

# Platte Basin Coalition Committee

## DRAFT Minutes

August 2, 2016, 1:30 p.m. Central Time  
TPNRD Office, Great Western Bank Building, North Platte, NE

**Call to order and attendance:** Miller called the meeting to order at 1:30 p.m., Central Time. Sponsors and partners in attendance (Attachment A) were:

Duane Woodward	CPNRD	Tracy Zayac	NPNRD
Jennifer Schellpeper	NeDNR	Elizabeth Miller	NPNRD
Kayla Crowe	NeDNR	Ryan Reisdorf	SPNRD
Jessie Winter	NeDNR	Travis Glanz	SPNRD
Melissa Mosier	NeDNR	John Thorburn	TBNRD
Kathy Benson	NeDNR	Kent O. Miller	TPNRD
Rod L. Horn	SPNRD		
John Berge	NPNRD		

Guests in attendance:

Marc Groff	The Flatwater Group	Jeff Shafer	NPPD
Thad Kuntz	ARI	Dean Edson	NARD
Kevin Boyd	CNPPID		

- 1. Welcome and Open Meetings Act:** Miller noted that a copy of the Open Meetings Act was available in the meeting room.
- 2. Publication of Meeting Notices:** The NeDNR published a public notice (Attachment B) of the PBC meeting in the Grand Island Independent on July 25, 2016, the North Platte Telegraph on July 26, 2016, and the Scottsbluff Star Herald on July 21, 2016.
- 3. Agenda Modifications:** No revisions were made to the agenda (Attachment C).
- 4. Approval of the June 2, 2016, PBC Meeting Minutes:**
  - Motion:** To approve the June 2, 2016, PBC meeting minutes (Attachment D).  
**Thorburn motioned to approve and Schellpeper seconded. Motion passed with all ayes.**
- 5. Budget Update (NeDNR) (Attachment E):**
  - A. First three-year increment funding:**
    - i. Cow Camp:** NeDNR and NPNRD are drafting a new contract.

- ii. **SPNRD Industrial Baseline Offset:** SPNRD and NeDNR are working on drafting a new contract.
- iii. **N-CORPE:** NeDNR and TPNRD are working on re-allocating remaining funds. Estimates on project costs and detailed plans are forthcoming.

**B. Second three-year increment funding (years 4-6):** Contracts are currently being drafted for Cow Camp, Hardt/Tighe retirements, and N-CORPE. One invoice was accounted for in this budget period for E-65 Canal. The only remaining uncommitted dollars are allocated with Tri-Basin NRD in the amount of \$684,858.88. All other monies are committed to projects. Horn asked about the Oliver Reservoir contract. NeDNR did communicate with Ryan Reisdorf about edits being made to the operations agreement and when that has been completed the contract will be resent to SPNRD.

- i. **E-65 Canal:** Crowe reported that a payment was made with \$2,419.44 remaining. Currently, no acre-feet remain.

**Action:** NeDNR will send the edited Oliver Reservoir contract to SPNRD.

**C. Studies:**

**i. Conservation Measures Study:**

- a. **Invoice:** There were two Flatwater Group invoices in this budget period that need approval (Attachment F). April through May, 2016 totalling \$25,035.00, and June 2016 totalling \$26,361.71

**Motion:** To approve both invoices for payment. **Woodward motioned to approve and Schellpeper seconded. Motion passed with all ayes.**

**Action:** NeDNR will send individual invoices to the NRDs.

**ii. Robust Review:**

- a. A final draft of the scope of work and cost estimate (Attachment G) was sent out. There are budget estimates from ARI on the WWUM, and from the Flatwater Group on the WWUM and the CoHYST models. The budget amounts are broken down by model area with an estimated total of \$297,000.00.

**Motion:** To approve the scope of work and approve the Robust Review budget by model area (*see Attachment G*). **Thorburn motioned to approve and Woodward seconded. Discussion included Schellpeper pointing out that ARI has two options in their estimate. The Option 2 estimate is what is being voted on. Motion passed with all ayes.**

**iii. Difference Between Current and Fully Appropriated:**

- a. The current contract for the OA/FA study expires at the end of 2016, therefore, a new agreement has been drafted (Attachment H) to extend the work and account for additional costs. The maximum dollar amount on the new contract is \$42,250.00. The other contract

includes a draft contract, scope of work that has been reviewed by the technical committee for additional work in the amount of \$40,000.00 with HDR (Attachment I), and costs from ARI in the amount of \$12,000.00 (Attachment J).

**Motion #1:** To approve the OA/FA contract for current work done (*see Attachment H*). **Moved by Schellpeper, seconded by Horn. Motion passed with all ayes.**

**Motion #2:** To approve the contract for the future work with ARI and HDR on OA/FA in the total amount of \$52,000.00 (*see Attachments I & J*). **Thorburn motioned to approve, seconded by Woodward. Motion passed with all ayes.**

## **6. Project Updates**

### **A. N-CORPE (TPNRD):**

- i. The current estimated timeline for construction of the north pipeline is set for late fall or early winter of 2016.

### **B. J-2 Regulating Reservoir (NeDNR):**

- i. Schellpeper reported that the Governance Committee took action to put J-2 on hold while pursuing other water action plan options that could be implemented more quickly. The quarterly report will be available in September.

### **C. North Platte NRD Leases and Retirements (NPNRD):**

- i. On the Cow-Camp project, options are being looked into due to the recharge pit plan not being feasible. Discussions are being had with NeDNR to use the well on the property to make up for historic return flows. Hardt & Tighe are in retirement and language is pending for reimbursement with PBC on the easements.

### **D. Tri-Basin NRD Phase II Augmentation-North Dry Creek (TBNRD):**

- i. Both augmentation wells ran for 10 days. North Dry Creek was below target flows and it was a good time to test the wells.

### **E. South Platte NRD Industrial Baseline Offset (SPNRD):**

- i. The contract is close to completion. The project will be completed by the end of 2016, and it has turned out well.

### **F. Oliver Reservoir Streamflow Enhancement (SPNRD):**

- i. A contract with NeDNR is forthcoming. Kick-off and public meetings have been held.

### **G. Excess Flow Diversion Updates:**

- i. No further comments were made.

**8. Public Comments:** There were no public comments.

**9. Adjourn:** The next meeting is October 12<sup>th</sup>, 2016, at 1:30 p.m. at the Twin Platte NRD office. The meeting adjourned at 2:00 p.m.

## **Action Item Summary:**

- 1) NeDNR will send the edited Oliver Reservoir contract to SPNRD this week.
- 2) NeDNR will send individual invoices to the NRDs on the Conservation Measures Study.

The PBC meeting schedule is as follows:

October 12, 2016	1:30 p.m.	TPNRD Office, Great Western Bank Building, North Platte, NE
December 16, 2016	1:30 p.m.	TPNRD Office, Great Western Bank Building, North Platte, NE

**\*Meeting times may adjust depending on the Agenda\***

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# PLATTE BASIN COALITION MEETING

Meeting Date: August 2, 2016

Place/Room: TPNRD Office

Name:	Representing:	E-Mail:
MELISSA H MOSIER	NE DNR	melissa.mosier@nebraska.gov
Duane Woodward	CPNRD	woodward@cpnrd.org
Thad Knutz	NPNRD / SPNRA	thad@ari-water.com
Kayla Crowe	NeDNR	Kayla.Crowe@nebraska.gov
Jessie Winter	NeDNR	jessie.winter@nebraska.gov
Jennifer Schellpeter	NeDNR	jennifer.schellpeter@nebraska.gov
Kent O. Miller	Twin Platte NRD	komiller@tpnrd.org
John Thorburn	Tri-Basin NRD	jthorburn@tribasinrd.org
Tracy Zayac	NPNRD	tzayac@nprnd.org
Robt. Horn	SPNRD	rlhorn@spnrd.org
Jim Beup	NPNRD	jbeup@nprnd.org
DEAN EDSON	NARD	dledson@nrdnet.org
Jeff Shater	NPPD	jtshate@nppd.com
Kevin Boyd	Central	kmboyd@cappid.com
Ryan Reisdorf	SPNRD	rreisdorf@spnrd.org
Travis Glanz	SPNRD	tglanz@spnrd.org
Elizabeth Miller	NPNRD	emiller@nprnd.org
Marc Geoff	TFG	MGeoff@FirstWaterGroup.com
Kathy Benson	NeDNR	Kathy.Benson@nebraska.gov

## **PUBLIC NOTICE MEETING OF THE PLATTE BASIN COALITION**

The Central Platte Natural Resources District, North Platte Natural Resources District, South Platte Natural Resources District, Tri-Basin Natural Resources District, Twin Platte Natural Resources District (collectively, the Platte Basin NRDs), and the Nebraska Department of Natural Resources (Department) hereby provide notice that a public meeting of the Platte Basin Coalition will be held on Tuesday, August 2, 2016, at 1:30 p.m. Central Time, at the Twin Platte Natural Resources District office, 111 South Dewey Street, North Platte, Nebraska.

The Platte Basin Coalition purpose is to create a cooperative body to assist the Platte Basin NRDs and the Department with resource management and efficient implementation of the basin-wide management plan and the individual integrated management plans for the overappropriated area of the Platte River Basin.

An agenda of the meeting is being kept continually current and is available for public inspection during normal business hours at the offices of the Platte Basin NRDs and the Department and at the following website: [www.dnr.nebraska.gov](http://www.dnr.nebraska.gov). Please refer to the websites and phone numbers listed below for further information.

- CPNRD: <http://www.cpnrd.org> or phone (308) 385-6282  
215 Kaufman Avenue, Grand Island, NE 68803
  
- NPNRD: <http://www.npnrd.org> or phone (308) 632-2749  
100547 Airport Road, Scottsbluff, NE 69363
  
- SPNRD: <http://www.spnrd.org> or phone (308) 254-2377  
551 Parkland Drive, Sidney, NE 69162
  
- TBNRD: <http://www.tribasinnrd.org> or phone (308) 995-6688  
1723 Burlington Street, Holdrege, NE 68949
  
- TPNRD: <http://www.tpnrd.org> or phone (308) 535-8080  
111 S Dewey Street, North Platte, NE 69101
  
- Department: <http://www.dnr.nebraska.gov> or phone (402) 471-2363  
301 Centennial Mall South, 4<sup>th</sup> Floor, Lincoln, NE 68508

Individuals with disabilities may request auxiliary aids and services necessary for participation by contacting Melissa Mosier at the Nebraska Department of Natural Resources, 301 Centennial Mall South, PO Box 94676, Lincoln, NE 68509-4676, telephone (402) 471-3948 or e-mail [melissa.mosier@nebraska.gov](mailto:melissa.mosier@nebraska.gov).

# Agenda

## Platte Basin Coalition Committee Meeting

August 2, 2016, 1:30 p.m. Central Time

TPNRD Office, Great Western Bank Building, North Platte, NE

1. Welcome and Open Meetings Act
2. Publication of Meeting Notices
3. Agenda Modifications
4. Approval of June 2, PBC Meeting Minutes
5. Budget Update (NeDNR)
  - A. First three-year increment funding
    - i. Cow Camp
    - ii. SPNRD Industrial Baseline Offset
    - iii. N-CORPE
  - B. Second three-year increment funding
  - C. Studies
    - i. Conservation Measures
    - ii. Robust Review
    - iii. Difference Between Current and Fully Appropriated
6. Project Updates
  - A. N-CORPE (TPNRD)
  - B. J-2 Regulating Reservoir (NeDNR)
  - C. North Platte NRD Leases and Retirements (NPNRD)
  - D. Tri-Basin NRD Phase II Augmentation - North Dry Creek (TBNRD)
  - E. South Platte NRD Industrial Baseline Offset (SPNRD)
  - F. Oliver Reservoir Streamflow Enhancement (SPNRD)
  - G. Excess Flow Diversion Updates
7. Public Comments
8. Adjourn

The next PBC meeting is scheduled for **October 12, 2016**, and will be held at **1:30** p.m. Central Time at the Twin Platte NRD office.

