Carthage fine sandy loam, 0 to 2 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	1	0	0.37	3	88	No	Pipeline	0.0	6.201172
CaB	Carthage fine sandy loam, 2 to 6 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	1	0	0.37	3	82	No	Pipeline	0.0	6.160633
CbA	Carthage-Blendon fine sandy loams, 0 to 2 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	1	0	0.37	6	88	No	Access Road	0.781317	0.781317
CbA	Carthage-Blendon fine sandy loams, 0 to 2 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	1	0	0.37	6	88	No	Launcher/Receiver	0.040174	0.040174
CbA	Carthage-Blendon fine sandy loams, 0 to 2 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	1	0	0.37	6	88	No	Pipeline	0.0	5.70011
CbB	Carthage-Blendon fine sandy loams, 2 to 6 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	2.9	0.5	0.37	3	62	Smectitic	Pipeline	0.0	3.65001
CrA	Cavo-Jerauld loams, 0 to 4 percent slopes	No	No	Moderately well drained	No Bedrock Identified	8	9.7	0.32	6	26	Montmorillonitic	Pipeline	0.0	0.066772
G129A	Cavour-Ferney loams, 0 to 3 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.3	8.7	0.37	6	35	Smectitic	Access Road	0.0	0.119092
G129A	Cavour-Ferney loams, 0 to 3 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.3	8.7	0.37	6	35	Smectitic	Launcher/Receiver	0.031128	0.031128
G129A	Cavour-Ferney loams, 0 to 3 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.3	8.7	0.37	6	35	Smectitic	Pipeline	0.0	40.618589
Ca	Chancellor silty clay loam, 0 to 2 percent slopes, frequently flooded	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	1.2	0	0.37	6	75	Smectitic	Pipeline	0.0	0.561147
Cb	Chancellor silty clay loam, 0 to 2 percent slopes, frequently flooded	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	1.2	0	0.37	6	81	Smectitic	Pipeline	0.0	0.668595
Ca	Chancellor-Tetonka complex, 0 to 2 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	1.2	0	0.37	6	75	Smectitic	Pipeline	0.0	33.376882
Cc	Chancellor-Tetonka complex, 0 to 2 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	1.2	0	0.37	6	75	Smectitic	Pipeline	0.0	18.957446
Cd	Chancellor-Viborg silty clay loams	Yes, if drained	Yes	Somewhat poorly drained	No Bedrock Identified	1.8	0.7	0.43	7	87	Montmorillonitic	Access Road	0.021689	0.021689

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Cd	Chancellor-Viborg silty clay loams	Yes, if drained	Yes	Somewhat poorly drained	No Bedrock Identified	1.8	0.7	0.43	7	87	Montmorillonitic	Pipeline	0.0	6.301409
Ch	Chancellor-Wakonda-Tetonka complex	SWI	Yes	Somewhat poorly drained	No Bedrock Identified	1.8	0.7	0.43	7	78	Montmorillonitic	Pipeline	0.0	6.01893
CaB	Clarno loam, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.32	6	82	No	Access Road	0.02123	0.02123
CaB	Clarno loam, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.32	6	82	No	MLV	0.057392	0.057392
CaB	Clarno loam, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.32	6	82	No	Pipeline	0.0	17.38035
CbA	Clarno-Bonilla loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	88	No	Access Road	0.043355	0.043355
CfA	Clarno-Bonilla loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	88	No	Access Road	0.02296	0.02296
CbA	Clarno-Bonilla loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	88	No	MLV	0.057391	0.057391
CfA	Clarno-Bonilla loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	88	No	MLV	0.057392	0.057392
CaA	Clarno-Bonilla loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.32	6	88	No	Pipeline	0.0	2.055409
CbA	Clarno-Bonilla loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	88	No	Pipeline	0.0	52.660793
CfA	Clarno-Bonilla loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	88	No	Pipeline	0.0	65.041599
CfB	Clarno-Bonilla loams, 1 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	84	No	Pipeline	0.0	27.225471
CgA	Clarno-Crossplain complex, 0 to 2 percent slopes	Yes, if drained	No	Well drained	No Bedrock Identified	1	0	0.32	6	82	No	Pipeline	0.0	76.326157
CeD	Clarno-Ethan loams, 9 to 16 percent slopes	No	No	Well drained	No Bedrock Identified	3.5	0	0.37	6	45	No	Pipeline	0.0	4.568502
CeB	Clarno-Ethan-Bonilla loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.32	6	78	No	Pipeline	0.0	71.599673
CkB	Clarno-Ethan-Bonilla loams, 1 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	78	No	Pipeline	0.0	6.673546
CeC	Clarno-Ethan-Bonilla loams, 2 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	69	No	Access Road	0.016418	0.016418
CeC	Clarno-Ethan-Bonilla loams, 2 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	69	No	Pipeline	0.0	28.613435
Co	Colvin-Oldham silty clay loams	No	Yes	Very poorly drained	No Bedrock Identified	0	3.1	0.43	4L	41	Montmorillonitic	Pipeline	0.0	1.451077
G124A	Cresbard-Cavour loams, 0 to 3 percent slopes	No	No	Moderately well drained	No Bedrock Identified	3.4	6.2	0.37	6	58	Smectitic	Access Road	0.0	0.837533
G124A	Cresbard-Cavour loams, 0 to 3 percent slopes	No	No	Moderately well drained	No Bedrock Identified	3.4	6.2	0.37	6	58	Smectitic	Pipeline	0.0	18.869112
G124B	Cresbard-Cavour loams, 3 to 6 percent slopes	No	No	Moderately well drained	No Bedrock Identified	3.4	6.2	0.37	6	51	Smectitic	Pipeline	0.0	11.699512
G130A	Cresbard-Cavour-Ferney loams, 0 to 3 percent slopes	No	No	Moderately well drained	No Bedrock Identified	3.4	6.2	0.37	6	46	No	Pipeline	0.0	19.483264
G141B	Cresbard-Cavour-Forman loams, 0 to 6 percent slopes	No	No	Moderately well drained	No Bedrock Identified	3.4	6.2	0.37	6	59	No	Access Road	0.055887	0.055887
G141B	Cresbard-Cavour-Forman loams, 0 to 6 percent slopes	No	No	Moderately well drained	No Bedrock Identified	3.4	6.2	0.37	6	59	No	MLV	0.041215	0.041215
G141B	Cresbard-Cavour-Forman loams, 0 to 6 percent slopes	No	No	Moderately well drained	No Bedrock Identified	3.4	6.2	0.37	6	59	No	Pipeline	0.0	8.872328
G126A	Cresbard-Cavour-Heil complex, 0 to 3 percent slopes	No	No	Moderately well drained	No Bedrock Identified	3.4	6.2	0.37	6	45	Smectitic	Pipeline	0.0	11.726549
Ct	Crossplain-Tetonka complex	Yes, if drained	Yes	Somewhat poorly drained	No Bedrock Identified	1.8	0.4	0.37	6	74	Montmorillonitic	Pipeline	0.0	44.346432
Ct	Crossplain-Tetonka complex, 0 to 1 percent slopes	Yes, if drained	Yes	Somewhat poorly drained	No Bedrock Identified	1.8	0.4	0.32	6	74	Montmorillonitic	Pipeline	0.0	3.085407
Cu	Cubden silty clay loam, 0 to 2 percent slopes	Yes	No	Somewhat poorly drained	No Bedrock Identified	2.5	1.6	0.49	4L	81	No	Pipeline	0.0	1.885814
J122A	Cubden silty clay loam, 0 to 2 percent slopes	SWI	No	Somewhat poorly drained	No Bedrock Identified	2.5	1.6	0.49	4L	77	None	Pipeline	0.0	1.126691
Cu	Cubden-Badger silty clay loams, coteau, 0 to 2 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	2.5	1.6	0.49	4L	81	No	Pipeline	0.0	17.204389
Cv	Cubden-Badger silty clay loams, coteau, 0 to 2 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	2.5	1.6	0.49	4L	81	No	Pipeline	0.0	2.692609
J123A	Cubden-Badger silty clay loams, coteau, 0 to 2 percent slopes	SWI	No	Somewhat poorly drained	No Bedrock Identified	2.5	1.6	0.49	4L	81	No	Pipeline	0.0	0.825881
Cx	Cubden-Tonka silty clay loams, coteau, 0 to 2 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	2.5	1.6	0.49	4L	69	No	Access Road	0.076483	0.076483
Cx	Cubden-Tonka silty clay loams, coteau, 0 to 2 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	2.5	1.6	0.49	4L	70	No	MLV	0.057392	0.057392

