



# FY 2019 Water Plan Budget

PRRIP Water Advisory Committee  
October 2, 2018

# Overview

- **DRAFT FY 2019 Water Work Plan**
- **DRAFT FY 2019 Water Budget**



# Active Channel Capacity Improvements

- WP-1(a) N. Platte channel above CNPPID diversion dam
  - ▣ Monitoring of high flow release
  - ▣ State channel maintenance
  - ▣ Budget estimate = \$10,500
- WP-1(b) CNPPID diversion dam to Grand Island
  - ▣ Invasive vegetation (Phragmites) management
  - ▣ Herbicide spraying by helicopter and airboat
  - ▣ Budget estimate = \$200,000



# Water Action Plan

- **WP-4**
  - All recharge/lease projects have WSAs through 12/31/2019 or later
  - Standard 3% rate increases annually (exceptions: Pathfinder Municipal Account, CNPPID irrigator lease)
  - Eliminated “acquire & retire”
  - Added two line items related to North Platte leasing



# Water Action Plan

- **WP-4(b) Groundwater recharge**
  - **Projects**
    - Phelps County Canal (CNPPID)
    - Elwood Reservoir (CNPPID)
    - Recharge recapture projects
    - Broad-Scale Recharge
  - **Budget estimate = \$2,349,000**



# Water Action Plan

- WP-4(b)i CNPPID system groundwater recharge projects
  - Phelps County Canal
    - $4,000 \text{ AF} \times \$31.91/\text{AF} = \$128,000$
  - Elwood Reservoir
    - $12,000 \text{ AF} \times \$48.46/\text{AF} = \$582,000$
  - Recharge recapture projects
    - Cook well pumping, O&M= \$5,000
    - External expenses for design, permitting = \$20,000
- Budget estimate = \$735,000, subject to actual measured deliveries for recharge



# Water Action Plan

- **WP-4(b)ii Broad-Scale Recharge Projects**
  - **Cottonwood Ranch**
    - Design, construction, pipeline all included in prior years' budgets
    - No new costs for 2019
  - **New land acquisitions**
    - $(320 \text{ acres} \times \$4,768/\text{acre}) + (\text{admin and title fees}) = \$1,614,000$
- **Budget estimate = \$1,614,000**



# Water Action Plan

- WP-4(d) Pathfinder Municipal Account
  - Last of 38,400 AF pre-paid in 2012 was delivered in 2017.
  - For FY 2019, assume high end budget estimate  
 $9,600 \text{ AF} \times \$65/\text{AF} = \$624,000$





# Water Action Plan

- WP-4(f) Water leasing and acquisition
  - ▣ CPNRD surface and groundwater leasing
  - ▣ NPPD leasing
  - ▣ CNPPID leasing – irrigator
  - ▣ NPNRD leasing
  - ▣ North Platte canals leasing
- Budget estimate = \$4,244,400



# Water Action Plan

- WP-4(f)i CPNRD surface and groundwater leasing
  - Thirty Mile, Cozad, Orchard-Alfalfa canals
  - Surface water lease
    - Pilot program to transfer to Lake McConaughy EA in 2018
    - Assume  $14,200 \text{ AF} \times \$159.14/\text{AF} = \$2,260,000$
  - Excess flows diverted for groundwater recharge during non-irrigation season
    - Program pays for lagged accretions to river
    - Assume  $3,000 \text{ AF} \times \$45.62/\text{AF} = \$137,000$
  - Budget estimate = \$2,397,000



# Water Action Plan

- WP-4(f)ii NPPD leasing
  - Surface water lease (Dawson County Canal)
    - CU credit:  $718 \text{ AF} \times \$154.33 = \$110,800$
    - Offsets:  $144 \text{ AF} \times \$45.62 = \$6,600$
    - Total = \$117,400 (dependent on permit approval)
  - Excess diversions for groundwater recharge
    - Dawson County and Gothenburg canals
    - Assume  $5,000 \text{ AF} \times \$31.83/\text{AF} = \$160,000$
  - Budget estimate = \$277,400