# Platte Basin Coalition Committee

## DRAFT Minutes

June 2, 2016, 1:30 p.m. Central Time  
TPNRD Office, Great Western Bank Building, North Platte, NE

**Call to order and attendance:** Miller called the meeting to order at 1:30 p.m., Central Time.  
Sponsors and partners in attendance (Attachment A) were:

Lyndon Vogt	CPNRD	Tracy Zayac	NPNRD
Jennifer Schellpeper	NDNR	Barb Cross	NPNRD
Kayla Sharp	NDNR	Ryan Reisdorf	SPNRD
Jessie Winter	NDNR	Travis Glanz	SPNRD
Melissa Mosier	NDNR	John Thorburn	TBNRD
Kayla Sharp	NDNR	Landon Shaw	TPNRD
Rod L. Horn	SPNRD	Ann Dimmitt	TPNRD
John Berge	NPNRD	Kent O. Miller	TPNRD

Guests in attendance:

John Engel	HDR	Jeff Shafer, NPPD
Thad Kuntz	ARI	Rick Wilson, JEO

- 1. Welcome and Open Meetings Act:** Miller noted that a copy of the Open Meetings Act was available in the meeting room.
- 2. Publication of Meeting Notices:** The NDNR published a public notice (Attachment B) of the PBC meeting in the Grand Island Independent on May 26, 2016, the North Platte Telegraph on May 24, 2016, and the Scottsbluff Star Herald on May 24, 2016.
- 3. Agenda Modifications:** No revisions were made to the agenda (Attachment C).
- 4. Approval of the April 6, 2016, PBC Meeting Minutes:**
  - Motion:** To approve the April 6, 2016, PBC meeting minutes (Attachment D).  
**Vogt motioned to approve and Thorburn seconded. Motion passed with all ayes.**
- 5. Budget Update (NDNR) (Attachment E):**
  - A. First three-year increment funding:**
    - i. Cow Camp:** NDNR and NPNRD are still working on moving funds so the first three-year books can be closed.

- ii. **SPNRD Industrial Baseline Offset:** SPNRD and NDNR are working on moving funds so the first three-year books can be closed.
- iii. **N-CORPE:** This grant needs to be closed and the remaining funds in the amount of \$22,500.00 needs to be re-allocated. N-CORPE and NDNR continue to work on moving the remaining funds.
- iv. **J-2 Regulating Reservoir:** Schellpeper reported the budget now reflects the NCF fees. The budget was reviewed and the NRDs are asking for invoices to be sent as soon as possible. Funds will need to be moved and the 1-3 year funding closed.  
**Action:** 1. NDNR will email the Nebraska Community Foundation to send out invoices on J-2.

**B. Second three-year increment funding (years 4-6)**

**i. Invoices:**

- a. **Phelps Canal:** A partial payment was made on Phelps Canal in the amount of \$4,599, with 1,423 acre-feet remaining.

**C. Studies:**

**i. Conservation Measures Study:**

- a. **Invoice:** The Flatwater invoice (Attachment F) in the amount of \$4,677.50 needs approval. NDNR will send invoices to the individual NRDs in the amount of \$467.75. Berge asked about a timeline on the final product, in which Winter stated the projected completion date is September.

**Motion:** To approve the Flatwater Invoice on Contract #571 in the amount of \$4,677.50. **Schellpeper motioned to approve and Berge seconded. Motion passed with all ayes.**

**Action:** Invoices will be sent to the individual NRDs.

**6. Project Updates**

**A. N-CORPE (TPNRD):**

- i. The current estimated timeline for construction of the north pipeline is set for late fall or early winter of 2016.

**B. J-2 Regulating Reservoir (NDNR):**

- i. Schellpeper referred the group to the quarterly report (Attachment G) in the meeting packet and that invoices from the Nebraska Community foundation would be forthcoming. No further discussion.

**C. North Platte NRD Leases and Retirements (NPNRD):**

- i. The projects that are pending reimbursements remain dry. NPNRD was the recipient of a Water Sustainability Fund grant that will help retire more acres of groundwater.

**D. Tri-Basin NRD Phase II Augmentation-North Dry Creek (TBNRD):**

- i. Nothing new to report.

**E. South Platte NRD Industrial Baseline Offset (SPNRD):**

- i. The project continues to be monitored. A contract with NDNR is forthcoming.

**F. Oliver Reservoir Streamflow Enhancement (SPNRD):**

- i. A contract with NDNR is forthcoming.

**G. Excess Flow Diversion Updates:**

- i. Diversions are taking place all along the Basin and NRDs are starting to shut down to make room for irrigation water.

**Action:** NDNR will provide the NRDs with a spreadsheet of historical first-date-of-irrigation data.

**7. NPNRD Long-Term Reimbursement Proposal:**

- i. Berge referred to the proposal that was included in the meeting packet (Attachment H). Three agreements need reimbursement. PBC monies would be put into a designated bank account for a 15-year term and used to pay NPNRD for the total amount. The contract is still in draft and an added safety measure is being discussed in case of someone pulling out of the contract. Conservation easements may be required to ensure no future irrigation on decertified and decommissioned acres.

**Motion:** To approve the North Platte NRD long-term reimbursement payment and waive any requirement for conservation easements due to the fact the wells on the land are decommission and/or decertified.

**Thorburn motioned to approve and Horn seconded. Motion passed with all ayes.**

**8. Public Comments:** There were no public comments.

**9. Adjourn:** The next meeting is August 2<sup>nd</sup>, 2016, at 1:30 p.m. at the Twin Platte NRD office. Meeting adjourned at 2:00 p.m.

**Action Item Summary:**

- 1) NDNR will send out invoices to the NRDs on The Flatwater Group.
- 2) NDNR will have the Nebraska Community Foundation send invoices on J-2.
- 3) NDNR will provide a spreadsheet with historical first-date-of-irrigation data.
- 4) SPNRD will check their accounting for payments made on the Industrial Baseline Offset
- 5) NDNR will provide the NRDs with a spreadsheet of historical first-date-of-irrigation data.

The PBC meeting schedule is as follows:

August 2, 2016	1:30 p.m.	TPNRD Office, Great Western Bank Building, North Platte, NE
October 12, 2016	1:30 p.m.	TPNRD Office, Great Western Bank Building, North Platte, NE
December 16, 2016	1:30 p.m.	TPNRD Office, Great Western Bank Building, North Platte, NE

**\*Meeting times may adjust depending on the Agenda\***

**PBC Study Budget**

Updated 8/1/2016

PBHEP Budget Summary	CPNRD	NPNRD	SPNRD	TBNRD	TPNRD	NDNR	Total by Year
Invoice 13-1511 (Phase I ConPracStudy)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 24,556.00	
Invoice 13-1537 (Phase I ConPracStudy)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 42,096.00	
Invoice 13-1560 (Phase I ConPracStudy)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,508.00	
Contract # 571	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>Total 3 Year Budget</b>	<b>\$ -</b>	<b>\$ 70,160.00</b>	<b>\$ 70,160.00</b>				

Conservation Study Phase II Total Budget	CPNRD	NPNRD	SPNRD	TBNRD	TPNRD	NRD Total	NDNR	Total
Conservation Study Phase II Contracted (#571)	\$ 22,600.00	\$ 22,600.00	\$ 22,600.00	\$ 22,600.00	\$ 22,600.00	\$ 113,000.00	\$ 113,000.00	\$ 226,000.00
Invoice 15-1764 (Phase II) #1	\$ 1,783.45	\$ 1,783.45	\$ 1,783.45	\$ 1,783.45	\$ 1,783.45	\$ 8,917.25	\$ 8,917.25	\$ 17,834.50
Invoice 15-1798 (Phase II) #2	\$ 678.00	\$ 678.00	\$ 678.00	\$ 678.00	\$ 678.00	\$ 3,390.00	\$ 3,390.00	\$ 6,780.00
Invoice 15-1829 (Phase II) #3	\$ 2,047.12	\$ 2,047.12	\$ 2,047.12	\$ 2,047.12	\$ 2,047.12	\$ 10,235.60	\$ 10,235.65	\$ 20,471.25
Invoice 16-1859 (Phase II) #4	\$ 1,073.00	\$ 1,073.00	\$ 1,073.00	\$ 1,073.00	\$ 1,073.00	\$ 5,365.00	\$ 5,365.00	\$ 10,730.00
Invoice 16-1870 (Phase II) #5	\$ 2,488.00	\$ 2,488.00	\$ 2,488.00	\$ 2,488.00	\$ 2,488.00	\$ 12,440.00	\$ 12,440.00	\$ 24,880.00
Invoice 16-1893 (Phase II) #6	\$ 467.75	\$ 467.75	\$ 467.75	\$ 467.75	\$ 467.75	\$ 2,338.75	\$ 2,338.75	\$ 4,677.50
Invoice 16-1910 (Phase II) #7	\$ 2,503.50	\$ 2,503.50	\$ 2,503.50	\$ 2,503.50	\$ 2,503.50	\$ 12,517.50	\$ 12,517.50	\$ 25,035.00
Invoice 16-1932 (Phase II) #8	\$ 2,636.17	\$ 2,636.17	\$ 2,636.17	\$ 2,636.17	\$ 2,636.17	\$ 13,180.85	\$ 13,180.86	\$ 26,361.71
Total	\$ 13,676.99	\$ 13,676.99	\$ 13,676.99	\$ 13,676.99	\$ 13,676.99	\$ 68,384.95	\$ 68,385.01	\$ 136,769.96
Remaining totals by Contributor	\$ 8,923.01	\$ 8,923.01	\$ 8,923.01	\$ 8,923.01	\$ 8,923.01	\$ 44,615.05	\$ 44,614.99	\$ 89,230.04

Paid 9/16/2015

Paid 10/16/2015

Paid 12/18/2015

Paid 2/8/2016

Paid 4/13/2016

paid 6/7/2016

Post-1997 Study	CPNRD	NPNRD	SPNRD	TBNRD	TPNRD	NRD Total	NDNR	Total
Invoice 14-1637	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 24,678.75	
Invoice 15-1724	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,435.00	
Contracted with Flatwater (#772)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 31,113.75	\$ 45,000.00
Remaining totals by Contributor								\$ 13,886.25

Consultant Estimates October 2014	\$ 115,000.00	\$ 107,000.00						\$ 222,000.00
OA/FA Study	CPNRD	NPNRD	SPNRD	TBNRD	TPNRD	NRD Total	IWMPPF	Total
Budget	\$ 9,000.00	\$ 9,000.00	\$ 9,000.00	\$ 9,000.00	\$ 9,000.00	\$ 45,000.00	\$ 180,000.00	\$ 225,000.00
actual to-date	\$ 8,852.57	\$ 8,852.57	\$ 8,852.57	\$ 8,852.57	\$ 8,852.57	\$ 44,262.85	\$ 177,051.40	\$ 221,314.25
ARI overage	\$ 758.02	\$ 758.02	\$ 758.02	\$ 758.02	\$ 758.02	\$ 3,790.10	\$ 3,790.10	\$ 7,580.20
actual total	\$ 9,610.59	\$ 9,610.59	\$ 9,610.59	\$ 9,610.59	\$ 9,610.59	\$ 48,052.95	\$ 180,841.50	\$ 228,894.45
difference between budget and actual	\$ (610.59)	\$ (610.59)	\$ (610.59)	\$ (610.59)	\$ (610.59)	\$ (3,052.95)	\$ (841.50)	\$ (3,894.45)