Soil Map Units Crossed by the Project

Map Unit Symbol	Map Unit Name	Farmland Class <sup>1</sup>	Hydric Rating	Drainage Class	Depth to Bedrock	Electrical Conductivity (dS/m)	Sodium Adsorption Rate	Kw Factor <sup>2</sup>	Wind Erodibility Group <sup>3</sup>	Crop Productivity Index	Clay Minerals with Swell Potential	Project Components	Operation Impacts Acreage <sup>4</sup>	Construction Impacts Acreage <sup>5</sup>
Cw	Cubden-Tonka silty clay loams, coteau, 0 to 2 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	2.5	1.6	0.49	4L	71	No	Pipeline	0.0	8.58398
Cx	Cubden-Tonka silty clay loams, coteau, 0 to 2 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	2.5	1.6	0.49	4L	71	No	Pipeline	0.0	14.366484
J124A	Cubden-Tonka silty clay loams, coteau, 0 to 2 percent slopes	SWI	No	Somewhat poorly drained	No Bedrock Identified	2.5	1.6	0.49	4L	71	No	Pipeline	0.0	9.928673
C521B	Daglum-Rhoades loams, 0 to 6 percent slopes, shaly	No	No	Moderately well drained	No Bedrock Identified	7.1	11.7	0.49	6	30	Smectitic	Pipeline	0.0	3.027484
Z165B	Darnen loam, coteau, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.3	0	0.37	6	85	No	Pipeline	0.0	1.60394
Da	Davis loam	Yes	No	Moderately well drained	No Bedrock Identified	1.3	0	0.32	6	91	No	Pipeline	0.0	1.406504
DaB	Davis loam, 2 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.5	0	0.32	6	87	No	Pipeline	0.0	1.357014
LdA	Davis silt loam, fans, nearly level	Yes	No	Moderately well drained	No Bedrock Identified	1.3	0	0.28	6	92	No	Pipeline	0.0	1.233348
Dd	Davison-Crossplain clay loams, 0 to 2 percent slopes	Yes, if drained	No	Moderately well drained	No Bedrock Identified	1.9	0.9	0.32	4L	76	No	Pipeline	0.0	11.764758
Dc	Davison-Crossplain complex	Yes, if drained	No	Moderately well drained	No Bedrock Identified	2.9	0.8	0.37	6	78	No	Pipeline	0.0	1.323132
DkB	Delmont and Talmo soils, 2 to 9 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.28	6	25	No	Pipeline	0.0	5.86629
DeA	Delmont loam, 0 to 2 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.37	6	41	No	Pipeline	0.0	7.821492
Sm	Delmont loam, 0 to 2 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.37	6	41	No	Pipeline	0.0	2.870609
DeB	Delmont loam, 2 to 6 percent slopes	Yes, if irrigated	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.24	6	32	No	Pipeline	0.0	3.265336
DeA	Delmont-Enet loams, 0 to 2 percent slopes	Yes, if irrigated	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.37	6	41	No	Pipeline	0.0	2.964367
EdA	Delmont-Enet loams, 0 to 2 percent slopes	Yes, if irrigated	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.37	6	50	No	Pipeline	0.0	6.21123
DfB	Delmont-Talmo complex, 2 to 6 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.32	6	37	No	Pipeline	0.0	1.373561
DeB	Delmont-Talmo loams, 2 to 6 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.28	6	32	No	Pipeline	0.0	0.461409
DtB	Delmont-Talmo loams, 2 to 6 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.28	6	34	No	Pipeline	0.0	0.863459
DeC	Delmont-Talmo loams, 6 to 9 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.28	6	27	No	Access Road	0.0	0.091463
DeC	Delmont-Talmo loams, 6 to 9 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.28	6	27	No	Pipeline	0.0	2.567236
DmA	Dempster silt loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.43	6	66	Smectitic	Access Road	0.015115	0.719515
DmA	Dempster silt loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.43	6	66	Smectitic	MLV	0.057392	0.057392
DmA	Dempster silt loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.43	6	66	Smectitic	Pipeline	0.0	13.802938
DmB	Dempster silt loam, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.43	6	54	Smectitic	Pipeline	0.0	7.103341
DpC	Dempster-Delmont complex, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.43	6	40	Smectitic	Pipeline	0.0	1.170261
DgB	Dempster-Graceville silty clay loams, 1 to 5 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.43	7	64	No	Pipeline	0.0	0.915618
G738D	Dickey-Buse-Embden complex, 6 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.32	2	38	Smectitic	Pipeline	0.0	0.438312
SyA	Dimo loam, nearly level	SWI	No	Somewhat poorly drained	No Bedrock Identified	1	0	0.32	6	75	Smectitic	Pipeline	0.0	0.272291
C825A	Divide loam, 0 to 2 percent slopes	Yes	No	Somewhat poorly drained	No Bedrock Identified	2	1.2	0.37	4L	62	No	Pipeline	0.0	1.082542
Z159A	Divide loam, 0 to 2 percent slopes, occasionally flooded	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	1	0	0.32	4L	54	No	Access Road	0.0	0.396894
Z159A	Divide loam, 0 to 2 percent slopes, occasionally flooded	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	1	0	0.32	4L	54	No	Pipeline	0.0	4.217046
Dg	Doger loamy fine sand	No	No	Well drained	No Bedrock Identified	0	0	0.17	2	37	No	Pipeline	0.0	2.175283
C496A	Dovecreek silt loam, 0 to 2 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	1.4	0	0.55	6	89	Smectitic	Pipeline	0.0	1.17974

Soil Map Units Crossed by the Project

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C492A	Dovecreek-Fluvaquents channeled, complex, 0 to 2 percent slopes, flooded	No	No	Moderately well drained	No Bedrock Identified	1.4	0	0.55	6	51	Smectitic	Pipeline	0.0	4.087776
G040A	Dovray silty clay, undrained, 0 to 1 percent slopes	No	Yes	Very poorly drained	No Bedrock Identified	1.4	0.4	0.37	4	27	Smectitic	Pipeline	0.0	0.508916
Du	Dudley-Jerauld silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.7	10	0.43	6	28	No	Access Road	0.02926	0.02926
Du	Dudley-Jerauld silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.7	10	0.43	6	28	No	MLV	0.057392	0.057392
DkA	Dudley-Jerauld silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.7	10	0.43	6	28	No	Pipeline	0.0	3.375511
Du	Dudley-Jerauld silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.7	10	0.43	6	28	No	Pipeline	0.0	17.672811
Dx	Dudley-Jerauld silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.7	10	0.43	6	28	No	Pipeline	0.0	13.15307
MdA	Dudley-Jerauld silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.7	10	0.43	6	28	No	Pipeline	0.0	5.371432
DtA	Dudley-Tetonka silt loams	No	No	Somewhat poorly drained	No Bedrock Identified	9	8.1	0.37	6	43	Montmorillonitic	Access Road	0.011432	0.011432
DtA	Dudley-Tetonka silt loams	No	No	Somewhat poorly drained	No Bedrock Identified	9	8.1	0.37	6	43	Montmorillonitic	MLV	0.054972	0.054972
DtA	Dudley-Tetonka silt loams	No	No	Somewhat poorly drained	No Bedrock Identified	9	8.1	0.37	6	43	Montmorillonitic	Pipeline	0.0	8.351367
Du	Durrstein and Egas soils	No	Yes	Poorly drained	No Bedrock Identified	10.0	18.2	0.49	6	7	No	Pipeline	0.0	1.448055
EtA	Durrstein silty clay loam, nearly level	No	Yes	Poorly drained	No Bedrock Identified	10	18.7	0.43	7	30	No	Pipeline	0.0	6.615154
RhA	Eakin-Raber complex, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.49	6	83	No	Access Road	0.076039	0.076039
RhA	Eakin-Raber complex, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.49	6	83	No	Launcher/Receiver	0.040175	0.040175
RhA	Eakin-Raber complex, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.49	6	83	No	MLV	0.057392	0.057392
RhA	Eakin-Raber complex, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.49	6	83	No	Pipeline	0.0	40.555731
RgB	Eakin-Raber complex, 2 to 6 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.49	6	76	No	Pipeline	0.0	40.200838
G495B	Eckman-Zell very fine sandy loams, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	0.3	0	0.49	3	77	Smectitic	Access Road	0.0	0.336525
G495B	Eckman-Zell very fine sandy loams, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	0.3	0	0.49	3	77	Smectitic	Pipeline	0.0	1.216369
G584D	Edgeley loam, 9 to 15 percent slopes	No	No	Well drained	2 to 3 feet	3	1.4	0.37	6	46	No	Pipeline	0.0	1.736975
C947B	Edgeley-Kloten complex, west, 0 to 6 percent slopes	SWI	No	Well drained	1 to 2 feet	2.2	0.9	0.32	6	58	Smectitic	Pipeline	0.0	4.397478
EaB	Egan silty clay loam, 3 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.8	0.6	0.43	7	82	No	Pipeline	0.0	22.768474
EaC	Egan silty clay loam, 6 to 11 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.49	6	72	No	Pipeline	0.0	9.3426
EbA	Egan-Beadle complex, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.4	0.5	0.43	7	87	No	Pipeline	0.0	2.737302
EbB	Egan-Beadle complex, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.4	0.5	0.43	7	78	No	Access Road	0.0	0.047058
EbB	Egan-Beadle complex, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.4	0.5	0.43	7	78	No	Pipeline	0.0	45.493698
EbC	Egan-Beadle complex, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	2.4	0.5	0.43	7	66	No	Pipeline	0.0	11.965659
EcB	Egan-Chancellor silty clay loams, 0 to 4 percent slopes	SWI	No	Well drained	No Bedrock Identified	2.6	0.5	0.43	7	83	No	Pipeline	0.0	12.686259
EaB	Egan-Ethan complex, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.8	0.6	0.43	7	82	No	Pipeline	0.0	5.138731
EeB	Egan-Ethan complex, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.8	0.6	0.43	7	81	No	Pipeline	0.0	30.951269
EaC	Egan-Ethan complex, 5 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.43	7	72	No	Pipeline	0.0	8.420736
EeC2	Egan-Ethan complex, 6 to 9 percent slopes, eroded	No	No	Well drained	No Bedrock Identified	2.4	0.5	0.43	7	66	No	MLV	0.003706	0.003706
EeC2	Egan-Ethan complex, 6 to 9 percent slopes, eroded	No	No	Well drained	No Bedrock Identified	2.4	0.5	0.43	7	66	No	Pipeline	0.0	28.938655
EeB	Egan-Ethan-Trent complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.8	0.6	0.43	7	81	No	Access Road	0.011492	0.011492
EeB	Egan-Ethan-Trent complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.8	0.6	0.43	7	81	No	MLV	0.057392	0.057392
EeB	Egan-Ethan-Trent complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.8	0.6	0.43	7	81	No	Pipeline	0.0	152.560132

Soil Map Units Crossed by the Project

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EsB	Egan-Shindler complex, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.6	0.5	0.43	7	77	No	Pipeline	0.0	30.707831
EsC	Egan-Shindler complex, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	2.6	0.5	0.43	7	65	No	Pipeline	0.0	9.621534
EfA	Egan-Trent silty clay loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.8	0.6	0.43	7	92	No	Pipeline	0.0	5.638905
EgA	Egan-Viborg silty clay loams, 0 to 3 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.4	0.5	0.43	7	92	No	Pipeline	0.0	20.786389
WeA	Egan-Wentworth complex, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	93	No	Access Road	0.026797	0.026797
WeA	Egan-Wentworth complex, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	93	No	MLV	0.053686	0.053686
WeA	Egan-Wentworth complex, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	93	No	Pipeline	0.0	1.06903
EhB	Egan-Wentworth complex, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	84	No	Access Road	0.012899	0.012899
EhB	Egan-Wentworth complex, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	84	No	Launcher/Receiver	0.489543	0.489543
EgB	Egan-Wentworth complex, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	84	No	Pipeline	0.0	11.138301
EhB	Egan-Wentworth complex, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	84	No	Pipeline	0.0	65.294034
EgB	Egan-Wentworth-Trent complex, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	84	No	Access Road	0.029591	0.029591
EgB	Egan-Wentworth-Trent complex, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	84	No	Pipeline	0.0	25.526012
EwB	Egan-Worthing complex, 0 to 6 percent slopes	No	No	Well drained	No Bedrock Identified	2.6	0.5	0.43	7	66	Smectitic	Pipeline	0.0	2.674447
Eg	Egas silty clay loam	No	Yes	Poorly drained	No Bedrock Identified	12	1.9	0.32	4	8	No	Pipeline	0.0	13.410157
Sa	Egas silty clay loam	No	Yes	Poorly drained	No Bedrock Identified	12	4.2	0.37	4	5	No	Pipeline	0.0	0.437519
EgA	Egeland-Embden complex, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.4	0.5	0.28	3	92	No	Pipeline	0.0	0.951027
EgB	Egeland-Embden complex, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.28	3	84	No	Pipeline	0.0	1.861706
G371B	Egeland-Embden fine sandy loams, till substratum, 0 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.3	1.6	0.37	3	55	No	Pipeline	0.0	5.525913
G373B	Egeland-Letcher fine sandy loams, till substratum, 0 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.3	1.6	0.37	3	52	No	Pipeline	0.0	18.321967
EmC	Egeland-Maddock sandy loams, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.20	3	36	No	Pipeline	0.0	0.699399
Em	Elsmere loamy fine sand, loamy substratum	No	No	Somewhat poorly drained	No Bedrock Identified	0.3	0	0.37	2	67	No	Pipeline	0.0	2.549129
EnA	Enet loam, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	60	No	Pipeline	0.0	18.767807
EnB	Enet loam, 2 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	54	No	Pipeline	0.0	1.123006
Z282B	Estelline-Kampeska silt loams, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	0.8	0	0.49	6	54	No	Pipeline	0.0	1.650039
ExC	Ethan, very stony-Egan complex, 2 to 9 percent slopes	No	No	Well drained	No Bedrock Identified	1.9	0.5	0.32	8	41	Smectitic	Pipeline	0.0	5.667972
BfD	Ethan-Betts loams, 9 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.32	4L	30	No	Pipeline	0.0	1.96265
EcD	Ethan-Betts loams, 9 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.32	4L	30	No	Pipeline	0.0	0.612465
EpD	Ethan-Betts loams, 9 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.32	4L	30	No	Pipeline	0.0	1.254717
EoD	Ethan-Bon, channeled, loams, 0 to 20 percent slopes	No	No	Well drained	No Bedrock Identified	2.2	0.6	0.32	6	39	No	Access Road	0.0	0.057402
EoD	Ethan-Bon, channeled, loams, 0 to 20 percent slopes	No	No	Well drained	No Bedrock Identified	2.2	0.6	0.32	6	39	No	Pipeline	0.0	5.403792
ErE	Ethan-Clarno loams, 16 to 21 percent slopes	No	No	Well drained	No Bedrock Identified	2.6	0.8	0.32	4L	29	No	Pipeline	0.0	0.841955
EsE	Ethan-Clarno loams, 6 to 25 percent slopes, very stony	No	No	Well drained	No Bedrock Identified	2.6	0.8	0.32	8	14	No	Pipeline	0.0	2.486101
EtC	Ethan-Clarno loams, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	4L	61	No	Pipeline	0.0	1.096797
EtD	Ethan-Clarno loams, 9 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	2.6	0.8	0.32	4L	26	No	Pipeline	0.0	15.61475
EsE	Ethan-Clarno stony complex, 6 to 25 percent slopes	No	No	Well drained	No Bedrock Identified	2.6	0.8	0.32	8	14	No	Pipeline	0.0	10.817767
EtD	Ethan-Davis stony complex, 3 to 21 percent slopes	No	No	Well drained	No Bedrock Identified	2.6	0.8	0.32	8	26	No	Access Road	0.000073	0.000073

