

Permit Application (*Alternate Form APA-001*)

What Is the Recharge Application Type? *Natural Flow*

Source Name (From Point of Diversion) *Suburban Canal from North Platte River*

Diversion Type (From Point of Diversion) *Headgate*

Diversion Structure Name (From Point of Diversion) *Suburban Diversion Dam*

Maximum Capacity of Canal or Delivery Works (CFS) (From Point of Diversion) *105*

Quantity Desired for Recharge Appropriation (CFS) *77.47*

What is the Minimum Operational Rate of the Canal (CFS) *20*

What is the Earliest Diversion Date? *04/01/2024*

Will This Project Be Constructed under a Federal Program, Receive Federal Funding, or Have Federal Planning Assistance? *No*

Do You Intend to Divert Water into Recharge Facilities Other than Your Canal? *Yes*

How Many Recharge Facilities Will Be Utilized under This Application? *3*

Annual Operating Plan

General System Operations (*AOP*)

Yes

No

 Do You Use This System to Irrigate?

Diversion Begin Date *05/01/2024*

Diversion End Date *09/15/2024*

Delivery to Irrigators Begin Date *06/01/2024*

Delivery to Irrigators End Date *09/15/2024*

Irrigation Narrative (optional) *In a normal year, the irrigation canal generally takes water to flush the main & laterals for about 2 weeks prior to needing irrigation water. Timing is dependent on precipitation. This generally occurs around the last week of April to the first week of May. The canal does have some non-traditional row crops such as alfalfa & grass that will take a small amount of irrigation water earlier. The bulk of the irrigation occurs for corn & soybean crops, and those usually take water from late June to the first week of July and run thru September 20th. After the last round of irrigation, the canal pulls all the check boards and runs water down the canal for 10-12 days to clean out all of the piled up sand and mud to restore the bottom of the canal to a flat surface for the next year.*

Irrigation Use Uploads (Optional)

No files uploaded.

Yes

No

 Do You Use This System to Generate Hydropower?

Yes

No

Do You Use This System for Storage?

Narrative for All Non-excess Flow Activities That Would Affect the Ability to Divert Excess Flows (Optional) *This canal does not operate under prolong periods of freezing conditions.*

Partners & Sponsors

Sponsor 1

Name of Entity Paying for Recharge at this Facility *Twin Platte Natural Resources District*

Per Acre-foot Cost Basis for Recharge at This Facility *Recharged*

Max Volume per Annum *9203*

Upload Sponsor Documents
<div><div></div><div>5 yr MOA for Excess Flow (2018-2022) Contract #1012 - Signed - Suburban.pdf [https://dssdnr.nebraska.gov/filedownload/124]</div></div>
<div><div></div><div>2023-2028 Paxton-Hershey signed MOA.pdf [https://dssdnr.nebraska.gov/filedownload/134]</div></div>

Recharge Facilities (AOP)

Suburban Canal

Location & Capacity

Name of Facility (If Only One Facility, This Is the Canal Name) *Suburban Canal*

Type of Facility *Canal*

Delivery Point Coordinates

Latitude *41.19253*

Longitude *-101.022*

Operational Constraints: Enter Dates or Describe in the Narrative below When Can This Facility Can Be Operated?

Begin Date of Constraints (Optional):

End Date of Constraints (Optional):

Narrative of Constraints: Describe Details (Example: Weather Is Too Cold, so Cannot Operate the Facility) *Does not operate under prolonged freezing conditions.*

Diversion Rate from Stream (CFS)
Amount needed to be diverted in order to deliver the amount specified in the next question below. The total of the diversion values entered for all project facilities should add up to the amount to be appropriated in the application section. *77.47*

Delivery Rate (CFS)
Amount to Be delivered into the project facility from the stream diversion. If your project consists of one canal, then the value for this question should be the same as the value for the previous question. For projects where a canal delivers water to a recharge site: (the stream diversion rate) minus (the project facility delivery rate) = canal loss. *77.47*

Anticipated Maximum Annual Diversion (AF)
The upper limit of water diverted from the stream for this project facility. *9203*

Maximum Operational Head (FT)

For reservoirs and wetlands, how deep will the water get? For canal sections, what is the maximum height of water (head) in the canal while diversions under this application are occurring? 4

Maximum Water Surface Area (Acres)

For reservoirs and wetlands, what will be the maximum water surface area corresponding to the maximum head. For canals this would be the average canal width multiplied by the canal section length where recharge will occur. 46.3

Are Engineering Drawings Available?