4 NRD total

\$ 36,000.00

\$ 35,410.28

\$ 3,032.08

\$ 38,442.36

OA/FA Refinements - HDR	CPNRD	NPNRD	SPNRD	TBNRD	TPNRD	NRD Total	NeDNR	Total
Budget estimate even split	\$ 4,147.44	\$ 4,147.44	\$ 4,147.44	\$ 4,147.44	\$ 4,147.44	\$ 20,737.22	\$ 20,737.22	\$ 52,000.00
HDR	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 20,000.00	\$ 20,000.00	\$ 40,000.00
ARI	\$ -	\$ 3,000.00	\$ 3,000.00	\$ -	\$ -	\$ 6,000.00	\$ 6,000.00	\$ 12,000.00
total by model area	\$ 4,000.00	\$ 7,000.00	\$ 7,000.00	\$ 4,000.00	\$ 4,000.00	\$ 20,737.22	\$ 20,737.22	\$ 52,000.00
<b>OA/FA total</b>	<b>\$ 13,610.59</b>	<b>\$ 16,610.59</b>	<b>\$ 16,610.59</b>	<b>\$ 13,610.59</b>	<b>\$ 13,610.59</b>	<b>\$ 68,790.17</b>	<b>\$ 201,578.72</b>	<b>\$ 280,894.45</b>

Robust Review Work	CPNRD	NPNRD	SPNRD	TBNRD	TPNRD	NRD Total	NDNR	Total
Budget Estimate Even Split	\$ 29,600.00	\$ 29,600.00	\$ 29,600.00	\$ 29,600.00	\$ 29,600.00	\$ 148,000.00	\$ 148,000.00	\$ 296,000.00

FWG WWUM		\$ 20,250.00	\$ 20,250.00			\$ 40,500.00	\$ 40,500.00	\$ 81,000.00
FWG Cohyst	\$ 17,500.00			\$ 17,500.00	\$ 17,500.00	\$ 52,500.00	\$ 52,500.00	\$ 105,000.00
ARI WWUM		\$ 27,500.00	\$ 27,500.00			\$ 55,000.00	\$ 55,000.00	\$ 110,000.00
By Model Area Total	\$ 17,500.00	\$ 47,750.00	\$ 47,750.00	\$ 17,500.00	\$ 17,500.00	\$ 148,000.00	\$ 148,000.00	\$ 296,000.00

	CPNRD	NPNRD	SPNRD	TBNRD	TPNRD	NRD Total	NeDNR	IWMPPF	Total
<b>Total Study Budget</b>	\$ 44,787.58	\$ 78,037.58	\$ 78,037.58	\$ 44,787.58	\$ 44,787.58	\$ 285,175.12	\$ 519,237.48	\$ 177,051.40	\$ 696,288.88

**Facilitation for 2nd Increment**

	CPNRD	NPNRD	SPNRD	TBNRD	TPNRD	NRD Total	NDNR	Total
HDR Engineering Facilitator								
Upper Platte Basinwide Plan	\$ 43,440.90	\$ 43,440.90	\$ 43,440.90	\$ 43,440.90	\$ 43,440.90	\$ 217,204.50	\$ 217,204.50	\$ 434,409.00

Remaining totals by Contributor

**PBC Operations Budget**

**PBC Funding Summary Updated 3/10/2016**

<b>PBHEP Budget Summary</b>	<b>CPNRD</b>	<b>NPNRD</b>	<b>SPNRD</b>	<b>TBNRD</b>	<b>TPNRD</b>	<b>NDNR</b>	<b>Total by Year</b>
Budget Year 1	\$ 503.33	\$ 503.33	\$ 503.33	\$ 503.33	\$ 503.34	\$ 503.34	\$ 3,020.00
Budget Year 2	\$ 535.85	\$ 535.85	\$ 535.85	\$ 535.85	\$ 535.85	\$ 535.85	\$ 3,215.10
Budget Year 3	\$ 561.15	\$ 561.15	\$ 561.15	\$ 561.15	\$ 561.15	\$ 561.15	\$ 3,366.90
<b>Total 3 Year Budget</b>	<b>\$ 1,600.33</b>	<b>\$ 1,600.33</b>	<b>\$ 1,600.33</b>	<b>\$ 1,600.33</b>	<b>\$ 1,600.34</b>	<b>\$ 1,600.34</b>	<b>\$ 9,602.00</b>

*Paid 5/23/13*

*Paid 3/7/14*

*paid 3/17/15*

<b>PBC Budget Summary**</b>	<b>CPNRD</b>	<b>NPNRD</b>	<b>SPNRD</b>	<b>TBNRD</b>	<b>TPNRD</b>	<b>NDNR</b>	<b>Total by Year</b>
Budget Year 4	\$ 578.33	\$ 578.33	\$ 578.33	\$ 578.33	\$ 578.33	\$ 578.35	\$ 3,470.00
Budget Year 5	\$ 615.69	\$ 615.69	\$ 615.69	\$ 615.69	\$ 615.69	\$ 615.71	\$ 3,694.17
Budget Year 6	\$ 655.47	\$ 655.47	\$ 655.47	\$ 655.47	\$ 655.47	\$ 655.49	\$ 3,932.82
<b>Total 3 Year Budget</b>	<b>\$1,849.49</b>	<b>\$1,849.49</b>	<b>\$1,849.49</b>	<b>\$1,849.49</b>	<b>\$1,849.49</b>	<b>\$1,849.55</b>	<b>\$11,097.00</b>

*Paid 3/8/16*

*\*Insurance Invoice received February 1, 2016*

PBC Budget Years 1 to 3 Review and Amendments  
Updated 7/29/2016

Table 1

PBC Budget Summary	CPNRD	NPNRD	SPNRD	TBNRD	TPNRD	Total NRD	DNR (NET Transfer)	DNR General Fund	Total by Year
Budget Year 1	\$ 301,400.00	\$ 708,400.00	\$ 61,600.00	\$ 444,400.00	\$ 684,200.00	\$ 2,200,000.00	\$ 3,300,000.00	\$ 2,200,000.00	\$ 7,700,000.00
Budget Year 2	\$ 301,400.00	\$ 708,400.00	\$ 61,600.00	\$ 444,400.00	\$ 684,200.00	\$ 2,200,000.00	\$ 3,300,000.00	\$ 2,200,000.00	\$ 7,700,000.00
Budget Year 3	\$ 301,400.00	\$ 708,400.00	\$ 61,600.00	\$ 444,400.00	\$ 684,200.00	\$ 2,200,000.00	\$ 3,300,000.00	\$ 2,200,000.00	\$ 7,700,000.00
<b>Total 3 Year Budget</b>	<b>\$ 904,200.00</b>	<b>\$ 2,125,200.00</b>	<b>\$ 184,800.00</b>	<b>\$ 1,333,200.00</b>	<b>\$ 2,052,600.00</b>	<b>\$ 6,600,000.00</b>	<b>\$ 9,900,000.00</b>	<b>\$ 6,600,000.00</b>	<b>\$ 23,100,000.00</b>
Amendment 1 Total (Dec-13) [NPNRD lease & Easement]	\$ -	\$ 121,788.00	\$ -	\$ -	\$ -	\$ 121,788.00	\$ -	\$ 9,432.00	\$ 131,220.00
Amendment 2 Total (Dec-13) [fall 2013 gw recharge]	\$ 6,000.00	\$ -	\$ 2,970.00	\$ 112,199.34	\$ 10,930.00	\$ 132,099.34	\$ -	\$ 198,149.00	\$ 330,248.34
Amendment 3 Total (Aug-14) [spring 2014 gw recharge]	\$ -	\$ -	\$ 600.00	\$ 258,121.50	\$ 3,600.00	\$ 262,321.50	\$ -	\$ 264,421.50	\$ 526,743.00
Amendment 4 Total (Feb-15) [spring-winter 2014-2015, phelps gw recharge]	\$ -	\$ -	\$ -	\$ 239,435.90	\$ -	\$ 239,435.90	\$ -	\$ 295,595.75	\$ 535,031.65
<b>Total 3 Year Budget &amp; Amendments</b>	<b>\$ 6,000.00</b>	<b>\$ 121,788.00</b>	<b>\$ 3,570.00</b>	<b>\$ 609,756.74</b>	<b>\$ 14,530.00</b>	<b>\$ 755,644.74</b>	<b>\$ -</b>	<b>\$ 767,598.25</b>	<b>\$ 1,523,242.99</b>
								\$ 7,367,598.25	
<b>PBC Budget Summary</b>									
Revised Budget Years 1 - 3*	\$ 3,782,442.00	\$ 203,046.00	\$ 7,866.00	\$ 1,802,256.66	\$ 1,564,330.00	\$ 7,359,940.66	\$ 9,900,000.00	\$ 7,374,042.25	\$ 24,633,982.83