Soil Map Units Crossed by the Project

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EtD	Ethan-Davis stony complex, 3 to 21 percent slopes	No	No	Well drained	No Bedrock Identified	2.6	0.8	0.32	8	26	No	MLV	0.040785	0.040785
EtD	Ethan-Davis stony complex, 3 to 21 percent slopes	No	No	Well drained	No Bedrock Identified	2.6	0.8	0.32	8	26	No	Pipeline	0.0	6.606259
EtC	Ethan-Egan complex, 5 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	4L	61	No	Pipeline	0.0	3.618427
EuC	Ethan-Egan complex, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.9	0.5	0.32	4L	61	No	Pipeline	0.0	64.64188
ZaD	Ethan-Houdek loams, hilly	No	No	Well drained	No Bedrock Identified	1	0	0.32	4L	41	No	Pipeline	0.0	1.288879
G845A	Exline-Aberdeen-Nahon silt loams, 0 to 2 percent slopes	No	No	Somewhat poorly drained	No Bedrock Identified	8.7	9.9	0.49	6	38	Smectitic	Pipeline	0.0	19.633597
G846A	Exline-Aberdeen-Nahon silt loams, till substratum, 0 to 2 percent slopes	No	No	Somewhat poorly drained	No Bedrock Identified	7.1	9.9	0.49	6	39	Smectitic	Pipeline	0.0	17.539936
G848A	Exline-Heil silt loams, 0 to 2 percent slopes	No	No	Somewhat poorly drained	No Bedrock Identified	10.4	12.6	0.43	6	18	Smectitic	Pipeline	0.0	7.493234
G849A	Exline-Heil silt loams, till substratum, 0 to 2 percent slopes	No	No	Somewhat poorly drained	No Bedrock Identified	6.6	11.3	0.49	6	19	Smectitic	Pipeline	0.0	0.848686
G850B	Exline-Putney silt loams, 1 to 6 percent slopes	No	No	Moderately well drained	No Bedrock Identified	6.5	11.3	0.49	6	47	Smectitic	Pipeline	0.0	10.796843
G133A	Ferney-Heil, till substratum complex, 0 to 3 percent slopes	No	No	Somewhat poorly drained	No Bedrock Identified	10.3	14.5	0.32	6	18	No	Access Road	0.0	0.32514
G133A	Ferney-Heil, till substratum complex, 0 to 3 percent slopes	No	No	Somewhat poorly drained	No Bedrock Identified	10.3	14.5	0.32	6	18	No	Pipeline	0.0	25.247843
G574A	Fluvaquents, channeled-La Prairie-Holmquist complex, 0 to 2 percent slopes, freque	No	Yes	Very poorly drained	No Bedrock Identified	1	0	0.15	3	33	No	Access Road	0.0	0.2578
G574A	Fluvaquents, channeled-La Prairie-Holmquist complex, 0 to 2 percent slopes, freque	No	Yes	Very poorly drained	No Bedrock Identified	1	0	0.15	3	33	No	Pipeline	0.0	1.249921
FdA	Fordville loam, coteau, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.28	6	59	Smectitic	Pipeline	0.0	1.706649
FrA	Forestburg-Doger loamy fine sands, 0 to 3 percent slopes	No	No	Moderately well drained	No Bedrock Identified	1	0	0.43	2	52	Smectitic	Pipeline	0.0	6.319559
G191B	Forman-Aastad loams, 0 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.4	0.4	0.32	6	85	No	Pipeline	0.0	2.859682
G193B	Forman-Aastad loams, 3 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.4	0.4	0.32	6	86	No	Pipeline	0.0	1.13343
G190B	Forman-Buse-Aastad loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.4	0.4	0.32	6	79	No	Access Road	0.024295	1.07779
G190B	Forman-Buse-Aastad loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.4	0.4	0.32	6	79	No	MLV	0.057392	0.057392
G190B	Forman-Buse-Aastad loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.4	0.4	0.32	6	79	No	Pipeline	0.0	18.220264
G190C	Forman-Buse-Aastad loams, 3 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.5	0.5	0.32	6	65	No	Pipeline	0.0	5.484505
G897D	Forman-Buse-Lowe, occasionally flooded loams, 0 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	1.4	0	0.37	6	51	No	Pipeline	0.0	0.579189
G138A	Forman-Cavour loams, 0 to 3 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.4	0	0.37	6	67	No	Pipeline	0.0	0.948049
G139A	Forman-Cresbard loams, 0 to 3 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.4	0	0.37	6	79	No	Pipeline	0.0	70.201442
G139B	Forman-Cresbard loams, 3 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.4	0	0.37	6	76	No	Pipeline	0.0	7.638783
Ft	Forman-Cresbard-Tonka complex	SWI	No	Well drained	No Bedrock Identified	1.5	0	0.37	6	75	Smectitic	Pipeline	0.0	0.409972
G136A	Forman-Cresbard-Tonka complex, 0 to 3 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.4	0	0.37	6	73	No	Pipeline	0.0	7.676527
G489A	Gardena-Glyndon silt loams, 0 to 2 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	1.5	0.7	0.55	5	89	No	Access Road	0.0	0.178182
G489A	Gardena-Glyndon silt loams, 0 to 2 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	1.5	0.7	0.55	5	89	No	Pipeline	0.0	0.547116
WmC	Glenham loam, rolling	SWI	No	Well drained	No Bedrock Identified	1.8	0.8	0.37	6	64	Smectitic	Pipeline	0.0	1.238538
WmB	Glenham loam, undulating	Yes, if irrigated	No	Well drained	No Bedrock Identified	1.8	0.8	0.37	6	82	Smectitic	Pipeline	0.0	11.084252
WpA	Glenham-Cavo loams, nearly level	No	No	Well drained	No Bedrock Identified	1.8	0.8	0.37	6	63	Smectitic	Pipeline	0.0	0.428478
WpB	Glenham-Cavo loams, undulating	No	No	Well drained	No Bedrock Identified	1.8	0.8	0.37	6	58	Smectitic	Pipeline	0.0	1.686124
WuB	Glenham-Delmont loams, undulating	SWI	No	Well drained	No Bedrock Identified	1.8	0.8	0.37	6	66	No	Pipeline	0.0	2.399093
WzC	Glenham-Java loams, rolling	SWI	No	Well drained	No Bedrock Identified	1.8	0.8	0.37	6	58	No	Pipeline	0.0	2.849582