# Water Action Plan

- WP-4(f)iv CNPPID leasing – irrigator
  - ▣ Approved 5-year agreement through 2023
  - ▣ Increased cap on enrolled acres
  - ▣ Revisit cost annually
  - ▣ Assume max (3,000 acres x \$220/acre\*) + (\$10,000 admin fee) = \$670,000

\*about \$293/AF, assuming 9" per acre transferable CU



# Water Action Plan

- WP-4(f) v NPNRD leasing
  - Ongoing water retirement programs, e.g., Encouraging Producer Innovation through Conservation (EPIC)
  - Allocation Buy-Down
- Propose Program funding contributions of \$150,000 in 2019



# Water Action Plan

- WP-4(f)viii North Platte canals leasing
  - 2001 Modified North Platte Decree
    - Glendo Reservoir – 25,000 AF to Nebraska
    - May be used anywhere in Platte Basin downstream of reservoir
    - May be used for fish and wildlife purposes
  - Program contacts with Glendo contractors and non-federal irrigation districts in 2018
  - Leased water could be stored in Lake McConaughy EA
  - Assume  $5,000 \text{ AF} \times \$150/\text{AF} = \$750,000$



# Water Action Plan

- WP-4(g) Water management incentives
  - Program supporting efforts to improve management of irrigation resources
    - UNL-TAPS (Testing Ag Performance Solutions)
    - PRECIP (Panhandle Research, Evaluation, Conservation Irrigation Partnership)
      - Nebraska Water Balance Alliance and NRDs
  - May help to quantify beneficial effects of CU efficiency
  - FY 2019 budget = \$25,000





# Water Action Plan

- WP-4(i) Slurry wall gravel pits
  - ▣ Lakeside pit (Tract W1606)
    - Engineering design, construction admin included in 2018 budget
    - Construction = \$8,546,000
    - Net cost to expand wellfield, eliminate Peterson Drain infrastructure = \$700,000
  - ▣ Budget estimate = \$9,246,000





# Water Action Plan

- **WP-4(j) General maintenance of land-for-water properties**
  - **Lands include**
    - Future recharge/gravel pit properties
    - New properties to be acquired in 2019
  - **Tasks include**
    - Fence and road maintenance
    - Noxious weed spraying
    - Mowing
    - Farming
  - **Budget estimate = \$62,000**



# Other Tasks

- **WP-5 Management Tool**
  - \$14,400 budget for COHYST technical oversight and training
- **WP-8 Water Plan Special Advisors**
  - \$155,200 budget for hydrogeology/groundwater, civil infrastructure, hydroclimatic and streamflow forecasting