Feb 2015 Meeting

Feb 2015 Meeting

PBC Project	Cnt #	CPNRD	NPNRD	SPNRD	TBNRD	TPNRD	Total NRD	DNR (NET Transfer)	DNR General Fund	Total by Project	NDNR Amount Paid	Project Status - Notes	NDNR Remaining
North Platte NRD Lease/Recharge - Cow Camp	see status	\$ -	\$ 196,758.00	\$ -	\$ -	\$ -	\$ 196,758.00	\$ 121,887.00	\$ 173,250.00	\$ 491,895.00	\$ -	Draft Contract	\$ 295,137.00
Phase II North Dry Creek	488	\$ -	\$ -	\$ -	\$ 23,348.78	\$ -	\$ 23,348.78	\$ 25,603.36	\$ -	\$ 48,952.14	\$ 25,603.36	Paid - January 21, 2015	\$ -
J-2 Reregulating Reservoir	574	\$ 1,168,500.00	\$ -	\$ -	\$ 1,168,500.00	\$ 934,800.00	\$ 3,271,800.00	\$ 4,907,700.00	\$ 6,426,750.00	\$ 14,606,250.00	\$ 11,334,450.00	Paid - June 30, 2016	\$ -
N-CORPE	778	\$ -	\$ -	\$ -	\$ -	\$ 615,000.00	\$ 615,000.00	\$ 922,500.00	\$ -	\$ 1,537,500.00	\$ 900,000.00	Partial Paid - September 4, 2014; draft amend	\$ 22,500.00
Industrial Baseline Offset SPNRD	894	\$ -	\$ -	\$ 4,296.00	\$ -	\$ -	\$ 4,296.00	\$ -	\$ 6,444.00	\$ 10,740.00	\$ 2,148.00	Parital Payment - June 16, 2015	\$ 4,296.00
Grandview Permanent Retirement	571	\$ -	\$ 6,288.00	\$ -	\$ -	\$ -	\$ 6,288.00	\$ -	\$ 9,432.00	\$ 15,720.00	\$ 9,432.00	Paid - October 28, 2015	\$ -
Orchard-Alfalfa Canal Rehabilitation	615	\$ 1,665,578.40	\$ -	\$ -	\$ -	\$ -	\$ 1,665,578.40	\$ 2,498,367.60	\$ -	\$ 4,163,946.00	\$ 2,498,367.60	Paid - June 10, 2015	\$ -
Re-Use Pits Recharge Project Spring 2014	N/A	\$ -	\$ -	\$ 600.00	\$ -	\$ 3,600.00	\$ 4,200.00	\$ -	\$ 6,300.00	\$ 10,500.00	\$ 6,300.00	Paid - April 17, 2015	\$ -
Thirty-Mile & Orchard Transfer from CPNRD easement package	616 & 615	\$ 118,682.40	\$ -	\$ -	\$ -	\$ -	\$ 118,682.40	\$ 178,023.60	\$ -	\$ 296,706.00	\$ 178,023.60	Paid - January 21, 2015	\$ -
CPNRD conservation easement package*	618	\$ 623,681.20	\$ -	\$ -	\$ -	\$ -	\$ 623,681.20	\$ 935,521.80	\$ -	\$ 1,559,203.00	\$ 935,521.80	Paid - October 8, 2014	\$ -
2014 E65 Canal and Elwood Reservoir Recharge Project (spring 2014)	771	\$ -	\$ -	\$ -	\$ 258,121.50	\$ -	\$ 258,121.50	\$ -	\$ 258,121.50	\$ 516,243.00	\$ 258,121.50	Paid - August 6, 2014	\$ -
Fall 2013 GW recharge	585-588/622-624	\$ 6,000.00	\$ -	\$ 2,970.00	\$ 112,199.34	\$ 10,930.00	\$ 132,099.34	\$ 198,149.00	\$ -	\$ 330,248.34	\$ 198,149.00	Paid - December 12, 2013	\$ -
Cozad & Thirty-Mile (PBHEP Overruns)	592 & 616	\$ 200,000.00	\$ -	\$ -	\$ -	\$ -	\$ 200,000.00	\$ 300,000.00	\$ -	\$ 500,000.00	\$ 300,000.00	Paid - September 24, 2014	\$ -
Spring 2014 E65 Canal and Elwood Reservoir Recharge Project	771	\$ -	\$ -	\$ -	\$ 34,378.65	\$ -	\$ 34,378.65	\$ -	\$ 34,378.50	\$ 68,757.15	\$ 34,378.50	Paid - February 26, 2015	\$ -
Fall/Winter 2014-2015 E65 Canal and Elwood Reservoir Recharge Project	800	\$ -	\$ -	\$ -	\$ 205,057.25	\$ -	\$ 205,057.25	\$ -	\$ 205,057.25	\$ 410,114.50	\$ 205,057.25	Paid - March 31, 2015	\$ -
Phelps Canal Diversion Project (DNR/PRRIP)	799	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 56,160.00	\$ 56,160.00	\$ 56,160.00	Paid - March 31, 2015	\$ -
Fall/Winter 2014-2015 E65 Canal and Elwood Reservoir Recharge Project	800	\$ -	\$ -	\$ -	\$ 651.14	\$ -	\$ 651.14	\$ 10,396.56	\$ -	\$ 11,047.70	\$ 10,396.56	Paid - March 15, 2016	\$ -
<b>Totals by Contributor</b>		\$ 3,782,442.00	\$ 203,046.00	\$ 7,866.00	\$ 1,802,256.66	\$ 1,564,330.00	\$ 7,359,940.66	\$ 9,899,999.92	\$ 7,374,042.25	\$ 24,633,982.83			
<b>DNR Total</b>													\$ 321,933.00
Budget Difference from Original 3 year budget		\$ (2,878,242.00)	\$ 1,922,154.00	\$ 176,934.00	\$ (469,056.66)	\$ 488,270.00	\$ (759,940.66)	\$ 0.08	\$ (774,042.25)	\$ (1,533,982.83)			

Specific Project Amendments	Cnt #	CPNRD	NPNRD	SPNRD	TBNRD	TPNRD	Total NRD	DNR (NET Transfer)	DNR General Fund	Total by Project
J-2 Reservoir (original)	574	\$ 1,168,500.00	\$ -	\$ -	\$ 1,168,500.00	\$ 934,800.00	\$ 3,271,800.00	\$ 4,907,700.00	\$ 6,426,750.00	\$ 14,606,250.00
J-2 Reservoir (revised; Aug-2013)	574	\$ 1,571,662.00	\$ -	\$ -	\$ 1,571,662.00	\$ 1,257,328.00	\$ 4,400,652.00	\$ 7,125,086.16	\$ 8,120,026.70	\$ 19,645,764.86
Phase II North Dry Creek (original)	488	\$ -	\$ -	\$ -	\$ 39,000.00	\$ -	\$ 39,000.00	\$ 58,500.00	\$ -	\$ 97,500.00
Phase II Augmentation North Dry Creek (revised; Apr-2014)	488	\$ -	\$ -	\$ -	\$ 24,000.00	\$ -	\$ 24,000.00	\$ 36,000.00	\$ -	\$ 60,000.00
CPNRD Conservation Easement Package (original)	618	\$ 742,364.00	\$ -	\$ -	\$ -	\$ -	\$ 742,364.00	\$ 1,113,545.00	\$ -	\$ 1,855,909.00
CPNRD Conservation Easement Package (revised; Aug-2014)	618	\$ 623,681.28	\$ -	\$ -	\$ -	\$ -	\$ 623,681.28	\$ 935,521.80	\$ -	\$ 1,559,203.08
Thirty-Mile (original)	616	\$ 2,021,592.80	\$ -	\$ -	\$ -	\$ -	\$ 2,021,592.80	\$ 3,032,389.21	\$ -	\$ 5,053,982.01
Thirty-Mile (revised; Aug-2014)	616	\$ 2,140,275.20	\$ -	\$ -	\$ -	\$ -	\$ 2,140,275.20	\$ 3,210,412.81	\$ -	\$ 5,350,688.01
N-CORPE (original)	778	\$ -	\$ -	\$ -	\$ -	\$ 600,000.00	\$ 600,000.00	\$ 900,000.00	\$ -	\$ 1,500,000.00
N-CORPE (revised; Oct-2014)	778	\$ -	\$ -	\$ -	\$ -	\$ 615,000.00	\$ 615,000.00	\$ 922,500.00	\$ -	\$ 1,537,500.00

Additional funding committed in years 4-6

PBC Years 4 to 6 Budget Review

Updated 8/1/2016

PBC Budget Summary	CPNRD	NPNRD	SPNRD	TBNRD	TPNRD	Total NRD	DNR (NET Transfer)	DNR General Fund	Total by Year
Budget Year 4	\$ 301,400.00	\$ 708,400.00	\$ 61,600.00	\$ 444,400.00	\$ 684,200.00	\$ 2,200,000.00	\$ 3,300,000.00	\$ 1,693,277	\$ 7,193,276.70
Budget Year 5	\$ 301,400.00	\$ 708,400.00	\$ 61,600.00	\$ 444,400.00	\$ 684,200.00	\$ 2,200,000.00	\$ 3,300,000.00		5,500,000.00
Budget Year 6	\$ 301,400.00	\$ 708,400.00	\$ 61,600.00	\$ 444,400.00	\$ 684,200.00	\$ 2,200,000.00	\$ 3,300,000.00		5,500,000.00
<b>Total 3 Year Budget</b>	<b>\$ 904,200.00</b>	<b>\$ 2,125,200.00</b>	<b>\$ 184,800.00</b>	<b>\$ 1,333,200.00</b>	<b>\$ 2,052,600.00</b>	<b>\$ 6,600,000.00</b>	<b>\$ 9,900,000.00</b>	<b>\$ 1,693,276.70</b>	<b>\$ 18,193,276.70</b>

PBC Project	Cnt #	CPNRD	NPNRD	SPNRD	TBNRD	TPNRD	Total NRD	DNR (NET Transfer)	DNR General Fund	Total by Project	NDNR Amount Paid	Project Status	NDNR Remaining	AF Remaining	Meeting Motion Ref.
North Platte NRD Lease/Recharge - Cow Camp	see status	\$ -	\$ 221,197.00	\$ -	\$ -	\$ -	\$ 221,197.00	\$ 331,795.50	\$ -	\$ 552,992.50	\$ -	(Draft Contract)	\$ 331,795.50		Jun 2013 pg 2 #7 C
Orchard-Alfalfa Canal Rehabilitation	615	\$ 501,038.88	\$ -	\$ -	\$ -	\$ -	\$ 501,038.88	\$ 488,106.29	\$ -	\$ 520,786.00	\$ 488,106.29	Paid - March 9, 2016	\$ -		Jun 2013 Pg 2 #7 B
N-CORPE	778	\$ -	\$ -	\$ -	\$ -	\$ 1,730,071.10	\$ 1,730,071.10	\$ 2,595,106.66	\$ -	\$ 4,325,177.76	\$ -	Under Contract	\$ 2,595,106.66		Aug 2013 pg 3 #8 B
J-2 Reregulating Reservoir	574	\$ 403,161.12	\$ -	\$ -	\$ 403,161.12	\$ 322,528.90	\$ 1,128,851.14	\$ 2,217,386.16	\$ 1,693,276.70	\$ 5,039,514.00	\$ 3,910,662.86	Paid June 30, 2016	\$ -		Aug 2013 Pg 3 #8 A
Platte Valley Irrigation District	588	\$ -	\$ -	\$ -	\$ -	\$ 2,000.00	\$ 2,000.00	\$ 3,000.00	\$ -	\$ 5,000.00	\$ -	Under Contract	\$ 3,000.00		June 2015 Pg 2 #5 C
Western Irrigation District	587	\$ -	\$ -	\$ 1,800.00	\$ -	\$ 4,200.00	\$ 6,000.00	\$ 9,000.00	\$ -	\$ 15,000.00	\$ -	Under Contract	\$ 9,000.00		June 2015 Pg 2 #5 C
Suburban Irrigation District	586	\$ -	\$ -	\$ -	\$ -	\$ 2,000.00	\$ 2,000.00	\$ 3,000.00	\$ -	\$ 5,000.00	\$ -	Under Contract	\$ 3,000.00		June 2015 Pg 2 #5 C
Fall/Winter 2015 E65 Canal and Elwood Reservoir Recharge Project	800	\$ -	\$ -	\$ -	\$ 148,928.00	\$ -	\$ 148,928.00	\$ 148,928.00	\$ -	\$ 297,856.00	\$ 148,928.00	Paid - October 14, 2015	\$ -		Aug 2015 Pg 2 #5 C
NPNRD Retirement Agreement - Hardt and Tighe	see status	\$ -	\$ 1,904,003.00	\$ -	\$ -	\$ -	\$ 1,904,003.00	\$ 1,989,157.50	\$ -	\$ 3,893,160.50	\$ -	(draft contract)	\$ 1,989,157.50		June 2015 Pg 4 #7 A
E65 Canal and Elwood Reservoir (4,500 acre ft) amd (5,000 acre ft)	571	\$ -	\$ -	\$ -	\$ 96,252.00	\$ -	\$ 96,252.00	\$ 96,252.00	\$ -	\$ 192,504.00	\$ 93,832.56	Partial Paid March 15, 2016	\$ 2,419.44		Dec 2015 Pg 3 #5 C
Phelps Canal (7,000 acre ft)	571	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 51,100.00	\$ 51,100.00	\$ 39,874.90	Partial Payment March 15, 2016	\$ 11,225.10	1,423	Dec 2015 Pg 3 #5 C
Oliver Reservoir Streamflow Enhancement Project	887	\$ -	\$ -	\$ 184,800.00	\$ -	\$ -	\$ 184,800.00	\$ 277,200.00	\$ -	\$ 462,000.00	\$ -	(Draft contract)	\$ 277,200.00		Dec 2015 Pg 4 #7 A
<b>Totals by Contributor</b>		<b>\$ 904,200.00</b>	<b>\$ 2,125,200.00</b>	<b>\$ 186,600.00</b>	<b>\$ 648,341.12</b>	<b>\$ 2,060,800.00</b>	<b>\$ 5,925,141.12</b>	<b>\$ 8,158,932.11</b>	<b>\$ 1,744,376.70</b>	<b>\$ 15,360,090.76</b>					