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GnA	Glenham-Java-Cavo loams, 0 to 4 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.8	0.8	0.37	6	65	No	Pipeline	0.0	0.749079
GmB	Glenham-Java-Prosper loams, 1 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	77	No	Pipeline	0.0	94.811842
WnB	Glenham-Propser loams, 1 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	82	No	Access Road	0.0	0.763508
GrB	Glenham-Propser loams, 1 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	82	No	Pipeline	0.0	3.211897
WnB	Glenham-Propser loams, 1 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	82	No	Pipeline	0.0	36.512986
GrA	Glenham-Prosper loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	86	No	Access Road	0.024502	0.024502
GrA	Glenham-Prosper loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	86	No	MLV	0.057392	0.057392
GIA	Glenham-Prosper loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	86	No	Pipeline	0.0	1.105069
GrA	Glenham-Prosper loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	86	No	Pipeline	0.0	20.45701
WnA	Glenham-Prosper loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	86	No	Pipeline	0.0	8.39572
GsA	Glenham-Prosper-Hoven complex, 0 to 4 percent slopes	No	No	Well drained	No Bedrock Identified	1.8	0.8	0.37	6	68	No	Access Road	0.0	0.080992
GsA	Glenham-Prosper-Hoven complex, 0 to 4 percent slopes	No	No	Well drained	No Bedrock Identified	1.8	0.8	0.37	6	68	No	Pipeline	0.0	41.475755
GuA	Glenham-Stickney-Hoven complex, 0 to 4 percent slopes	No	No	Well drained	No Bedrock Identified	1.8	0.8	0.37	6	58	No	Pipeline	0.0	18.666808
Gr	Graceville silty clay loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.43	6	85	No	Pipeline	0.0	11.033661
C471A	Grail silty clay loam, 0 to 2 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	1.3	2.1	0.37	6	95	Smectitic	Pipeline	0.0	0.781865
C457A	Grassna silt loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	98	Smectitic	Pipeline	0.0	4.217779
Ga	Grat loam	No	Yes	Poorly drained	No Bedrock Identified	1.4	0.9	0.32	6	49	No	Access Road	0.021205	0.021205
Ga	Grat loam	No	Yes	Poorly drained	No Bedrock Identified	1.4	0.9	0.32	6	49	No	MLV	0.057392	0.057392
Ga	Grat loam	No	Yes	Poorly drained	No Bedrock Identified	1.4	0.9	0.32	6	49	No	Pipeline	0.0	3.798282
G720A	Great Bend-Beotia silt loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.3	1	0.49	6	95	No	Access Road	0.914363	1.038666
G720A	Great Bend-Beotia silt loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.3	1	0.49	6	95	No	Launcher/Receiver	0.040175	0.040175
G720A	Great Bend-Beotia silt loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.3	1	0.49	6	95	No	MLV	0.114779	0.114779
G720A	Great Bend-Beotia silt loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.3	1	0.49	6	95	No	Pipeline	0.0	116.228369
G720B	Great Bend-Beotia silt loams, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.3	1	0.49	6	88	No	Access Road	0.231589	0.231589
G720B	Great Bend-Beotia silt loams, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.3	1	0.49	6	88	No	Pipeline	0.0	6.149145
G721A	Great Bend-Beotia silt loams, till substratum, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.7	0.6	0.49	6	95	No	Pipeline	0.0	3.904979
G724A	Great Bend-Putney silt loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.5	0	0.55	6	87	No	Pipeline	0.0	5.76326
G722B	Great Bend-Zell silt loams, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.5	0	0.55	6	77	No	Access Road	0.010895	0.010895
G722B	Great Bend-Zell silt loams, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.5	0	0.55	6	77	No	MLV	0.057392	0.057392
G722B	Great Bend-Zell silt loams, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.5	0	0.55	6	77	No	Pipeline	0.0	11.160829
G722C	Great Bend-Zell silt loams, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	2.5	0	0.55	6	66	No	Access Road	0.0	0.405045
G722C	Great Bend-Zell silt loams, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	2.5	0	0.55	6	66	No	Pipeline	0.0	21.521852
C270A	Hamerly loam, 0 to 3 percent slopes	Yes	No	Somewhat poorly drained	No Bedrock Identified	4.5	3.3	0.32	4L	76	No	Access Road	0.0	0.085541
C270A	Hamerly loam, 0 to 3 percent slopes	Yes	No	Somewhat poorly drained	No Bedrock Identified	4.5	3.3	0.32	4L	76	No	Pipeline	0.0	2.681319
HbA	Hand loam, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1.0	0	0.37	6	86	No	Pipeline	0.0	7.696254
HbB	Hand loam, 2 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.37	6	81	No	Pipeline	0.0	0.332068
HgB	Hand-Ethan-Bonilla loams, 1 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.37	6	79	No	Pipeline	0.0	9.046918

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HJB	Hand-Talmo complex, 2 to 6 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.37	6	54	No	Pipeline	0.0	0.684501
G865A	Harmony-Aberdeen silt loams, till substratum, 0 to 2 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	2.3	0.6	0.55	6	82	Smectitic	Access Road	0.018388	0.018388
G865A	Harmony-Aberdeen silt loams, till substratum, 0 to 2 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	2.3	0.6	0.55	6	82	Smectitic	MLV	0.057379	0.057379
G865A	Harmony-Aberdeen silt loams, till substratum, 0 to 2 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	2.3	0.6	0.55	6	82	Smectitic	Pipeline	0.0	22.773285
G866A	Harmony-Aberdeen silty clay loams, 0 to 2 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	1.8	0.5	0.49	6	80	Smectitic	Pipeline	0.0	74.720702
G862A	Harmony-Beotia silt loams, 0 to 2 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	2.4	1	0.49	6	92	Smectitic	Pipeline	0.0	54.216022
G863A	Harmony-Beotia silt loams, till substratum, 0 to 2 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	2.4	0.7	0.49	6	92	Smectitic	Pipeline	0.0	20.214678
G554A	Harriet loam, 0 to 1 percent slopes, occasionally flooded	No	Yes	Poorly drained	No Bedrock Identified	11.2	9.1	0.37	6	21	No	Pipeline	0.0	5.068765
C584A	Harriet loam, 0 to 2 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	11	9.8	0.37	6	26	Smectitic	Access Road	0.034845	0.034845
C584A	Harriet loam, 0 to 2 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	11	9.8	0.37	6	26	Smectitic	MLV	0.057556	0.057556
C584A	Harriet loam, 0 to 2 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	11	9.8	0.37	6	26	Smectitic	Pipeline	0.0	6.51412
C020A	Heil silt loam, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	8.3	9.7	0.37	6	20	Smectitic	Access Road	0.597422	0.805771
C020A	Heil silt loam, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	8.3	9.7	0.37	6	20	Smectitic	Pipeline	0.0	25.807658
G017A	Heil silt loam, till substratum, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	6.8	11.5	0.43	6	11	Smectitic	Pipeline	0.0	2.804674
HeB	Henkin loam, 3 to 9 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.28	5	45	No	Access Road	0.487324	0.487324
HeB	Henkin loam, 3 to 9 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.28	5	45	No	MLV	0.016607	0.016607
HeB	Henkin loam, 3 to 9 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.28	5	45	No	Pipeline	0.0	1.335092
HsA	Henkin-Blendon fine sandy loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.24	3	77	No	Pipeline	0.0	0.737513
HkB	Henkin-Blendon fine sandy loams, 2 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.43	3	57	No	Pipeline	0.0	0.591311
HsB	Henkin-Blendon fine sandy loams, 2 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.24	3	74	No	Pipeline	0.0	0.474957
HeA	Hetland silty clay loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.43	6	92	No	Pipeline	0.0	2.682716
HmA	Hetland silty clay loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.43	6	85	No	Pipeline	0.0	15.906088
HmB	Hetland silty clay loam, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.43	6	84	Smectitic	Pipeline	0.0	1.540664
HeA	Highmore silt loam, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.49	6	92	No	Pipeline	0.0	46.033591
HeB	Highmore silt loam, 2 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.49	6	45	No	Pipeline	0.0	1.19662
HdA	Highmore-DeGrey silt loams, 0 to 2 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.49	6	76	No	Pipeline	0.0	1.15355
HmA	Highmore-Walke silt loams, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.49	6	85	Smectitic	Pipeline	0.0	3.374877
HhA	Houdek loam, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	86	No	Pipeline	0.0	4.762923
HhB	Houdek loam, 2 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	81	No	Access Road	0.017197	0.017197
HhB	Houdek loam, 2 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	81	No	MLV	0.057392	0.057392
HhB	Houdek loam, 2 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	81	No	Pipeline	0.0	38.519572
HhC	Houdek loam, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	64	No	Pipeline	0.0	3.179653
HcB	Houdek stony loam, 0 to 9 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.32	7	4	No	Pipeline	0.0	4.622492
HIA	Houdek-Dudley complex, 0 to 2 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.32	6	61	Smectitic	Pipeline	0.0	10.020005
HdB	Houdek-Dudley complex, 2 to 6 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.32	6	63	No	Pipeline	0.0	1.32561
HIB	Houdek-Dudley complex, 2 to 6 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.32	6	63	No	Pipeline	0.0	15.965321

Soil Map Units Crossed by the Project

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HeB	Houdek-Ethan loams, 2 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	45	No	Pipeline	0.0	0.761982
HuD	Houdek-Ethan loams, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	58	Smectitic	Pipeline	0.0	33.076545
HnB	Houdek-Ethan-Prosper loams, 1 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	78	Smectitic	Pipeline	0.0	1.484642
HtB	Houdek-Ethan-Prosper loams, 1 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	78	Smectitic	Pipeline	0.0	11.769661
HmB	Houdek-Jerauld complex, undulating	No	No	Well drained	No Bedrock Identified	1	0	0.32	6	84	Smectitic	Pipeline	0.0	1.008506
HoA	Houdek-Prosper loams, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	88	No	Access Road	0.101549	0.101549
HoA	Houdek-Prosper loams, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	88	No	MLV	0.059812	0.059812
HkA	Houdek-Prosper loams, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	88	No	Pipeline	0.0	44.730548
HoA	Houdek-Prosper loams, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	88	No	Pipeline	0.0	58.921217
HpA	Houdek-Prosper loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.32	6	88	No	Pipeline	0.0	20.252683
HkB	Houdek-Prosper loams, 1 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	57	No	Access Road	0.0	0.62076
HkB	Houdek-Prosper loams, 1 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	57	No	Pipeline	0.0	70.315099
HoB	Houdek-Prosper loams, 1 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	84	No	Pipeline	0.0	21.234567
HpB	Houdek-Prosper loams, 1 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.32	6	84	No	Pipeline	0.0	6.236497
HsA	Houdek-Stickney complex, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	77	No	Pipeline	0.0	135.758253
HwA	Houdek-Stickney complex, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	77	No	Pipeline	0.0	16.657297
HsB	Houdek-Stickney complex, 2 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	74	No	Access Road	0.0	0.296692
HsB	Houdek-Stickney complex, 2 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	74	No	Pipeline	0.0	22.486829
Ht	Houdek-Stickney-Tetonka complex, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	75	Montmorillonitic	Access Road	0.017295	0.256489
Ht	Houdek-Stickney-Tetonka complex, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	75	Montmorillonitic	MLV	0.175982	0.175982
CnA	Houdek-Stickney-Tetonka complex, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	75	Montmorillonitic	Pipeline	0.0	7.998528
Ht	Houdek-Stickney-Tetonka complex, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	75	Montmorillonitic	Pipeline	0.0	92.098333
HxA	Houdek-Stickney-Tetonka complex, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.32	6	75	Montmorillonitic	Pipeline	0.0	40.369637
HsD	Houdek-Talmo complex, hilly	No	No	Well drained	No Bedrock Identified	1	0	0.32	6	35	No	Pipeline	0.0	4.284961
Ho	Hoven silt loam, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	4.3	12.5	0.43	6	15	Smectitic	Pipeline	0.0	11.801963
Hv	Hoven silt loam, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	4.3	12.5	0.43	6	15	Smectitic	Pipeline	0.0	8.239024
Hy	Hoven silt loam, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	4.3	12.5	0.43	6	15	Smectitic	Pipeline	0.0	0.033041
ScA	Huntimer silty clay loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0.6	0.32	4	90	Smectitic	Access Road	0.724798	1.000898
ScA	Huntimer silty clay loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0.6	0.32	4	90	Smectitic	Launcher/Receiver	0.040174	0.040174
HuA	Huntimer silty clay loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.5	0.6	0.43	4	89	Smectitic	Pipeline	0.0	21.653455
ScA	Huntimer silty clay loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0.6	0.32	4	90	Smectitic	Pipeline	0.0	16.057359
HuB	Huntimer silty clay loam, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.5	0.7	0.43	4	84	No	Pipeline	0.0	11.678365
SdB	Huntimer silty clay loam, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0.6	0.32	4	85	No	Pipeline	0.0	17.210538
JbD	Java-Betts loams, 6 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	2	0.3	0.37	6	43	No	Pipeline	0.0	14.218874
JcD	Java-Betts stony complex, 3 to 12 percent slopes	No	No	Well drained	No Bedrock Identified	2	0.3	0.37	6	24	No	Pipeline	0.0	1.823276
JgC	Java-Glenham loams, 3 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	2	0.3	0.37	6	63	No	Pipeline	0.0	2.564456
JgC	Java-Glenham loams, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	2	0.3	0.37	6	63	No	Pipeline	0.0	7.953826