| PRRIP<br>Project ID                      | PRRIP Project Description  | Cost                    |                         |                         |
|--|--|-------------------------|-------------------------|-------------------------|
|  |  | 2007-2018               | 2019                    | Total                   |
| <b>Water Plan Implementation (WP)</b>    |  |                         |                         |                         |
| <b>WP-1(a)</b>                           | Active Channel Capacity Improvements (N Platte Channel above CNPPID Diversion Dam) | \$ 1,098,401.36         | \$ 10,500.00            | \$ 1,108,901.36         |
| <b>WP-1(b)</b>                           | Active Channel Capacity Improvements (CNPPID Diversion Dam to Grand Island)        | \$ 2,200,000.00         | \$ 200,000.00           | \$ 2,400,000.00         |
| <b>WP-2(a)</b>                           | Water Management Study Phase 1 (FY07-FY08)   | \$ 124,985.96           | \$ -                    | \$ 124,985.96           |
| <b>WP-2(b)</b>                           | Water Management Study Phase II (FY08)   | \$ 150,000.00           | \$ -                    | \$ 150,000.00           |
| <b>WP-3</b>                              | Test Flow Routing Model/2008 EA Augmented SDHF Pilot Study (FY09)                  | \$ 23,471.00            | \$ -                    | \$ 23,471.00            |
| <b>WP-4(a)</b>                           | Water Action Plan (J2 Reg Reservoir)   | \$ 14,869,402.14        | \$ -                    | \$ 14,869,402.14        |
| <b>WP-4(b)i</b>                          | Water Action Plan (CNPPID system groundwater projects)                             | \$ 3,832,042.01         | \$ 735,000.00           | \$ 4,567,042.01         |
| <b>WP-4(b)ii</b>                         | Broad-Scale Recharge Projects  |                         | \$ 1,614,000.00         | \$ 1,614,000.00         |
| <b>WP-4(c)i</b>                          | No cost NCCW   | \$ -                    | \$ -                    | \$ -                    |
| <b>WP-4(c)ii</b>                         | Water Action Plan (Purchased NCCW)   | \$ -                    | \$ -                    | \$ -                    |
| <b>WP-4(d)</b>                           | Water Action Plan (Pathfinder Municipal Acct)                                      | \$ 2,796,900.00         | \$ 624,000.00           | \$ 3,420,900.00         |
| <b>WP-4(e)</b>                           | Water Action Plan (CO GW Mgmnt)  | \$ -                    | \$ -                    | \$ -                    |
| <b>WP-4(f)i</b>                          | Water Action Plan (CPNRD Leasing)  | \$ 5,212,437.67         | \$ 2,397,000.00         | \$ 7,609,437.67         |
| <b>WP-4(f)ii</b>                         | Water Action Plan (NPPD Leasing)   |                         | \$ 277,400.00           | \$ 277,400.00           |
| <b>WP-4(f)iii</b>                        | Water Action Plan (CNPPID Leasing-Storage)   |                         | \$ -                    | \$ -                    |
| <b>WP-4(f)iv</b>                         | Water Action Plan (CNPPID Leasing-Irrigator)                                       |                         | \$ 670,000.00           | \$ 670,000.00           |
| <b>WP-4(f)v</b>                          | Water Action Plan (NPNRD Leasing)  |                         | \$ 150,000.00           | \$ 150,000.00           |
| <b>WP-4(f)vi</b>                         | Water Action Plan (CPNRD Groundwater Market)                                       |                         | \$ -                    | \$ -                    |
| <b>WP-4(f)vii</b>                        | Water Action Plan (Acquire and Retire)   |                         | \$ -                    | \$ -                    |
| <b>WP-4(f)viii</b>                       | Water Action Plan (North Platte canals leasing)                                    |                         | \$ 750,000.00           |                         |
| <b>WP-4(g)</b>                           | Water Action Plan (Water Mgmnt Incentives)   | \$ 29,500.00            | \$ 25,000.00            | \$ 54,500.00            |
| <b>WP-4(h)</b>                           | Water Action Plan (NE GW Mgmnt)  | \$ 47,091.78            | \$ -                    | \$ 47,091.78            |
| <b>WP-4(i)</b>                           | Water Action Plan (Slurry Wall Gravel Pits)  | \$ 993,307.45           | \$ 9,246,000.00         | \$ 10,239,307.45        |
| <b>WP-4(j)</b>                           | General maintenance of land-for-water properties                                   | \$ 24,528.94            | \$ 62,000.00            | \$ 86,528.94            |
| <b>WP-5</b>                              | Management Tool  | \$ 289,519.71           | \$ 14,400.00            | \$ 303,919.71           |
| <b>WP-6</b>                              | Feasibility Studies  | \$ 1,638,363.26         | \$ -                    | \$ 1,638,363.26         |
| <b>WP-7</b>                              | Water Acquisition  | \$ 1,727,409.52         | \$ -                    | \$ 1,727,409.52         |
| <b>WP-8</b>                              | Water Plan Special Advisors (FY10-FY19)  | \$ 1,170,323.16         | \$ 155,200.00           | \$ 1,325,523.16         |
| <b>WP-9</b>                              | Miscellaneous Water Resources Studies  | \$ 143,148.71           | \$ -                    | \$ 143,148.71           |
| <b>DOES NOT INCLUDE EXTENSION BUDGET</b> |  |                         |                         |                         |
| <b>Total</b>                             |  | <b>\$ 36,370,832.67</b> | <b>\$ 16,930,500.00</b> | <b>\$ 52,551,332.67</b> |
|  |  |                         | <b>WP Budget:</b>       | <b>\$ 93,000,000.00</b> |
|  |  |                         | <b>Difference:</b>      | <b>\$ 40,448,667.33</b> |
| Positive value indicates surplus \$      |  |                         |                         |                         |

# Questions?