Remaining Financial Commitments by Contributor	\$ -	\$ -	\$ (1,800.00)	\$ 684,858.88	\$ (8,200.00)	\$ 674,858.88	\$ 1,741,067.89	\$ (51,100.00)	\$ 2,833,185.94	\$ 5,221,904.20
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\*\*\* E65/Elwood Canal invoice was paid in the amount of \$10,275 with a remaining \$2,419.44 but has 0 remaining acre feet

New Projects but no mataching dollars	Cnt #	CPNRD	NPNRD	SPNRD	TBNRD	TPNRD	Total NRD	DNR (NET Transfer)	DNR General Fund	Total by Project	Meeting Motion Ref.
Western Irrigation District	587	\$ -	\$ -	\$ 600.00	\$ -	\$ 1,400.00	\$ 2,000.00		\$ 3,000.00	\$ 5,000.00	Dec 2015 Pg 3 #5 C



8200 Cody Drive, Suite A  
Lincoln, Nebraska 68512-9550

Phone: 402.435.5441  
Fax: 402.435.7108

## MEMORANDUM

---

**To:** Ms. Jessie Winter  
Nebraska Department of Natural Resources  
P.O. Box 94676  
Lincoln, NE 68509-4676

**From:** Marc Groff

**Date:** 02 June 2016

**Re:** Progress Report – Contract #571

**Period:** 1 April 2016 through 31 May 2016

### **Work Completed this Period:**

1. Efforts this period were focused on
  - a. Incorporating updated commingled pumping and canal seepage information for the Irrigation Efficiency scenario runs in the WWUM area.
  - b. Developing surface water delivery, commingled pumping, and canal seepage estimates in the North Platte NRD, South Platte NRD, and Pumpkin Creek areas for the tillage scenarios.

**Billings for this period are \$25,035.00 -- for a billing-to-date of \$110,408.25.**

### **Deliverables**

1. Using the commingled pumping, surface water delivery information, and canal seepage information received at the end of March, TFG delivered recharge and ground water pumping exchange files for the revised baseline, high irrigation efficiency scenario, and low irrigation efficiency scenario modeling runs to ARI on 9 May 2016 for the WWUM area.
2. WWG delivered to ARI and TFG surface water delivery, commingled pumping, and canal seepage estimates for the tillage scenario modeling runs on 31 May 2016. The information covered the North Platte NRD, South Platte NRD, and Pumpkin Creek areas of the WWUM domain.

**Concerns:** Landuse information from 2006 through 2010 within the COHYST model area has not yet been finalized. Modeling efforts in that area are currently on hold pending the availability of that information.

### **Work Projected for Next Period:**

1. ARI to complete revised baseline, high irrigation efficiency scenario, and low irrigation efficiency scenario ground water modeling runs for the WWUM area.
2. ARI/WWG/TFG to begin developing summaries of the results from the integrated modeling runs for the revised baseline, high irrigation efficiency, and low irrigation efficiency modeling runs for the WWUM area.
3. ARI to format (de-aggregate WWG information from URF zones to model cells) commingled pumping and surface water delivery information for the tillage scenario runs for delivery to TFG for the WWUM area.
4. ARI to format canal seepage information from WWG for the tillage scenario runs for delivery to TFG for the WWUM area.



Tax ID# 47-0833338  
 8200 Cody Dr Ste A  
 LINCOLN, NE 68512-9550

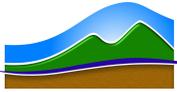
PBC Meeting  
 August 2, 2016  
 Attachment F

# Invoice

Date	Invoice #
6/2/2016	16-1910

Bill To
<b>Department of Natural Resources</b> <b>301 Centennial Mall South</b> <b>PO Box 94676</b> <b>Lincoln, NE 68509-4676</b>

PROJECT DESCRIPTION		BILLING PERIOD		TERMS
POAC Conservation Study		4/1/2016 - 5/31/2015		Net 30
Employee Class	Work Description	Qty	Rate	Amount
Designer/GIS Specialist	General GIS / Database Support	52.5	95.00	4,987.50
Water Resources Special...	Dataset Development and Model Execution	110.25	110.00	12,127.50
Senior Engineer	Project Coordination and Review of Modelign Results	13	165.00	2,145.00
Junior Engineer	Dataset formatting	2.5	90.00	225.00
	LABOR HOUR TOTAL			19,485.00
Subs	Subcontractors Fee - ARI Invoice 1735	1	480.00	480.00
Subs	Subcontractors Fee - ARI Invoice 1760	1	3,420.00	3,420.00
Subs	Subcontractors Fee - WWG May Invoice	1	1,650.00	1,650.00
	TOTAL OTHER DIRECT COSTS			5,550.00
			<b>Total</b>	<b>\$25,035.00</b>
			<b>Balance Due</b>	<b>\$25,035.00</b>



Adaptive Resources, Inc.  
 229 E Kiowa Ave  
 FORT MORGAN, CO 80701-3109

(970)370-2481  
 chelli@adaptiveresourcesinc.com, kimberly@ari-  
 http://www.adaptiveresourcesinc.com

PBC Meeting  
 August 2, 2016  
 Attachment F

# Adaptive Resources, Inc.

## Invoice

Date	Invoice #
04/26/2016	1735
Terms	Due Date
Net 30	05/26/2016

### Bill To

The Flatwater Group, Inc.  
 8200 Cody Dr, Ste A  
 Lincoln, NE 68512-9550

Amount Due	Enclosed
\$2,515.00	

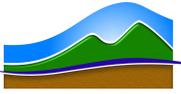
Please detach top portion and return with your payment.

Date	Account Summary	Amount
03/26/2016	Balance Forward	\$13,976.25
	Payments and credits between 03/26/2016 and 04/26/2016	-11,941.25
	New charges (details below)	480.00
	Total Amount Due (activity through 04/26/2016)	2,515.00

Date	Activity	Quantity	Rate	Amount
	<b>Conservation Measures Study</b>			
	<b>Week starting 04/04/2016</b>			
04/06/2016	Western Canal 1953-2013 comingled scenario pumping, Lodgepole Creek SWO and Comingled Pumping exploration, 4 hrs @ \$120.00/hr	4:00	120.00	480.00
	<b>SUBTOTAL - Conservation Measures Study = \$480.00</b>			

We appreciate your business.

<b>Total Of New Charges</b>	\$480.00
<b>Total Amount Due</b>	\$2,515.00



Adaptive Resources, Inc.  
 229 E Kiowa Ave  
 FORT MORGAN, CO 80701-3109

(970)370-2481  
 chelli@adaptiveresourcesinc.com, kimberly@ari-  
 http://www.adaptiveresourcesinc.com

PBC Meeting  
 August 2, 2016  
 Attachment F

# Adaptive Resources, Inc.

## Invoice

Date	Invoice #
05/27/2016	1760
Terms	Due Date
Net 30	06/26/2016

### Bill To

The Flatwater Group, Inc.  
 8200 Cody Dr, Ste A  
 Lincoln, NE 68512-9550

Amount Due	Enclosed
\$5,935.00	

Please detach top portion and return with your payment.

Date	Account Summary	Amount
04/26/2016	Balance Forward	\$2,515.00
	Payments and credits between 04/26/2016 and 05/27/2016	0.00
	New charges (details below)	3,420.00
	Total Amount Due (activity through 05/27/2016)	5,935.00

Date	Activity	Quantity	Rate	Amount
	<b>Conservation Measures Study</b>			
	<b>Week starting 05/02/2016</b>			
05/04/2016	Pumpkin Creek Canals and Western Canal NIR data aggregation for WWG, 3 hrs @ \$120.00/hr	3:00	120.00	360.00
05/05/2016	Pumpkin Creek Canals and Western Canal NIR data aggregation for WWG, 3 hrs @ \$120.00/hr	3:00	120.00	360.00
	<b>Week starting 05/16/2016</b>			
05/19/2016	Review information from TFG, download the files, create new WEL file databases for Baseline, 1 hr @ \$150.00/hr	1:00	150.00	150.00
05/20/2016	Review information from TFG, download the files, create new WEL file databases for Baseline, 2 hrs 30 mins @ \$150.00/hr	2:30	150.00	375.00
	<b>Week starting 05/23/2016</b>			
05/23/2016	Add the surrounding information to Baseline dataset for WY, CO, UNWNRD, and others for WEL file, make start year operate correctly, 2 hrs 30 mins @ \$150.00/hr	2:30	150.00	375.00
05/23/2016	Add commingled pumping to the WEL file databases from Kara for WEL File, 1 hr 30 mins @ \$150.00/hr	1:30	150.00	225.00

Continue to the next page

Date	Activity	Quantity	Rate	Amount
05/24/2016	Add the surrounding information to Baseline dataset for WY, CO, UNWNRD, and others for WEL file, make start year operate correctly, 4 hrs @ \$150.00/hr	4:00	150.00	600.00
05/24/2016	Add commingled pumping to the WEL file databases from Kara for WEL File, 2 hrs @ \$150.00/hr	2:00	150.00	300.00
05/25/2016	Add database to SQL to get count of wells for each certification., 4 hrs 30 mins @ \$150.00/hr	4:30	150.00	675.00
<b>SUBTOTAL - Conservation Measures Study = \$3,420.00</b>				

We appreciate your business.

<b>Total Of New Charges</b>	<b>\$3,420.00</b>
<b>Total Amount Due</b>	<b>\$5,935.00</b>



June 1, 2016

Marc Groff  
The Flatwater Group  
8200 Cody Drive, Ste A  
Lincoln, NE 68512

Re: Invoice for POAC Impact of Soil and Conservation Measures Study (WWG: POAC001)

Dear Marc,

Please see the invoice below for Wilson Water Group's professional service in support of the POAC Impact of Soil and Conservation Measures Study over the February 26, 2015 through May 25, 2016 period. Table 1 provides the breakdown of current and total invoiced by task; primary activities performed during this time period and any comments or concerns are provided below.

**May Invoice**

Staff	Hours	Rate	Total
K. Sobieski	10	\$ 165	\$ 1,650.00
<b>Total Amount This Statement</b>			<b>\$ 1,650.00</b>

**Table 1: Subtask Budget Summary**

Task	Description	Estimated Budget	Month Costs	Cum Costs	% Spent	Est. % Complete	Rem. Budget
Task 1	Baseline Scenario	\$ 10,000	\$ -	\$ 9,680	97%	100%	\$ 320
Task 2	First-Tier Analysis	\$ 7,500	\$ 495	\$ 6,885	92%	100%	\$ 615
Task 3	Second-Tier Analysis	\$ 7,500	\$ 495	\$ 6,885	92%	100%	\$ 615
Task 4	Analyses Documentation	\$ 7,500	\$ -	\$ 3,100	41%	41%	\$ 4,400
Task 5	Coordination/Integration	\$ 7,500	\$ 660	\$ 4,252	57%	57%	\$ 3,248
<b>Project Total</b>		<b>\$ 40,000</b>	<b>\$ 1,650</b>	<b>\$ 30,802</b>	<b>77%</b>	<b>77%</b>	<b>\$ 9,198</b>

**Primary Activities:**

- Compilation and delivery of the NPNRD historical tillage and no-tillage scenario results for integration into the GW Model and CropSim.
- Development and delivery of the SPNRD and Pumpkin Creek historical tillage and no-tillage scenario results for integration into the GW Model and CropSim.