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MhB	Jerauld-Houdek complex, undulating	No	No	Moderately well drained	No Bedrock Identified	5.6	10.9	0.43	6	41	No	Access Road	0.0	1.379789
MhB	Jerauld-Houdek complex, undulating	No	No	Moderately well drained	No Bedrock Identified	5.6	10.9	0.43	6	41	No	Pipeline	0.0	5.741089
Z125B	Kings Lake-Buse-Waubay complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1.1	0.6	0.49	6	81	No	Pipeline	0.0	1.02381
C589A	Koto-Harriet loams, 0 to 2 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	1.2	0.6	0.37	6	45	Smectitic	Pipeline	0.0	0.323564
J143A	Kranzburg-Brookings silty clay loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.43	6	93	No	Pipeline	0.0	11.392605
J143B	Kranzburg-Brookings silty clay loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.43	6	87	No	Pipeline	0.0	32.021064
KrB	Kranzburg-Buse-Waubay complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.3	0.5	0.43	6	83	No	Access Road	0.0	0.047039
KrB	Kranzburg-Buse-Waubay complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.3	0.5	0.43	6	83	No	Pipeline	0.0	2.733598
G796A	Kranzburg-Cresbard silt loams, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	2.4	0.6	0.43	6	81	Smectitic	Pipeline	0.0	10.391105
G793B	Kranzburg-Zell-Aastad complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.4	0.6	0.43	6	80	Smectitic	Access Road	0.000358	0.000358
G793B	Kranzburg-Zell-Aastad complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	2.4	0.6	0.43	6	80	Smectitic	Pipeline	0.0	5.512758
G793C	Kranzburg-Zell-Aastad complex, 3 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	2.4	0.6	0.43	6	72	Smectitic	Pipeline	0.0	0.602752
G561A	La Prairie loam, 0 to 2 percent slopes, occasionally flooded	Yes	No	Moderately well drained	No Bedrock Identified	1	0.6	0.32	6	84	No	Access Road	0.0	0.093292
G561A	La Prairie loam, 0 to 2 percent slopes, occasionally flooded	Yes	No	Moderately well drained	No Bedrock Identified	1	0.6	0.32	6	84	No	Pipeline	0.0	1.686797
Lf	La Prairie-Fairdale loams, channeled	No	No	Moderately well drained	No Bedrock Identified	0	0	0.43	6	34	No	Pipeline	0.0	0.485145
G571A	LaDelle silt loam, 0 to 2 percent slopes, occasionally flooded	Yes	No	Moderately well drained	No Bedrock Identified	1.5	0.6	0.49	6	92	No	Pipeline	0.0	17.978097
G570A	LaDelle-Fluvaquents, channeled complex, 0 to 2 percent slopes, frequently flooded	No	No	Moderately well drained	No Bedrock Identified	1.5	0.6	0.49	6	45	No	Pipeline	0.0	2.809895
Lm	Lamo silt loam	SWI	No	Somewhat poorly drained	No Bedrock Identified	0	0	0.43	4L	64	Smectitic	Pipeline	0.0	1.992307
La	Lamo silty clay loam	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	1	0	0.43	4L	70	No	Pipeline	0.0	0.761391
La	Lamo silty clay loam, cool, 0 to 2 percent slopes, occasionally flooded	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	1	0	0.43	6	70	No	Access Road	0.024958	0.024958
La	Lamo silty clay loam, cool, 0 to 2 percent slopes, occasionally flooded	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	1	0	0.43	6	70	No	MLV	0.057392	0.057392
La	Lamo silty clay loam, cool, 0 to 2 percent slopes, occasionally flooded	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	1	0	0.43	6	70	No	Pipeline	0.0	16.960234
G533A	Lamoure silty clay loam, somewhat poorly drained, 0 to 1 percent slopes, frequently flooded	Yes, if drained	Yes	Somewhat poorly drained	No Bedrock Identified	2	1.7	0.43	4L	57	Smectitic	Pipeline	0.0	2.593388
Lr	Lamoure-Rauville silty clay loams, channeled	No	Yes	Poorly drained	No Bedrock Identified	2	2	0.43	4L	33	No	Pipeline	0.0	0.731515
LnA	Lane silty clay loam, 0 to 2 percent slopes, rarely flooded	SWI	No	Moderately well drained	No Bedrock Identified	1	0.4	0.37	6	86	Smectitic	Access Road	0.026293	0.026293
LnA	Lane silty clay loam, 0 to 2 percent slopes, rarely flooded	SWI	No	Moderately well drained	No Bedrock Identified	1	0.4	0.37	6	86	Smectitic	Pipeline	0.0	16.692873
LnA	Lane silty clay loam, 0 to 2 percent slopes, rarely flooded	SWI	No	Moderately well drained	No Bedrock Identified	1	0.4	0.37	6	86	Smectitic	Pump Station	3.532002	3.532002
LpA	Lane-Jerauld silty clay loams, nearly level	No	No	Well drained	No Bedrock Identified	1.7	0.7	0.32	4	65	No	Pipeline	0.0	3.713806
Ln	Lawet loam, 0 to 2 percent slopes	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	2.6	1.8	0.43	4L	59	Smectitic	Pipeline	0.0	3.81645
C816A	Lehr loam, 0 to 2 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.28	5	47	No	Pipeline	0.0	3.703126
C808A	Lehr shaly, loam, 0 to 2 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	0	0	0.32	5	44	No	Pipeline	0.0	1.189569
C817B	Lehr-Bowdle loams, 2 to 6 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.28	5	50	No	Access Road	0.03068	1.132899
C817B	Lehr-Bowdle loams, 2 to 6 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.28	5	50	No	MLV	0.057392	0.057392
C817B	Lehr-Bowdle loams, 2 to 6 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.28	5	50	No	Pipeline	0.0	17.552673
C809B	Lehr-Bowdle loams, 2 to 6 percent slopes, shaly	No	No	Somewhat excessively drained	No Bedrock Identified	0	0	0.32	6	49	No	Pipeline	0.0	0.373767

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Lp	Loup loamy fine sand	No	No	Somewhat poorly drained	No Bedrock Identified	0	0	0.15	2	68	No	Pipeline	0.0	1.079762
Lo	Lowe loam	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	1.4	1	0.37	4L	57	Montmorillonitic	Pipeline	0.0	0.954258
C054A	Lowe loam, 0 to 2 percent slopes, occasionally flooded	No	Yes	Poorly drained	No Bedrock Identified	4.2	3.1	0.37	4L	53	No	Pipeline	0.0	0.693609
G523A	Lowe-Fluvaquents, channeled complex, 0 to 2 percent slopes, frequently flooded	No	Yes	Poorly drained	No Bedrock Identified	1	0	0.15	4L	21	Smectitic	Pipeline	0.0	2.31631
G055A	Ludden silty clay, 0 to 1 percent slopes, frequently flooded	No	Yes	Poorly drained	No Bedrock Identified	2.9	1.5	0.28	4	52	Smectitic	Pipeline	0.0	2.904179
Ma	Macken silty clay loam, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	1	0	0.37	4	27	No	Pipeline	0.0	1.145013
MbA	Mauvais clay loam, 0 to 2 percent slopes	No	Yes	Somewhat poorly drained	No Bedrock Identified	4.9	0	0.32	4L	41	No	Pipeline	0.0	0.337901
C167A	Max-Arnegard loams, 0 to 3 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	1	0.32	6	83	No	Access Road	0.0	0.156744
C167A	Max-Arnegard loams, 0 to 3 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	1	0.32	6	83	No	Pipeline	0.0	4.077273
C168B	Max-Arnegard-Zahl loams, 0 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	1	0.32	6	77	No	Access Road	0.0	0.367283
C168B	Max-Arnegard-Zahl loams, 0 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	1	0.32	6	77	No	Pipeline	0.0	14.490893
C168C	Max-Zahl-Arnegard loams, 3 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.32	6	64	No	Access Road	0.0	0.257426
C168C	Max-Zahl-Arnegard loams, 3 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.32	6	64	No	Pipeline	0.0	4.087052
Z117A	Mckranz-Badger silty clay loams, 0 to 2 percent slopes	SWI	No	Somewhat poorly drained	No Bedrock Identified	2.4	1.5	0.49	4L	79	No	Pipeline	0.0	6.767107
Z116A	McKranz-Hidewood, frequently flooded, silty clay loams, 0 to 2 percent slopes	SWI	No	Somewhat poorly drained	No Bedrock Identified	2.5	1.5	0.43	4L	67	No	Pipeline	0.0	0.795567
C424B	Minot silty clay, 2 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.28	4	78	No	Pipeline	0.0	9.709378
C558A	Miranda-Heil complex, 0 to 3 percent slopes	No	No	Moderately well drained	No Bedrock Identified	8.1	13	0.43	6	31	Smectitic	Pipeline	0.0	1.191325
OnA	Mobridge silt loam, 0 to 2 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	1	0	0.49	6	94	No	Pipeline	0.0	46.034016
G519A	Moritz-Lowe, occasionally flooded loams, 0 to 2 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	2.7	1.6	0.37	4L	68	Smectitic	Pipeline	0.0	0.490718
G851A	Nahon-Aberdeen-Exline silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	6.4	8.4	0.49	6	46	Smectitic	Access Road	0.018654	0.018654
G851A	Nahon-Aberdeen-Exline silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	6.4	8.4	0.49	6	46	Smectitic	Launcher/Receiver	0.61714	0.61714
G851A	Nahon-Aberdeen-Exline silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	6.4	8.4	0.49	6	46	Smectitic	Pipeline	0.0	136.458464
G852A	Nahon-Aberdeen-Exline silt loams, till substratum, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	6.2	8.9	0.49	6	45	Smectitic	Pipeline	0.0	5.699991
C661A	Niobell-Noonan loams, 0 to 3 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.2	9	0.37	6	62	Smectitic	Pipeline	0.0	6.873302
C661B	Niobell-Noonan loams, 3 to 6 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.2	9	0.37	6	60	Smectitic	Access Road	1.719248	2.100283
C661B	Niobell-Noonan loams, 3 to 6 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.2	9	0.37	6	60	Smectitic	Launcher/Receiver	0.935214	0.935214
C661B	Niobell-Noonan loams, 3 to 6 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.2	9	0.37	6	60	Smectitic	MLV	0.057392	0.057392
C661B	Niobell-Noonan loams, 3 to 6 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.2	9	0.37	6	60	Smectitic	Pipeline	0.0	265.054855
C668A	Niobell-Noonan-Heil complex, 0 to 3 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.2	9	0.37	6	52	No	Pipeline	0.0	1.926343
C556B	Noonan-Miranda loams, 0 to 6 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.9	9.9	0.37	6	42	Smectitic	Access Road	0.14165	0.859282
C556B	Noonan-Miranda loams, 0 to 6 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.9	9.9	0.37	6	42	Smectitic	Launcher/Receiver	0.20594	0.20594
C556B	Noonan-Miranda loams, 0 to 6 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.9	9.9	0.37	6	42	Smectitic	MLV	0.057392	0.057392
C556B	Noonan-Miranda loams, 0 to 6 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.9	9.9	0.37	6	42	Smectitic	Pipeline	0.0	70.929936
C665B	Noonan-Niobell-Williams loams, 0 to 6 percent slopes	No	No	Moderately well drained	No Bedrock Identified	4.9	9.9	0.37	6	58	No	Pipeline	0.0	2.218426
OhA	Oahe-Delmont loams, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.37	6	48	No	Pipeline	0.0	2.796756
So	Oahe-Delmont loams, 2 to 6 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.37	6	46	Smectitic	Access Road	0.027298	0.027298

