Legend

- Qg, Glacial till
- Qgr, Gravel
- Qgi, Glacial ice-contact deposits; kames, kame terraces, eskers
- Qgt, Glacial till
- Qgl, Glacial lake deposit
- Qglb, Glacial lake bar deposit
- QTat, Alluvium of alluvial terrace deposit
- QTgr, Terrace gravel
- TF, Flaxville Formation
- Tfu, Fort Union Formation
- Tfsb, Sentinel Butte Member
- Tft, Tullock Member
- Tfe, Ekalaka Member
- Tfle, Lebo Member
- Tfld, Ludlow Member
- Tfh, Fox Hills Formation
- Kp, Pierre Shale
- Kcl, Claggett Shale
- Kjr, Judith River Formation
- Kfc, Colgate Member
- Kh, Hell Creek Formation
- Kftt, Timber Lake Member and Trail City Member
- Af, Artificial fill - large dams, freeway interchanges
- W, Water
- Clinker
- Regions of paleosol

Geologic Map Units
- Qal, Alluvium of modern channels and flood plains
- Qac, Alluvium-colluvium
- Qat, Alluvium of alluvial terrace deposit
- Qc, Colluvium
- Qls, Landslide deposit
- Qao, Alluvium, older, undivided
- Qg, Glacial deposits, undivided
- Qgi, Glacial ice-contact deposits; kames, kame terraces, eskers
- Qgr, Gravel
- Qgt, Glacial till
- Qgl, Glacial lake deposit
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- Tfe, Ekalaka Member
- Tfle, Lebo Member
- Tfld, Ludlow Member
- Tfh, Fox Hills Formation
- Kh, Hell Creek Formation
- Kf, Colgate Member
- Kt, Timber Lake Member and Trail City Member
- Kf, Fox Hills Formation
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- Regions of paleosol
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Geologic Formations
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- **Qal**: Alluvium of modern channels and flood plains
- **Qac**: Alluvium-colluvium
- **Qat**: Alluvium of alluvial terrace deposit
- **Qc**: Colluvium
- **Qls**: Landslide deposit
- **Qao**: Alluvium, older, undivided
- **Qg**: Glacial deposits, undivided
- **Qgac**: Gravelly sheetwash alluvium and colluvium
- **Qggi**: Glacial ice-contact deposits; kames, kame terraces, eskers
- **Qgt**: Glacial till
- **Qgl**: Glacial lake deposit
- **Qglb**: Glacial lake bar deposit
- **QTat**: Alluvium of alluvial terrace deposit
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- **Tf**: Flaxville Formation
- **Tfu**: Fort Union Formation
- **Tfsb**: Sentinel Butte Member
- **Tftr**: Tongue River Member
- **Tfe**: Ekalaka Member
- **Tfld**: Ludlow Member
- **Tfle**: Lebo Member
- **Tft**: Tullock Member
- **Tsg**: Sand and gravel
- **Qgr**: Gravel
- **Qgi**: Glacial ice-contact deposits; kames, kame terraces, eskers
- **Qcl**: Alluvium of modern channels and flood plains
- **Qao**: Alluvium, older, undivided
- **Qc**: Colluvium
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- **Qgr**: Gravel
- **Qgi**: Glacial ice-contact deposits; kames, kame terraces, eskers

**Legend**

- **Khc**: Hell Creek Formation
- **Kfc**: Colgate Member
- **Kb**: Bearpaw Shale
- **Kjr**: Judith River Formation
- **Kcl**: Claggett Shale
- **Kp**: Pierre Shale
- **Af**: Artificial fill - large dams, freeway interchanges
- **W**: Water
- **Clinker**: Regions of paleosol
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Tsg, Sand and gravel
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Tfsb, Sentinel Butte Member
Tftr, Tongue River Member

Montana Study Area
KEYSTONE XL PROJECT

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Geologic Formations
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North Dakota

Montana

Custer

Antelope

FORT PECK
INDIAN RESERVATION

NORTHERN CHEYENNE INDIAN RESERVATION

CROW INDIAN RESERVATION

Frazer

Glasgow

0 1 20.5
0 1 20.5
Miles
Kilometers
1:100,000

B

Region of paleosol

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Kp, Pierre Shale
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W, Water
Clinker

Regions of paleosol

Carter County
Fallon County
Boxelder Creek

T 1 N - R 61 E
T 2 N - R 61 E
T 1 S - R 62 E
T 2 N - R 62 E
T 3 N - R 62 E
T 3 N - R 60 E
T 3 N - R 61 E
T 4 N - R 61 E
T 4 N - R 62 E
T 4 N - R 60 E
T 3 N - R 59 E
T 3 N - R 60 E
T 2 N - R 62 E
T 3 N - R 61 E
T 4 N - R 62 E
T 4 N - R 61 E
T 4 N - R 60 E
T 4 N - R 61 E
T 3 N - R 62 E
T 3 N - R 61 E
T 3 N - R 60 E
T 4 N - R 61 E
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Tft, Tullock Member
Tg, Sand and gravel
Tfu, Fort Union Formation
Tfsb, Sentinel Butte Member
Tftr, Tongue River Member
Tm, Missouri River
Tn, Fort Union Formation
Tb, Bearpaw Shale
Tj, Judith River Formation
Kh, Hell Creek Formation
Kf, Colgate Member
Kn, Timber Lake Member and Trail City Member
Kf, Fox Hills Formation
Kc, Brevig Shale
Kp, Pierre Shale
Kj, Judith River Formation
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Montana Study Area
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North Dakota