**Comments/Concerns/Schedules:**

The following comments/concerns for the current month are in bold font; comments/concerns from previous months are for reference.

**None**

Sincerely, Wilson Water Group LLC



Kara Sobieski, Senior Project Manager



Erin Wilson, Principal



8200 Cody Drive, Suite A  
Lincoln, Nebraska 68512-9550

Phone: 402.435.5441  
Fax: 402.435.7108

## MEMORANDUM

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**To:** Ms. Jessie Winter  
Nebraska Department of Natural Resources  
P.O. Box 94676  
Lincoln, NE 68509-4676

**From:** Marc Groff

**Date:** 27 July 2016

**Re:** Progress Report – Contract #571

**Period:** 1 June 2016 through 30 June 2016 – TFG Labor  
Subcontractor Invoices received through 26 July 2016

### Work Completed this Period:

1. Efforts this period were focused on
  - a. Commingled pumping and canal seepage information from WWG was de-aggregated by ARI for TFG's use
  - b. Completed the Irrigation Efficiency scenario runs in the WWUM area.
  - c. Began initial setup work of the surface water operations model for the COHYST modeling area.

**Billings for this period are \$26,361.71 -- for a billing-to-date of \$136,769.96.**

### Deliverables

1. ARI delivered to TFG de-aggregated commingled pumping and canal seepage information for the Tillage Scenarios on 22 July 2016. The information covered the North Platte NRD, South Platte NRD, Pumpkin Creek, and Western Canal areas of the WWUM domain.
2. ARI completed the ground water model runs for the Irrigation Scenarios.
3. Results from the Irrigation Efficiency scenarios were presented to the POAC technical committee on 25 July 2016.

**Concerns:** Landuse information from 2006 through 2010 within the COHYST model area has not yet been finalized. Modeling efforts beyond initial structural setup in that area are currently on hold pending the availability of that information.

### Work Projected for Next Period:

1. TFG to complete watershed model runs for the Tillage Scenarios using the information ARI provided on 22 July 2016.
2. ARI to complete ground water model runs for the Tillage Scenarios following completion of the watershed model runs.



Tax ID# 47-0833338  
 8200 Cody Dr Ste A  
 LINCOLN, NE 68512-9550

PBC Meeting  
 August 2, 2016  
 Attachment F

# Invoice

Date	Invoice #
7/26/2016	16-1932

Bill To
<b>Department of Natural Resources</b> <b>301 Centennial Mall South</b> <b>PO Box 94676</b> <b>Lincoln, NE 68509-4676</b>

PROJECT DESCRIPTION		BILLING PERIOD		TERMS
POAC Conservation Study		5/1/2016 - 6/30/2015		Net 30
Employee Class	Work Description	Qty	Rate	Amount
Water Resources Special...	Dataset Development and Model Execution	16.5	110.00	1,815.00
Senior Engineer	Project Coordination and Review of Modeling Results	5	165.00	825.00
Designer/GIS Specialist	General GIS / Database Support	5	95.00	475.00
Junior Engineer	Dataset formatting	5	90.00	450.00
	TFG LABOR SUBTOTAL			3,565.00
Subs	Subcontractor Fee - HDR Invoice 00489179-H	1	3,342.96	3,342.96
Subs	Subcontractors Fee - ARI Invoice 1781	1	1,350.00	1,350.00
Subs	Subcontractors Fee - ARI Invoice 1801	1	14,226.25	14,226.25
Subs	Subcontractors Fee - WWG June Invoice	1	3,877.50	3,877.50
	TOTAL OTHER DIRECT COSTS			22,796.71
			<b>Total</b>	<b>\$26,361.71</b>
			<b>Balance Due</b>	<b>\$26,361.71</b>



Reference Invoice Number with Payment

**HDR Engineering, Inc.**  
 Omaha, NE 68114  
 Phone: (402) 399-1000

HDR Invoice No. 00489179-H  
 Invoice Date June 13, 2016  
 Invoice Amount Due \$3,342.96  
 Payment Terms Net 30

**Flatwater Group Inc**  
**Mr. Thomas E Riley PE - President**  
 8200 Cody Drive, Suite A  
 Lincoln, NE 68512

Remit to HDR, Inc.  
 PO Box 74008202  
 Chicago, IL 60674-8202  
 ACH Bank of America  
 Account #: 355004076604  
 Transit #: 081000032

For Services Related to the COHYST and WWUM Model Runs

Professional Services  
 From: May 1, 2016 To: May 28, 2016

Professional Services Summarization	Hours	Amount
Water Resources Engineer	24.00	3,254.16
	24.00	<b>\$3,254.16</b>
<b>Total Professional Services</b>		<b>\$3,254.16</b>

Expenses Summarization	Quantity	Amount
Technology Charge	24.00	88.80
		<b>\$88.80</b>
<b>Total Expenses</b>		<b>\$88.80</b>

<b>Amount Due This Invoice</b>	<b>\$3,342.96</b>
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Fee Amount	\$41,000.00
Fee Invoiced to Date	\$3,342.96
Fee Remaining	\$37,657.04

HDR Internal Reference Only	
Client Number	200622
Business Unit	00134
Contract Number	CON0104499
Project Number	00000000272552



HDR Invoice No. 00489179-H  
Invoice Date June 13, 2016

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**Professional Services and Expense Detail**

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<b>Professional Services</b>		Hours	Billing Rate	Amount
Water Resources Engineer	McConville, Matthew T	24.00	135.59	3,254.16
		<b>24.00</b>		<b>\$3,254.16</b>
		<b>Total Professional Services</b>		<b>\$3,254.16</b>

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<b>Expenses</b>		Quantity	Billing Rate	Amount
Technology Charge		24.00	3.70	88.80
				<b>\$88.80</b>

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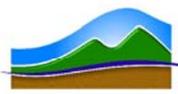
**Total Expenses \$88.80**

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**Total Contract \$3,342.96**

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Adaptive Resources, Inc.  
 229 E Kiowa Ave  
 FORT MORGAN, CO 80701-3109

(970)370-2481  
 chelli@adaptiveresourcesinc.com, kimberly@ari-  
 http://www.adaptiveresourcesinc.com

# Adaptive Resources, Inc.

## Invoice

Date	Invoice #
06/26/2016	1781
Terms	Due Date
Net 30	07/26/2016

Bill To
The Flatwater Group, Inc. 8200 Cody Dr, Ste A Lincoln, NE 68512-9550

Amount Due	Enclosed
\$7,285.00	

Please detach top portion and return with your payment.

Date	Account Summary	Amount
05/27/2016	Balance Forward	\$5,935.00
	Payments and credits between 05/27/2016 and 06/26/2016	0.00
	New charges (details below)	1,350.00
	Total Amount Due (activity through 06/26/2016)	7,285.00

Date	Activity	Quantity	Rate	Amount
<b>Conservation Measures Study</b>				
<b>Week starting 05/23/2016</b>				
05/26/2016	Add database to SQL to get count of wells for each certification., 2 hrs 30 mins @ \$150.00/hr	2:30	150.00	375.00
05/26/2016	Add land use dataset for parcel and well information for .wel file, 1 hr 30 mins @ \$150.00/hr	1:30	150.00	225.00
05/27/2016	Add land use dataset for parcel and well information for .wel file, 2 hrs @ \$150.00/hr	2:00	150.00	300.00
<b>Week starting 05/30/2016</b>				
05/31/2016	Database changes, SQL script for query of .wel file and data information., 3 hrs @ \$150.00/hr	3:00	150.00	450.00
<b>SUBTOTAL - Conservation Measures Study = \$1,350.00</b>				

We appreciate your business.

<b>Total Of New Charges</b>	\$1,350.00
<b>Total Amount Due</b>	\$7,285.00



Adaptive Resources, Inc.  
 229 E Kiowa Ave  
 FORT MORGAN, CO 80701-3109

(970)370-2481  
 chelli@adaptiveresourcesinc.com, kimberly@ari-  
 http://www.adaptiveresourcesinc.com

PBC Meeting  
 August 2, 2016  
 Attachment F

# Adaptive Resources, Inc.

## Invoice

Date	Invoice #
07/26/2016	1801
Terms	Due Date
Net 30	08/25/2016

### Bill To

The Flatwater Group, Inc.  
 8200 Cody Dr, Ste A  
 Lincoln, NE 68512-9550

Amount Due	Enclosed
\$18,996.25	

Please detach top portion and return with your payment.

Date	Account Summary	Amount
06/26/2016	Balance Forward	\$7,285.00
	Payments and credits between 06/26/2016 and 07/26/2016	-2,515.00
	New charges (details below)	14,226.25
	Total Amount Due (activity through 07/26/2016)	18,996.25

Date	Activity	Quantity	Rate	Amount
<b>Conservation Measures Study</b>				
<b>Week starting 07/04/2016</b>				
07/06/2016	Setup first datasets from information provided by Kara, 2 hrs @ \$150.00/hr	2:00	150.00	300.00
07/07/2016	assist Heath w/.wel file creation, 1 hr @ \$120.00/hr	1:00	120.00	120.00
07/07/2016	Setup first datasets from information provided by Kara, 3 hrs @ \$150.00/hr	3:00	150.00	450.00
07/07/2016	Import data into SQL database for incorporation into larger .wel file, 1 hr 30 mins @ \$150.00/hr	1:30	150.00	225.00
07/08/2016	Import data into SQL database for incorporation into larger .wel file, 3 hrs @ \$150.00/hr	3:00	150.00	450.00
<b>Week starting 07/11/2016</b>				
07/12/2016	Work on Database Table setup for the output, load Comingled pumping from Kara for Pumpkin Creek, 2 hrs @ \$150.00/hr	2:00	150.00	300.00
07/13/2016	Canal/Lateral Conveyance Loss - Hist/NoTill, 3 hrs @ \$120.00/hr	3:00	120.00	360.00
07/13/2016	Work on Database Table setup for the output, load Comingled pumping from Kara for Pumpkin Creek, 1 hr 30 mins @ \$150.00/hr	1:30	150.00	225.00
07/13/2016	Work on Database Table setup for the output, load Comingled pumping from Kara for Western Canal, 1 hr 30 mins @ \$150.00/hr	1:30	150.00	225.00