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So	Oahe-Delmont loams, 2 to 6 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.37	6	46	Smectitic	MLV	0.057392	0.057392
So	Oahe-Delmont loams, 2 to 6 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.37	6	46	Smectitic	Pipeline	0.0	22.204885
OhA	Oahe-Talmo loams, 0 to 2 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.37	6	48	No	Pipeline	0.0	11.33854
OhB	Oahe-Talmo loams, 2 to 6 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.37	6	38	No	Pipeline	0.0	3.597625
Ob	Obert silty clay loam, 0 to 1 percent slopes	No	Yes	Very poorly drained	No Bedrock Identified	1	0	0.43	8	29	No	Pipeline	0.0	0.470927
OnB	Onita silt loam, 2 to 5 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0.5	0.37	6	88	No	Pipeline	0.0	1.231531
OrA	Onita-DeGrey silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	1	0.5	0.37	6	76	No	Pipeline	0.0	2.314343
Os	Onita-Hoven silt loams	No	No	Moderately well drained	No Bedrock Identified	1	0.4	0.49	6	59	No	Pipeline	0.0	2.56931
OsA	Onita-Hoven silt loams, 0 to 1 percent slopes	No	No	Moderately well drained	No Bedrock Identified	1	0.5	0.37	6	59	No	Pipeline	0.0	0.633676
Pa	Parnell silty clay loam	No	Yes	Very poorly drained	No Bedrock Identified	1	0.7	0.37	7	31	No	Pipeline	0.0	3.507791
C003A	Parnell silty clay loam, 0 to 1 percent slopes	No	Yes	Very poorly drained	No Bedrock Identified	1.7	0	0.37	6	20	Smectitic	Pipeline	0.0	3.731981
C751A	Parshall fine sandy loam, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.20	3	67	No	Pipeline	0.0	1.039962
G202A	Peever-Cavour complex, 0 to 3 percent slopes	No	No	Well drained	No Bedrock Identified	2.5	3.9	0.28	6	61	No	Pipeline	0.0	3.587268
Pp	Pits, gravel and sand	No	No	Excessively drained	No Bedrock Identified	1	0	0.15	5	5	No	Pipeline	0.0	1.810298
Pk	Plankinton silt loam	No	Yes	Poorly drained	No Bedrock Identified	3.1	0.5	0.32	6	51	No	Pipeline	0.0	0.57985
J162B	Poinsett-Buse-Waubay complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	81	No	Access Road	0.020228	0.020228
PsB	Poinsett-Buse-Waubay complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	81	No	Access Road	0.014932	0.014932
J162B	Poinsett-Buse-Waubay complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	81	No	MLV	0.057392	0.057392
PsB	Poinsett-Buse-Waubay complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	81	No	MLV	0.057392	0.057392
J162B	Poinsett-Buse-Waubay complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	81	No	Pipeline	0.0	36.208597
PnB	Poinsett-Buse-Waubay complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	81	No	Pipeline	0.0	5.532446
PsB	Poinsett-Buse-Waubay complex, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	81	No	Pipeline	0.0	38.830298
J162C	Poinsett-Buse-Waubay complex, 2 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.49	6	69	No	Pipeline	0.0	7.155037
PsC	Poinsett-Buse-Waubay complex, 2 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.49	6	69	No	Pipeline	0.0	3.572737
PoC	Poinsett-Rusklyn silty clay loams, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.6	0	0.49	7	68	No	Pipeline	0.0	2.998017
PrB	Poinsett-Rusklyn-Waubay silty clay loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	84	No	Pipeline	0.0	16.455581
J164A	Poinsett-Waubay silty clay loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	93	No	Pipeline	0.0	8.984586
PwA	Poinsett-Waubay silty clay loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	93	No	Pipeline	0.0	31.296388
PwB	Poinsett-Waubay silty clay loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	89	No	Access Road	0.02304	0.417509
PwB	Poinsett-Waubay silty clay loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	89	No	MLV	0.057416	0.057416
J164B	Poinsett-Waubay silty clay loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	89	No	Pipeline	0.0	4.091474
PwB	Poinsett-Waubay silty clay loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	89	No	Pipeline	0.0	115.12261
PrA	Prosper loam, 0 to 2 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	2.5	0	0.37	6	93	No	Pipeline	0.0	6.045157
BcA	Prosper-Stickney loams, nearly level	SWI	No	Moderately well drained	No Bedrock Identified	2.2	0	0.37	6	84	No	Pipeline	0.0	1.782942
RcA	Raber-Cavo loams, 0 to 2 percent slopes	No	No	Well drained	No Bedrock Identified	1	0	0.28	6	60	No	Pipeline	0.0	4.397017
RdA	Raber-Demky loams, 0 to 2 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.8	0	0.28	6	75	No	Pipeline	0.0	0.876867
RgC	Raber-Eakin complex, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.28	6	61	No	Pipeline	0.0	2.354137

Soil Map Units Crossed by the Project

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RpB	Raber-Peno loams, 2 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.28	6	65	Montmorillonitic	Pipeline	0.0	3.539928
RpC	Raber-Peno loams, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	0	0.28	6	52	Montmorillonitic	Pipeline	0.0	2.631178
C575A	Ranslo loam, 0 to 2 percent slopes	No	No	Somewhat poorly drained	No Bedrock Identified	4.1	16.7	0.37	6	29	Smectitic	Pipeline	0.0	0.673024
G556A	Ranslo loam, 0 to 2 percent slopes, occasionally flooded	No	No	Somewhat poorly drained	No Bedrock Identified	4.1	16.7	0.37	6	27	No	Pipeline	0.0	0.946516
C578A	Ranslo-Harriet loams, 0 to 2 percent slopes, occasionally flooded	No	No	Somewhat poorly drained	No Bedrock Identified	4.1	16.7	0.37	6	29	Smectitic	Access Road	0.0	0.190734
G553A	Ranslo-Harriet loams, 0 to 2 percent slopes, occasionally flooded	No	No	Somewhat poorly drained	No Bedrock Identified	4.1	16.7	0.37	6	27	Smectitic	Pipeline	0.0	12.579708
C578A	Ranslo-Harriet loams, 0 to 2 percent slopes, occasionally flooded	No	No	Somewhat poorly drained	No Bedrock Identified	4.1	16.7	0.37	6	29	Smectitic	Pipeline	0.0	28.788042
Z250A	Rauville mucky silty clay loam, ponded, 0 to 1 percent slopes, frequently flooded	No	Yes	Very poorly drained	No Bedrock Identified	1.5	1.9	0.32	8	11	No	Pipeline	0.0	0.07329
Ra	Rauville silty clay loam	No	Yes	Very poorly drained	No Bedrock Identified	1.6	2	0.37	4L	30	No	Pipeline	0.0	10.853135
G052A	Rauville silty clay loam, 0 to 1 percent slopes, frequently flooded	No	Yes	Very poorly drained	No Bedrock Identified	2	2	0.37	4L	24	Smectitic	Pipeline	0.0	1.808837
Z150A	Rauville silty clay loam, coteau, 0 to 1 percent slopes, frequently flooded	No	Yes	Very poorly drained	No Bedrock Identified	1.5	2	0.32	4L	23	No	Access Road	0.0	0.190479
Z150A	Rauville silty clay loam, coteau, 0 to 1 percent slopes, frequently flooded	No	Yes	Very poorly drained	No Bedrock Identified	1.5	2	0.32	4L	23	No	Pipeline	0.0	5.793715
G053A	Rauville silty clay loam, ponded, 0 to 1 percent slopes, frequently flooded	No	Yes	Very poorly drained	No Bedrock Identified	2	2	0.37	8	9	Smectitic	Pipeline	0.0	0.260127
ReA	Ree loam, 0 to 2 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.37	6	85	No	Pipeline	0.0	0.842682
Z173B	Renshaw-Sioux complex, coteau, 2 to 6 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.32	6	34	No	Pipeline	0.0	1.014806
Z167A	Renwash loam, 0 to 2 percent slopes, rarely flooded	Yes, if irrigated	No	Somewhat excessively drained	No Bedrock Identified	0.5	0	0.32	6	47	No	Access Road	1.467442	1.568894
Z167A	Renwash loam, 0 to 2 percent slopes, rarely flooded	Yes, if irrigated	No	Somewhat excessively drained	No Bedrock Identified	0.5	0	0.32	6	47	No	Launcher/Receiver	0.055096	0.055096
Z167A	Renwash loam, 0 to 2 percent slopes, rarely flooded	Yes, if irrigated	No	Somewhat excessively drained	No Bedrock Identified	0.5	0	0.32	6	47	No	Pipeline	0.0	3.36347
C030A	Rimlap silt loam, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	1.5	0.8	0.49	6	51	Smectitic	Pipeline	0.0	0.771376
C031A	Rimlap-Heil silt loams, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	1.5	0.8	0.49	6	36	No	Access Road	0.024765	0.024765
C031A	Rimlap-Heil silt loams, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	1.5	0.8	0.49	6	36	No	Pipeline	0.0	4.117002
G019A	Rimlap-Heil, till substratum silt loams, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	0.9	0.8	0.49	6	26	Smectitic	Pipeline	0.0	0.140492
Sa	Salmo silty clay loam	No	Yes	Poorly drained	No Bedrock Identified	10	4.2	0.43	4L	35	Montmorillonitic	Pipeline	0.0	0.736059
Sa	Salmo silty clay loam, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	10	4.2	0.37	4L	35	Montmorillonitic	Pipeline	0.0	4.926853
Sa	Salmo silty clay loam, very wet	No	Yes	Poorly drained	No Bedrock Identified	10	4.2	0.43	4L	35	Montmorillonitic	Pipeline	0.0	3.276521
SkD2	Shindler-Egan complex, 9 to 15 percent slopes, eroded	No	No	Well drained	No Bedrock Identified	1.9	0.8	0.32	6	46	No	Pipeline	0.0	1.839749
Sh	Shue loamy fine sand	No	No	Somewhat poorly drained	No Bedrock Identified	1.1	0.6	0.37	2	54	No	Access Road	0.0	0.546885
Sh	Shue loamy fine sand	No	No	Somewhat poorly drained	No Bedrock Identified	1.1	0.6	0.37	2	54	No	Pipeline	0.0	12.916873
G267C	Sioux-Renshaw complex, 2 to 9 percent slopes	No	No	Excessively drained	No Bedrock Identified	1	0	0.20	6	29	No	Pipeline	0.0	0.979083
C005A	Southam silty clay loam, 0 to 1 percent slopes	No	Yes	Very poorly drained	No Bedrock Identified	4.9	0.9	0.32	8	5	Smectitic	Pipeline	0.0	1.656465
G004A	Southam silty clay loam, 0 to 1 percent slopes	No	Yes	Very poorly drained	No Bedrock Identified	3.9	0.9	0.32	4L	9	Smectitic	Pipeline	0.0	0.038708
Ss	Southam silty clay loam, 0 to 1 percent slopes	No	Yes	Very poorly drained	No Bedrock Identified	3	0	0.32	8	10	Smectitic	Pipeline	0.0	0.598656
Sp	Spottswood loam	SWI	No	Moderately well drained	No Bedrock Identified	1	0.8	0.28	6	71	Montmorillonitic	Pipeline	0.0	6.6484
Z161A	Spottswood loam, 0 to 2 percent slopes, occasionally flooded	Yes	No	Somewhat poorly drained	No Bedrock Identified	1	0	0.24	6	75	No	Access Road	0.499885	0.499885