No

Partners & Sponsors

- Twin Platte Natural Resources District *(contract uploaded)*

Instrumentation

Instrument 1 - Inflow

Name of Inflow Measurement Site

Canal Gage

Geographic Coordinates of Measurement Device

Latitude

41.19253

Longitude

-101.022

Recorder Type

Bubble

Recording Increments

15 Minute

Live Data Feed available to NeDNR?

Yes

West - Kessler

Location & Capacity

Name of Facility (If Only One Facility, This Is the Canal Name)

West - Kessler

Type of Facility

Recharge Cell

Delivery Point Coordinates

Latitude

41.1506

Longitude

-100.8847

Operational Constraints: Enter Dates or Describe in the Narrative below When Can This Facility Can Be Operated?

Begin Date of Constraints (Optional):

End Date of Constraints (Optional):

Narrative of Constraints: Describe Details (Example: Weather Is Too Cold, so Cannot Operate the Facility)

The canal nor the pits are operational under prolonged periods of freezing conditions.

Diversion Rate from Stream (CFS)

Amount needed to be diverted in order to deliver the amount specified in the next question below. The total of the diversion values entered for all project facilities should add up to the amount to be appropriated in the application section. 4

Delivery Rate (CFS)

Amount to Be delivered into the project facility from the stream diversion. If your project consists of one canal, then the value for this question should be the same as the value for the previous question. For projects where a canal delivers water to a recharge site: (the stream diversion rate) minus (the project facility delivery rate) = canal loss. 4

Anticipated Maximum Annual Diversion (AF)

The upper limit of water diverted from the stream for this project facility. 342

Maximum Operational Head (FT)

For reservoirs and wetlands, how deep will the water get? For canal sections, what is the maximum height of water (head) in the canal while diversions under this application are occurring? 5

Maximum Water Surface Area (Acres)

For reservoirs and wetlands, what will be the maximum water surface area corresponding to the maximum head. For canals this would be the average canal width multiplied by the canal section length where recharge will occur. 5

Are Engineering Drawings Available?

No

Partners & Sponsors

- Twin Platte Natural Resources District (contract uploaded)

Instrumentation

Instrument 1 - Inflow

Name of Inflow Measurement Site

W - Gillette Kessler Logger

Geographic Coordinates of Measurement Device

Latitude

41.1506

Longitude

-100.8847

Recorder Type

Transducer

Recording Increments

60 Minute

Live Data Feed available to NeDNR?

No

E -Steve Ries

Location & Capacity

Name of Facility (If Only One Facility, This Is the Canal Name)

E -Steve Ries

Type of Facility

Recharge Cell

Delivery Point Coordinates

Latitude

41.15

Longitude

-100.8831

Operational Constraints: Enter Dates or Describe in the Narrative below When Can This Facility Can Be Operated?

Begin Date of Constraints (Optional):

End Date of Constraints (Optional):

Narrative of Constraints: Describe Details (Example: Weather Is Too Cold, so Cannot Operate the Facility)

The canal and pits do not operate under prolonged periods of freezing conditions.

Diversion Rate from Stream (CFS)

Amount needed to be diverted in order to deliver the amount specified in the next question below. The total of the diversion values entered for all project facilities should add up to the amount to be appropriated in the application section. 2

Delivery Rate (CFS)

Amount to Be delivered into the project facility from the stream diversion. If your project consists of one canal, then the value for this question should be the same as the value for the previous question. For projects where a canal delivers water to a recharge site: (the stream diversion rate) minus (the project facility delivery rate) = canal loss. 2

Anticipated Maximum Annual Diversion (AF)

The upper limit of water diverted from the stream for this project facility. 171

Maximum Operational Head (FT)

For reservoirs and wetlands, how deep will the water get? For canal sections, what is the maximum height of water (head) in the canal while diversions under this application are occurring? 6

Maximum Water Surface Area (Acres)

For reservoirs and wetlands, what will be the maximum water surface area corresponding to the maximum head. For canals this would be the average canal width multiplied by the canal section length where recharge will occur. 1.5

Are Engineering Drawings Available?

No

Partners & Sponsors

- Twin Platte Natural Resources District (contract uploaded)

Instrumentation

Instrument 1 - Inflow

Name of Inflow Measurement Site

E -Steve Ries Logger

Geographic Coordinates of Measurement Device

Latitude

41.1504

Longitude

-100.8835

Recorder Type

Transducer

Recording Increments

60 Minute

Live Data Feed available to NeDNR?

No



Partners & Sponsors

Sponsor 1

Name of Entity Paying for Recharge at this Facility *Twin Platte Natural Resources District*

Per Acre-foot Cost Basis for Recharge at This Facility *Recharged*

Max Volume per Annum *9203*

Upload Sponsor Documents
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