Continue to the next page

Date	Activity	Quantity	Rate	Amount
07/14/2016	Work on Database Table setup for the output, load Comingled pumping from Kara for Western Canal, 2 hrs @ \$150.00/hr	2:00	150.00	300.00
07/15/2016	Further setup of SQL scripts for the Pumpking Creek Baseline, High and Low Eff runs, 1 hr 30 mins @ \$150.00/hr	1:30	150.00	225.00
<b>Week starting 07/18/2016</b>				
07/18/2016	Tillage Scenario Pumping and Conveyance Loss, Western Canal and Pumpkin Creek Conveyance Loss, 2 hrs 30 mins @ \$120.00/hr	2:30	120.00	300.00
07/18/2016	Work on baseline, high, and low efficiency model runs., 1 hr @ \$150.00/hr	1:00	150.00	150.00
07/19/2016	Tillage Scenario Pumping and Conveyance Loss, Western Canal and Pumpkin Creek Conveyance Loss, 2 hrs 30 mins @ \$120.00/hr	2:30	120.00	300.00
07/19/2016	Comingled pumping distribution for scenarios, database setup, SQL, and .wel file creation, 1 hr 30 mins @ \$150.00/hr	1:30	150.00	225.00
07/20/2016	Work on baseline, high, and low efficiency model runs., 2 hrs @ \$150.00/hr	2:00	150.00	300.00
07/20/2016	.wel file creation for the High, low and Baseline models, 5 hrs @ \$150.00/hr	5:00	150.00	750.00
07/20/2016	Comingled pumping distribution for scenarios, database setup, SQL, and .wel file creation, 3 hrs @ \$150.00/hr	3:00	150.00	450.00
07/21/2016	Tillage Scenario Pumping and Conveyance Loss, Western Canal and Pumpkin Creek Conveyance Loss, 6 hrs @ \$120.00/hr	6:00	120.00	720.00
07/21/2016	Update of WWUM ground water model with recharge and well files; QC of recharge and well files; incorporation of canal recharge outside of recharge file., 6 hrs 30 mins @ \$105.00/hr	6:30	105.00	682.50
07/21/2016	Model set up, QC, model runs, and exporting data., 8 hrs 30 mins @ \$95.00/hr	8:30	95.00	807.50
07/21/2016	Work on baseline, high, and low efficiency model runs., 6 hrs @ \$150.00/hr	6:00	150.00	900.00
07/21/2016	Delivery of .wel files to GW model and file files setup, 2 hrs 30 mins @ \$150.00/hr	2:30	150.00	375.00
07/21/2016	Changes to .wel files and update to baseline model run with new information, 30 mins @ \$150.00/hr	0:30	150.00	75.00
07/22/2016	Tillage Scenario Pumping and Conveyance Loss, Western Canal and Pumpkin Creek Conveyance Loss, 7 hrs @ \$120.00/hr	7:00	120.00	840.00
07/22/2016	Update of WWUM ground water model with recharge and well files; QC of recharge and well files; incorporation of canal recharge outside of recharge file., 8 hrs 30 mins @ \$105.00/hr	8:30	105.00	892.50
07/22/2016	Model set up, QC, model runs, and exporting data., 7 hrs 30 mins @ \$95.00/hr	7:30	95.00	712.50
07/22/2016	Work on baseline, high, and low efficiency model runs., 4 hrs @ \$150.00/hr	4:00	150.00	600.00
07/22/2016	Changes to .wel files and update to baseline model run with new information, 3 hrs @ \$150.00/hr	3:00	150.00	450.00
07/24/2016	Model set up, QC, model runs, and exporting data., 30 mins @ \$95.00/hr	0:30	95.00	47.50
<b>Week starting 07/25/2016</b>				
07/25/2016	QC of ground water model results; post-processing and presentation materials., 3 hrs @ \$105.00/hr	3:00	105.00	315.00

Continue to the next page

Date	Activity	Quantity	Rate	Amount
07/25/2016	Model set up, QC, model runs, and exporting data., 4 hrs 15 mins @ \$95.00/hr	4:15	95.00	403.75
07/25/2016	Travel for and POAC meeting discussing conservation measures results., 5 hrs @ \$150.00/hr	5:00	150.00	750.00
<b>SUBTOTAL - Conservation Measures Study = \$14,226.25</b>				

We appreciate your business.

<b>Total Of New Charges</b>	\$14,226.25
<b>Total Amount Due</b>	\$18,996.25



June 28, 2016

Marc Groff  
The Flatwater Group  
8200 Cody Drive, Ste A  
Lincoln, NE 68512

Re: Invoice for POAC Impact of Soil and Conservation Measures Study (WWG: POAC001)

Dear Marc,

Please see the invoice below for Wilson Water Group's professional service in support of the POAC Impact of Soil and Conservation Measures Study over the May 26, 2015 through June 25, 2016 period. Table 1 provides the breakdown of current and total invoiced by task; primary activities performed during this time period and any comments or concerns are provided below.

**June Invoice**

Staff	Hours	Rate	Total
K. Sobieski	23.5	\$ 165	\$ 3,877.50
<b>Total Amount This Statement</b>			<b>\$ 3,877.50</b>

**Table 1: Subtask Budget Summary**

Task	Description	Estimated Budget	Month Costs	Cum Costs	% Spent	Rem. Budget
Task 1	Baseline Scenario	\$ 10,000	\$ -	\$ 9,680	97%	\$ 320
Task 2	First-Tier Analysis	\$ 7,500	\$ -	\$ 6,885	92%	\$ 615
Task 3	Second-Tier Analysis	\$ 7,500	\$ -	\$ 6,885	92%	\$ 615
Task 4	Analyses Documentation	\$ 7,500	\$ 3,300	\$ 6,400	85%	\$ 1,100
Task 5	Coordination/Integration	\$ 7,500	\$ 578	\$ 4,830	64%	\$ 2,671
<b>Project Total</b>		<b>\$ 40,000</b>	<b>\$ 3,878</b>	<b>\$ 34,680</b>	<b>87%</b>	<b>\$ 5,321</b>

**Primary Activities:**

- Continued documentation of model approach and results.
- Continued coordination with other technical consultants on data integration efforts between models.

**Comments/Concerns/Schedules:**

The following comments/concerns for the current month are in bold font; comments/concerns from previous months are for reference.

**None**

Sincerely, Wilson Water Group LLC



Kara Sobieski, Senior Project Manager



Erin Wilson, Principal

# Memo

To: POAC Technical Committee  
From: Thad Kuntz (ARI) and Duane Woodward (CPNRD)  
Date: 8/2/2016  
Re: FINAL – Robust Review Project Analysis Scope of Work

## Introduction

The Platte Overappropriated Area Committee (POAC) Technical Committee tasked Thad Kuntz from Adaptive Resources Inc. (ARI) and Duane Woodward from CPNRD to develop a scope of work for the Robust Review Analysis. The Districts included in this analysis are NPNRD, SPNRD, TPNRD, CPNRD, and TBNRD.

## Robust Review General Scope of Work Description

A “change modeling” technique will be utilized for this analysis; this technique compares a baseline or reference model run (either the Western Water Use Management (WWUM) Model or Cooperative Hydrology Study (COHYST) Model) to a modified model run. The modified run introduces a change to a specific dataset in the baseline run and, when compared to the baseline, the difference is reflected in the stream baseflow, heads, or aquifer storage. The results from this technique do not represent actual estimates of future stream baseflow, streamflow, heads, or aquifer storage, but rather provide the estimated change in the stream baseflow, streamflow, heads, or aquifer storage.

Two phases of modeling will be completed to provide information for each District on post-1997 irrigated acreage development impacts, mitigation measures completed to offset those impacts, and effects of other water management actions each District has completed. Phase 1 modeling will encompass mitigation measures and management actions completed through 2013 while Phase 2 modeling will address additional analysis on surface water only and commingled acres, projects after 2013, and future water management planning for each District.

## Phase 1 Modeling

The Phase I Robust Review modeling encompasses the post-1997 irrigated acreage development depletions and the management actions to mitigate these depletions. These actions include: excess flow canal recharge, ground water pumping allocations, certified acreage retirements, certified acreage transfers, surface water recharge projects, crop type changes, and municipal/industrial baseline changes. To complete Phase 1 Modeling, the POAC Technical Committee has identified the following baseline simulation and 7 individual analyses:

### **Baseline Run:**

1. Existing Models
  - a. WWUM Modeling
    - i. Utilize the 1953 through 2014 Model
    - ii. Only use 1997 through 2013 for the analysis
    - iii. Modification to the Baseline Simulation
      1. Temporary retirements and transfers of certified ground water only irrigated acres occur in several NRDs and as a consequence the baseline simulation will need to be modified to

# Memo

incorporate the reactivation or movement of these acres. To account for this affect, the baseline model will add these acres or move them to the original location, represented as irrigated corn, in the simulation when their temporary location expires.

- iv. Repeat 2009 through 2013 climate into the future through 2063
- v. Repeat the 2009 through 2013 pumping and recharge into the future through 2063
- b. COHYST Modeling
  - i. Utilize the 1950 through 2013 Model
  - ii. Only use 1997 through 2013 for the analysis
  - iii. Repeat 1988 through 2013 climate through 2063
    - 1. Hold the 2013 land use dataset (this is the 2010 land use dataset repeated through 2013) constant for the projection
- c. Municipal, Industrial, and Livestock Pumping
  - i. To complete the municipal, industrial, and livestock transfer and baseline analyses, both modeling efforts may need to revise the current estimates and locations of pumping and if not already in place, revise with actual pumping estimates for each category.
- d. Canal Recharge Projects from Excess Flow
  - i. The baseline models will need modified to incorporate the excess flow diversions for recharge.
  - ii. To determine the amount of recharge from the diversion of excess flows a similar calculation to the NDNR Technical Memorandum for the 2011 Ground Water Recharge Demonstration Projects will need completed.

**For all modified modeling analyses described below, each District will need to have separate analyses to determine their individual effects and compared to the baseline run described above. For the WWUM Modeling, each analysis using the regionalized soil water balance modeling will have only one run for both NPNRD and SPNRD. Post processing will split the run for each District.**

## **Land Use Analysis:**

- 1. *Increase in Post-1997 Irrigated Ground Water Only Acres*
  - a. WWUM Modeling
    - i. A set of model runs have been completed by ARI and the only additional work is two ground water model runs to separate out the effects of each NRD. No additional regionalized soil water balance modeling work will need to be completed. ARI will coordinate with NDNR, allowing NDNR to conduct the same analysis of increases in post-1997 irrigated groundwater only acres. NDNR will use the same input files and the same model version used by ARI to replicate the analysis, and the results of the two will be compared and evaluated to determine if the methods used meet the goals and objectives of the IMPs. This activity will take place as part of the Robust Review process.

# Memo

- b. COHYST Modeling
  - i. To complete the analysis for CPNRD, TPNRD, and TBNRD individually, within each District the irrigation portion of the irrigated acres developed after 1997 will be removed from the land use dataset and ran through the watershed and ground water models to provide a streamflow value.
- 2. *Certified Irrigated Acreage Retirements (PBHEP, AWEF, CREP, EQUIP, NRD, etc.)*
  - a. The retirement analyses will be completed separate from the Post-1997 depletions analysis. However, the effects from the retirements can be incorporated into the depletions analysis to provide the overall combined results.
  - b. WWUM Modeling Area
    - i. The retirement analysis will pump water at the retired parcel in the modified model each year using the projected pumping described in the baseline run.
      - 1. There is the possibility of double accounting for retirement effects if the lands were post-1997 developed lands. To mitigate this issue, the lands that were retired and developed after 1997 will not be analyzed in the retirement analysis. (SPNRD has no post-1997 retired acres, NPNRD estimates that 130 retired acres were post-1997 lands.)
  - c. COHYST Modeling Area
    - i. The retirement analysis will pump water at the retired parcel in the modified model each year as if the parcel grew corn from the retirement date to the end of the analysis.
      - 1. There is the possibility of double accounting for retirement effects if the lands were post-1997 developed lands. To mitigate this issue, the lands that were retired and developed after 1997 will not be analyzed in the retirement analysis.
- 3. *Certified Irrigated Acreage Transfers*
  - a. The transfer analyses will also be completed separate from the Post-1997 depletions analysis. However, the effects from the transfers can be incorporated into the depletions analysis to provide the overall concept of combining the results.
  - b. WWUM and COHYST Modeling Areas
    - i. In the modified model:
      - 1. Water will be pumped at the pre-transferred location using the crop type and pumping amount of the post-transferred location. New irrigation recharge will be estimated will be provided for each pre-transferred location. The future projection will be completed as described in the baseline run.
      - 2. The post-transferred location will be converted to dryland pasture in the WWUM Modeling and dryland crop in the COHYST Modeling.
      - 3. If the transfer is to an industrial use, then the efficiency of that new use must be estimated for the simulation.
- 4. *Variances Granted Since July 1, 1997*

# Memo

- a. Each variance will need individually conceptualized and an analysis will need to be completed.
- b. NDNR has compiled a list of the variances provided by the NRDs that have occurred over this timeframe. It is anticipated that each individual variance can be categorized into one of the previous categories: Increase in acres, retirements, or transfers.