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Z161A	Spottswood loam, 0 to 2 percent slopes, occasionally flooded	Yes	No	Somewhat poorly drained	No Bedrock Identified	1	0	0.24	6	75	No	Pipeline	0.0	2.298647
DsA	Stickney-Dudley silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.1	7.1	0.49	6	54	Smectitic	Access Road	0.220387	0.220387
DsA	Stickney-Dudley silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.1	7.1	0.49	6	54	Smectitic	Pipeline	0.0	17.242815
St	Stickney-Dudley silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	7.3	1.4	0.49	6	51	Smectitic	Pipeline	0.0	3.767885
Sy	Stickney-Dudley silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.1	7.1	0.49	6	54	Smectitic	Pipeline	0.0	7.821731
Sv	Stickney-Dudley-Hoven silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.1	7.1	0.49	6	44	Montmorillonitic	Access Road	0.0	0.622188
Su	Stickney-Dudley-Hoven silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.1	7.1	0.49	6	44	Montmorillonitic	Pipeline	0.0	3.613492
Sv	Stickney-Dudley-Hoven silt loams, 0 to 2 percent slopes	No	No	Moderately well drained	No Bedrock Identified	5.1	7.1	0.49	6	44	Montmorillonitic	Pipeline	0.0	13.466857
StA	Stickney-Java loams, 0 to 4 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	5.2	0.9	0.37	6	70	Montmorillonitic	Pipeline	0.0	8.77375
SvA	Stickney-Java-Hoven complex, 0 to 4 percent slopes	No	No	Moderately well drained	No Bedrock Identified	7.4	1.4	0.37	6	55	Smectitic	Pipeline	0.0	15.5492
St	Stickney-Jerauld silt loam	No	No	Moderately well drained	No Bedrock Identified	7.3	1.4	0.37	6	51	Smectitic	Pipeline	0.0	1.496162
StA	Stickney-Tetanka complex, 0 to 2 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	5.2	0.9	0.37	7	70	Smectitic	Pipeline	0.0	1.413043
J177A	Still lake-Graceland silty clay loams, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	0.9	0.3	0.49	6	94	No	Pipeline	0.0	5.450725
J177B	Still lake-Graceland silty clay loams, 1 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	0.9	0.3	0.49	6	90	No	Pipeline	0.0	3.491972
C491A	Straw-Fluvaquents channeled, complex, 0 to 2 percent slopes, frequently flooded	No	No	Well drained	No Bedrock Identified	1	0	0.32	6	42	Smectitic	Access Road	0.0	0.380399
C491A	Straw-Fluvaquents channeled, complex, 0 to 2 percent slopes, frequently flooded	No	No	Well drained	No Bedrock Identified	1	0	0.32	6	42	Smectitic	Pipeline	0.0	6.90127
G123A	Svea-Cavour loams, 0 to 3 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	2.4	1.8	0.32	6	73	No	Pipeline	0.0	1.554823
C769B	Tally fine sandy loam, 2 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0	0.24	3	63	No	Pipeline	0.0	3.953763
TaE	Talmo gravelly loam, 9 to 25 percent slopes	No	No	Excessively drained	No Bedrock Identified	0	0	0.24	5	9	Smectitic	Pipeline	0.0	2.901105
TdE	Talmo-Delmont loams, 6 to 21 percent slopes	No	No	Excessively drained	No Bedrock Identified	0	0	0.24	6	12	Smectitic	Pipeline	0.0	2.895923
C486B	Tansem-Roseglen silt loams, 2 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1.8	0	0.49	6	84	Smectitic	Pipeline	0.0	16.076996
C337D	Telfer-Lihen loamy fine sands, 9 to 15 percent slopes	No	No	Somewhat excessively drained	No Bedrock Identified	1	0	0.10	2	24	No	Pipeline	0.0	1.055271
C743B	Temvik-Grassna-Bearpaw complex, 0 to 6 percent slopes	Yes, if irrigated	No	Well drained	No Bedrock Identified	1	0.8	0.49	6	87	No	Pipeline	0.0	3.000893
Te	Tetanka silt loam, 0 to 1 percent slopes	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	1	0	0.49	6	59	Smectitic	Pipeline	0.0	2.607663
Tp	Tetanka silt loam, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	1	0	0.49	6	56	Smectitic	Pipeline	0.0	13.731978
Te	Tetanka silt loam, 0 to 2 percent slopes, frequently ponded	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	1	0	0.49	6	59	Smectitic	Pipeline	0.0	6.275782
Te	Tetanka-Hoven silt loams	No	Yes	Poorly drained	No Bedrock Identified	1	0	0.32	6	59	Smectitic	Pipeline	0.0	5.938813
C002A	Tonka silt loam, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	1	0.5	0.37	6	45	Smectitic	Pipeline	0.0	3.174784
C004A	Tonka silt loam, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	1	0.5	0.37	6	45	Smectitic	Pipeline	0.0	9.025629
G007A	Tonka silt loam, silty substratum, 0 to 1 percent slopes	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	1.5	0.5	0.43	6	43	Smectitic	Pipeline	0.0	2.140099
To	Tonka silty clay loam, 0 to 1 percent slopes	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	1	0	0.49	6	58	Smectitic	Pipeline	0.0	0.609247
Z101A	Tonka silty clay loam, 0 to 1 percent slopes	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	1	0	0.49	6	58	Smectitic	Pipeline	0.0	1.935585
G008A	Tonka-Rimlap silt loams, 0 to 1 percent slopes	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	0.6	0.4	0.37	6	42	Smectitic	Pipeline	0.0	1.162969
G643B	Urban land-Udorthents loamy complex, 0 to 6 percent slopes	No	<Null>	<Null>	No Bedrock Identified	1.6	0	0.32	4L	17	No	Access Road	0.272892	0.272892
G643B	Urban land-Udorthents loamy complex, 0 to 6 percent slopes	No	<Null>	<Null>	No Bedrock Identified	1.6	0	0.32	4L	17	No	Launcher/Receiver	0.064407	0.064407
G643B	Urban land-Udorthents loamy complex, 0 to 6 percent slopes	No	<Null>	<Null>	No Bedrock Identified	1.6	0	0.32	4L	17	No	Pipeline	0.0	0.711158



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G011A	Vallers clay loam, 0 to 3 percent slopes	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	4.2	3.2	0.32	4L	41	Smectitic	Pipeline	0.0	1.991869
C021A	Vallers loam, 0 to 1 percent slopes	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	4.5	3.3	0.32	4L	46	No	Access Road	0.0	0.039071
C021A	Vallers loam, 0 to 1 percent slopes	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	4.5	3.3	0.32	4L	46	No	Pipeline	0.0	1.345273
C075A	Vallers loam, moderately saline, 0 to 1 percent slopes	No	Yes	Poorly drained	No Bedrock Identified	9.5	6.9	0.32	4L	37	No	Pipeline	0.0	1.087253
Va	Vallers-Hamerly loams	Yes, if drained	Yes	Poorly drained	No Bedrock Identified	2	0	0.37	4L	62	No	Pipeline	0.0	1.110638
G302A	Vang loam, 0 to 2 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	0.5	0	0.28	6	63	No	Pipeline	0.0	0.6902
VbA	Viborg silty clay loam, 0 to 2 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	1.7	0.4	0.49	7	96	No	Access Road	0.17259	0.17259
VbA	Viborg silty clay loam, 0 to 2 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	1.7	0.4	0.49	7	96	No	Pipeline	0.0	25.191956
VgB	Viborg-Egan silty clay loams, 2 to 6 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	1.7	0.4	0.49	7	87	No	Pipeline	0.0	6.653818
Z193C	Vienna-Buse complex, coteau, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	0.9	0.6	0.37	6	64	No	Pipeline	0.0	2.22745
C874C	Wabek-Appam complex, 6 to 9 percent slopes	No	No	Excessively drained	No Bedrock Identified	1	0	0.10	5	26	No	Pipeline	0.0	2.238279
C878C	Wabek-Bowdle complex, 2 to 9 percent slopes	No	No	Excessively drained	No Bedrock Identified	1	0	0.17	6	42	Smectitic	Pipeline	0.0	19.998943
C877B	Wabek-Lehr complex, 2 to 6 percent slopes	No	No	Excessively drained	No Bedrock Identified	1	0	0.17	6	39	No	Access Road	0.022004	0.063525
C877B	Wabek-Lehr complex, 2 to 6 percent slopes	No	No	Excessively drained	No Bedrock Identified	1	0	0.17	6	39	No	MLV	0.057392	0.057392
C877B	Wabek-Lehr complex, 2 to 6 percent slopes	No	No	Excessively drained	No Bedrock Identified	1	0	0.17	6	39	No	Pipeline	0.0	14.228142
C877C	Wabek-Lehr complex, 6 to 9 percent slopes	No	No	Excessively drained	No Bedrock Identified	1	0	0.17	6	32	Smectitic	Pipeline	0.0	5.675187
C870E	Wabek-Lehr-Appam complex, 9 to 25 percent slopes	No	No	Excessively drained	No Bedrock Identified	1	0	0.32	5	23	No	Access Road	0.0	0.279953
C870E	Wabek-Lehr-Appam complex, 9 to 25 percent slopes	No	No	Excessively drained	No Bedrock Identified	1	0	0.32	5	23	No	Pipeline	0.0	0.079905
Wa	Wakonda-Chancellor complex, 0 to 2 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	1.4	0.9	0.55	4L	83	No	Pipeline	0.0	4.751285
W	Water	No	Unranked	<Null>	No Bedrock Identified	<Null>	<Null>	<Null>	<Null>	0	No	Pipeline	0.0	2.2341
G997	Water, intermittent	No	<Null>	<Null>	No Bedrock Identified	5	0	0.32	8	3	No	Pipeline	0.0	0.165911
J192A	Waubay-Badger silty clay loams, 0 to 2 percent slopes	Yes, if drained	No	Moderately well drained	No Bedrock Identified	1	0	0.49	6	91	No	Pipeline	0.0	0.733727
WeA	Wentworth silty clay loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	93	No	Access Road	0.001528	0.001528
WeA	Wentworth silty clay loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	93	No	MLV	0.057392	0.057392
WaA	Wentworth silty clay loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	93	No	Pipeline	0.0	2.929644
WeA	Wentworth silty clay loam, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	93	No	Pipeline	0.0	32.496177
WbB	Wentworth silty clay loam, 2 to 6 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	84	No	Pipeline	0.0	5.393161
WhA	Wentworth-Chancellor silty clay loams, 0 to 2 percent slopes	Yes, if drained	No	Moderately well drained	No Bedrock Identified	1	0	0.43	7	95	No	Access Road	0.0	0.460525
WhA	Wentworth-Chancellor silty clay loams, 0 to 2 percent slopes	Yes, if drained	No	Moderately well drained	No Bedrock Identified	1	0	0.43	7	95	No	Pipeline	0.0	135.81501
WcA	Wentworth-Chancellor-Wakonda silty clay loams, 0 to 2 percent slopes	Yes	No	Moderately well drained	No Bedrock Identified	1.5	0.2	0.49	7	88	No	Pipeline	0.0	10.642245
WcB	Wentworth-Ethan complex, 2 to 5 percent slopes	Yes	No	Well drained	No Bedrock Identified	2	0.7	0.43	7	78	No	Pipeline	0.0	3.868855
WhA	Wentworth-Trent complex, 0 to 2 percent slopes	Yes	No	Well drained	No Bedrock Identified	1	0	0.49	6	95	No	Pipeline	0.0	0.18422
Wh	Whitewood silt loam	Yes, if drained	Yes	Somewhat poorly drained	No Bedrock Identified	0.9	0.6	0.43	7	83	No	Pipeline	0.0	0.804222
Wh	Whitewood silty clay loam, 0 to 2 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	0.9	0.6	0.43	6	83	No	Pipeline	0.0	26.018605
Wk	Whitewood silty clay loam, 0 to 2 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	0.8	0.5	0.43	6	84	Smectitic	Pipeline	0.0	1.882506
C210A	Williams-Bowbells loams, 0 to 3 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	86	No	Access Road	0.023608	0.086638
C210A	Williams-Bowbells loams, 0 to 3 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	86	No	MLV	0.057392	0.057392

Soil Map Units Crossed by the Project

Map Unit Symbol	Map Unit Name	Farmland Class <sup>1</sup>	Hydric Rating	Drainage Class	Depth to Bedrock	Electrical Conductivity (dS/m)	Sodium Adsorption Rate	Kw Factor <sup>2</sup>	Wind Erodibility Group <sup>3</sup>	Crop Productivity Index	Clay Minerals with Swell Potential	Project Components	Operation Impacts Acreage <sup>4</sup>	Construction Impacts Acreage <sup>5</sup>
C210A	Williams-Bowbells loams, 0 to 3 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	86	No	Pipeline	0.0	100.833703
C210B	Williams-Bowbells loams, 3 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	83	No	Access Road	0.02811	0.02811
C210B	Williams-Bowbells loams, 3 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	83	No	Pipeline	0.0	222.793875
C210B	Williams-Bowbells loams, 3 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	83	No	Pump Station	5.158858	5.158858
C210C	Williams-Bowbells loams, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	66	No	Pipeline	0.0	12.02402
C210C	Williams-Bowbells loams, 6 to 9 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	66	No	Pump Station	0.253865	0.253865
C149B	Williams-Bowbells-Tonka complex, 0 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	79	No	Pipeline	0.0	71.070324
C667A	Williams-Niobell loams, 0 to 3 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	81	No	Access Road	0.030411	0.26425
C667A	Williams-Niobell loams, 0 to 3 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	81	No	MLV	0.057392	0.057392
C667A	Williams-Niobell loams, 0 to 3 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	81	No	Pipeline	0.0	49.482701
C667B	Williams-Niobell loams, 3 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	77	No	Pipeline	0.0	31.925165
C147B	Williams-Niobell-Tonka complex, 0 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	74	No	Pipeline	0.0	13.730693
C772B	Williams-Noonan loams, 0 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	68	No	Pipeline	0.0	5.441867
C172D	Williams-Zahl loams, 3 to 15 percent slopes, very stony	No	No	Well drained	No Bedrock Identified	1	1	0.37	6	32	No	Pipeline	0.0	8.366596
C136B	Williams-Zahl loams, 3 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	76	No	Access Road	0.0	0.07261
C136B	Williams-Zahl loams, 3 to 6 percent slopes	SWI	No	Well drained	No Bedrock Identified	1	1	0.37	6	76	No	Pipeline	0.0	31.106242
C212D	Williams-Zahl loams, 6 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	1	1	0.37	6	53	No	Access Road	0.0	0.06313
C212D	Williams-Zahl loams, 6 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	1	1	0.37	6	53	No	Pipeline	0.0	13.88991
C177D	Williams-Zahl-Bowbells loams, 3 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	1	1	0.37	6	61	No	Access Road	0.0	1.084766
C177D	Williams-Zahl-Bowbells loams, 3 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	1	1	0.37	6	61	No	Pipeline	0.0	95.890531
C148C	Williams-Zahl-Parnell complex, 0 to 9 percent slopes	No	No	Well drained	No Bedrock Identified	1	1	0.37	6	51	No	Pipeline	0.0	14.544591
C132C	Williams-Zahl-Zahill complex, 6 to 9 percent slopes	No	No	Well drained	No Bedrock Identified	1	1	0.37	6	61	No	Pipeline	0.0	7.460282
G868A	Winship-Tonka silt loams, 0 to 1 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	1	0.3	0.49	6	71	No	Pipeline	0.0	12.144673
G869A	Winship-Tonka silt loams, till substratum, 0 to 1 percent slopes	Yes, if drained	No	Somewhat poorly drained	No Bedrock Identified	1.3	0.3	0.49	6	71	No	Pipeline	0.0	0.829732
Ws	Woonsocket-Whitelake fine sandy loams, 0 to 2 percent slopes	SWI	No	Moderately well drained	No Bedrock Identified	1.2	0	0.32	3	30	No	Pipeline	0.0	0.573795
Wo	Worthing silty clay loam, 0 to 1 percent slopes	No	Yes	Very poorly drained	No Bedrock Identified	1.2	0	0.37	6	30	No	Access Road	0.259088	0.259088
Wo	Worthing silty clay loam, 0 to 1 percent slopes	No	Yes	Very poorly drained	No Bedrock Identified	1.2	0	0.37	6	30	No	Launcher/Receiver	0.026983	0.026983
Wo	Worthing silty clay loam, 0 to 1 percent slopes	No	Yes	Very poorly drained	No Bedrock Identified	1.2	0	0.37	6	30	No	MLV	0.057392	0.057392
Wg	Worthing silty clay loam, 0 to 1 percent slopes	No	Yes	Very poorly drained	No Bedrock Identified	1.2	0	0.37	6	30	No	Pipeline	0.0	0.296379
Wo	Worthing silty clay loam, 0 to 1 percent slopes	No	Yes	Very poorly drained	No Bedrock Identified	1.2	0	0.37	6	30	No	Pipeline	0.0	21.072625
Ws	Worthing silty clay loam, 0 to 1 percent slopes	No	Yes	Very poorly drained	No Bedrock Identified	1.2	0	0.37	6	30	No	Pipeline	0.0	10.479632
Mar	Worthing silty clay loam, ponded, 0 to 1 percent slopes	No	Yes	Very poorly drained	No Bedrock Identified	1.2	0	0.37	8	10	No	Pipeline	0.0	1.090719
Wr	Worthing-Davison complex, 0 to 2 percent slopes	No	Yes	Very poorly drained	No Bedrock Identified	2.4	0.4	0.32	4	57	Smectitic	Pipeline	0.0	20.299928
C967E	Zahl-Kloten west-Edgeley west, complex, 9 to 35 percent slopes	No	No	Well drained	1 to 2 feet	0	0	0.32	6	28	Smectitic	Pipeline	0.0	0.831279
C176E	Zahl-Max loams, 15 to 25 percent slopes	No	No	Well drained	No Bedrock Identified	1	1.4	0.37	4L	31	No	Pipeline	0.0	4.914403
C175D	Zahl-Williams loams, 6 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	1	1.4	0.24	4L	44	No	Access Road	0.0	0.633799
C175D	Zahl-Williams loams, 6 to 15 percent slopes	No	No	Well drained	No Bedrock Identified	1	1.4	0.24	4L	45	No	Pipeline	0.0	7.584941

**Soil Map Units Crossed by the Project**

Map Unit Symbol	Map Unit Name	Farmland Class <sup>1</sup>	Hydric Rating	Drainage Class	Depth to Bedrock	Electrical Conductivity (dS/m)	Sodium Adsorption Rate	Kw Factor <sup>2</sup>	Wind Erodibility Group <sup>3</sup>	Crop Productivity Index	Clay Minerals with Swell Potential	Project Components	Operation Impacts Acreage <sup>4</sup>	Construction Impacts Acreage <sup>5</sup>
C175C	Zahl-Williams-Zahill complex, 6 to 9 percent slopes	No	No	Well drained	No Bedrock Identified	1	1.4	0.24	4L	56	No	Pipeline	0.0	7.08241
G722E	Zell-Great Bend silt loams, 6 to 25 percent slopes	No	No	Well drained	No Bedrock Identified	1.6	1.1	0.49	4L	53	No	Pipeline	0.0	0.44135

<sup>1</sup> Prime Farmland Soils: Yes = All Areas are Prime Farmland; Yes, if drained = Prime Farmland if Drained; Yes, if irrigated = Prime Farmland if Irrigated; No = Not Prime Farmland; SWI = Farmland of Statewide Importance.

<sup>2</sup> The Kw Factor quantifies the susceptibility of soil particles to detachment and movement by water. Values range from 0.02 to 0.64.

- 0.02 - 0.25 - Resistant to erosion by water
- 0.25 - 0.40 - Moderately susceptible to erosion by water
- 0.40 - 0.64 - Highly susceptible to erosion by water

<sup>3</sup> The wind erodibility group is a numerical value indicating the susceptibility of soil to wind erosion, based on the predominant soil texture class of surface layer. Values range from 1 to 8.

- 1 - 2 - Highly susceptible to erosion by wind
- 3 - 6 - Moderately susceptible to erosion by wind
- 7 - 8 - Least susceptible to erosion by wind

<sup>4</sup> Operations impacts include soils which would be permanently impacted. Only permanent facilities will have permanent impacts.

<sup>5</sup> Construction impacts include impacts from both operations and construction.