## **Change in Crop Mix Analysis:**

1. *Changes in Crop Consumptive Use from Changes in Crop Mix as Compared to 1997 Crop Mix*
  - a. This phase of the project will investigate the changes in crop consumptive use since 1997. This will be completed by determining the annual total consumptive use and comparing it to the 1997 annual consumptive use.

## **Canal Recharge Projects Analysis:**

1. *2011 Ground Water Recharge Demonstration Project*
  - a. In the modified model, this will be completed by removing the amount of excess flow diversions and associated recharge.
2. *2013 South Platte River Flood Flow Diversion and Recharge*
  - a. In the modified model, this analysis can be completed by removing the recharge from the diversion of excess flows.
3. *Phelps County Canal Recharge Project*
  - a. In the modified model, this analysis can be completed by removing the recharge from the diversion of excess flows into Phelps canal during the winter months.
4. *Elwood Reservoir Ground Water Recharge Project*
  - a. In the modified model, this analysis can be completed by removing the recharge from the diversion of excess flows into Elwood Reservoir.

## **Augmentation Project Analysis:**

1. *North Dry Creek Augmentation Project*
  - a. In the modified model, this analysis can be completed by removing the pumping into dry creek during the time period water was pumped.

## **Allocation Analysis (NPNRD and SPNRD Only):**

1. *Ground Water Allocations (North Platte and South Platte NRDs Only)*
  - a. A set of model runs have been completed by ARI and the only additional work is two ground water model runs to separate out the effects of each NRD. No additional regionalized soil water balance modeling work will need to be completed. ARI will coordinate with NDNR, allowing NDNR to conduct the same analysis evaluating the allocations. NDNR will use the same input files and the same model version used by ARI to replicate the analysis, and the results of the two will be compared and evaluated to determine if the methods used meet the goals and objectives of the IMPs. This activity will take place as part of the Robust Review process.

# Memo

## **Municipal, Industrial, and Confined Livestock Feeding Operation Baseline and Transfer Analysis:**

1. *Changes in Municipal, Industrial, and Confined Livestock Feeding Operations Consumptive Use and Location of Pumping as Compared to Their Baseline*
  - a. In the modified model:
    - i. For municipal baseline pumping from 1998 through 2013, the calculated baseline annual per capita consumptive use will be multiplied by the annual population of 1997 and will be compared to the baseline run's actual pumping amount.
    - ii. For industrial baselines from 1998 through 2013, the 1997 estimates of pumping for each industry will be fixed to compare against the actual pumping in the baseline run.
    - iii. For livestock baselines from 1998 through 2013, the average gallons/head/day will be multiplied against the 1997 cattle of feed for each NRD tracked livestock facility and compared to the baseline run's actual pumping.
  - b. To determine the effect of municipal, industrial, or livestock transfers, in the modified model, the pre-transferred pumping locations will be used. The post-transferred pumping locations will be removed from the modified model.

## **Overall Robust Review Analysis:**

1. Overall analysis will combine each analysis into a single run.
  - a. The overall analysis will encompass the following changes:
    - i. Land Use Analysis
    - ii. Canal Recharge Projects Analysis
    - iii. Augmentation Projects Analysis
    - iv. Allocation Analysis (NPNRD and SPNRD Only)
    - v. Municipal Baseline and Transfer Analysis
  - b. **Some of these changes may not be able to be analyzed together so a composite of the combined and individual analyses may need to be utilized in order to complete this analysis.**

## Documentation for All Analyses

The change results will be determined and presented for each of the individual analysis listed above (e.g. Land Use Analysis, Change in Crop Mix Analysis, etc.) and by District. Additionally, complete overall documentation for the process, assumptions, and results will be presented in a single document for the Platte Basin area.

## Project Timeline

The Phase 1 modeling analyses need completed by December 31<sup>st</sup>, 2016. In early 2017, the information and draft documentation will be provided to the POAC Technical Committee and Administrators for review and discussion.

# Memo

## Phase 2 Modeling

The Phase II modeling will be completed to provide each District with information on the post-1997 irrigated acre development impacts, projects, and management actions that are in the in development after 2013 that will effect stream baseflow or streamflow through the first increment and into the future. The future projects and management actions include canal recharge, allocations, certified acreage retirements, certified acreage transfers, surface water recharge projects, idled certified acres, crop type changes, and municipal/industrial baseline changes. Additionally, different climatic conditions may exist in the future that may include wet and dry scenarios and modeling can be completed to help inform each District's water resource management planning. Additionally, commingled pumping will be addressed in Phase 2 Modeling. The Phase 1 Modeling will be used as the modeling or a template of the modeling needed for this phase of the Robust Review Analysis.

Below is a list of potential projects being considered for Phase II modeling:

- Temporary Surface Water Only and Commingled Land Retirements
- Climatic Conditions
- Change in Crop Mix (If Needed)
- Commingled Acres
- Canal Rehabilitation: Cozad, Orchard-Alfalfa, Thirty-Mile
- Nebraska Cooperative Republican Platte Enhancement Project
- J-2 Regulating Reservoir
- Elm Creek Reservoir Potential Excess Flow Storage
- Surface Water Transfer Recharge/Stream Augmentation Projects (NPNRD)
- Future High Flow Canal Recharge Projects (Similar to the 2011 and 2013/2014 Recharge Projects)
- Planned Projects (after 2013)
- Conversion from Surface Water Only Irrigation to Commingled Irrigation
- Conversion from Surface Water Only Irrigation to Ground Water Only Irrigation (CPNRD)

## AGREEMENT

This AGREEMENT, made as of August 1, 2016 is entered into by and between the Platte Basin Water Project Coalition and the Central Platte Natural Resources District.

Whereas the Platte Basin Water Project Coalition (Coalition) was formed through an Interlocal Cooperation Agreement, in part, by five natural resources districts within the Platte and North Platte and South Platte River basins in Nebraska, and

Whereas the five natural resources district members of the Coalition have, as one of each of their responsibilities, to manage groundwater within each of their districts which has presently been determined to be partially over-appropriated and partially fully appropriated, and

Whereas members of the Coalition have obtained funding from the Nebraska Department of Natural Resources to assist in conducting the research to assist in making the determination of whether and how basins become fully appropriated, and

Whereas the Central Platte Natural Resources District (CPNRD) has or will shortly enter into agreements with two consultants for the purpose of performing the scope of work which is attached hereto as Exhibit A, and

Whereas upon the successful completion of the work as specified in the attached scope of work, the Coalition will reimburse the CPNRD up to \$42,250 for said work upon submission of satisfactory proof of payment for said work.

NOW THEREFORE, in consideration of the mutual promises contained herein the parties agree as follows:

1. **TERM.** This Agreement shall be for a term commencing upon the date of the last signature affixed hereto and continuing until September 30, 2016, unless the agreement is:
  - a. Terminated for cause in the event either party defaults on any of its material obligations under this agreement. The non-defaulting party shall notify the defaulting party in writing, specifying in detail the nature and extent of such breach. If within 30 calendar days after written notice of such default, the defaulting party fails to remedy the default, this agreement will terminate.
  - b. Amended by written amendment signed by both parties.
2. **SCOPE OF WORK.**
  - a. Attachment A is the scope of work as developed by the Coalition.
  - b. Technical oversight of the scope of work will be carried out by the Coalition, via the Platte Overappropriated Area Technical Committee.

3. **REIMBURSEMENT.**

- a. The Coalition agrees to reimburse the CPNRD for actual costs not to exceed \$42,250 ( $\$38,442.36 / 4 = \$9,610.59$  per NRD + \$3,790.10 NeDNR) incurred during the term of this agreement in performance of the task orders approved under this agreement. CPNRD will submit monthly invoices via email to the Coalition members for review. All submissions shall be detailed and include appropriate supporting documentation. Reimbursement shall be made for expenses submitted to and approved by the Coalition. Reimbursement will only be for a budget approved by the Coalition and for tasks performed under the Scope of Work developed and approved by the Coalition.

4. **NOTICES.** All notices, requests, demands, and other communication hereunder shall be in writing and delivered or mailed, with postage prepaid to the Agreement Managers at the addresses set forth in this agreement.

5. **AGREEMENT MANAGERS.**

- a. The Coalition Agreement Manager is: Kent O. Miller, Great Western Bank Center, 111 South Dewey Street – Second Floor, North Platte, NE 69103-1347; email: [komiller@tpnrd.org](mailto:komiller@tpnrd.org); phone: (308) 535-8080.
- b. The CPNRD Agreement Manager is: Duane Woodward, 215 Kaufman Avenue, Grand Island, NE 68803; email: [Woodward@cpnrd.org](mailto:Woodward@cpnrd.org); phone: (308) 385-6282.

6. **BINDING.** This Agreement shall inure to and bind the successors, assigns and representatives of the parties, provided however that this Agreement may not be assigned by either party without the prior written consent of the other. Neither party intends anyone to be a third party beneficiary of this Agreement.

7. **AMENDMENT.** This agreement may be amended only in writing and duly executed by both parties.

8. **TITLES NOT CONTROLLING.** The titles of the paragraphs are for reference only and shall not be used to construe the language of this agreement.

9. **PREVAILING LAW.** This Agreement is governed by the laws of the State of Nebraska including the State Contract Claims Act, *Neb. Rev. Stat.* Sections 81-8,302 through 81-8,306.

10. **TECHNOLOGY ACCESS.** CPNRD agrees to ensure compliance with Nebraska Access Technology Standards.  
See website at: <http://www.nitc.state.ne.us/standards/accessibility>.

11. **FAIR EMPLOYMENT PRACTICES.** CPNRD agrees to ensure compliance with the Nebraska Fair Employment Practice Act which prohibits contractors of the State of Nebraska, and their subcontractors, from discriminating against any employee or applicant for employment, with respect to hire, tenure, terms, conditions or privileges of employment because of race, color, religion, sex, disability, or national origin, *Neb. Rev. Stat.* Sections 48-1101 through 48-1125.
12. **NEBRASKA DRUG-FREE WORKPLACE POLICY.** CPNRD agrees to ensure compliance with the Nebraska Drug-Free Workplace Policy.
13. **SIGNATURES.**

IN WITNESS WHEREOF, the Parties to this Agreement through their duly authorized representatives have executed this Agreement on the days and dates set out below, and certify that they have read, understood, and agreed to the terms and conditions of this Agreement as set forth herein.

The Effective Date of this Agreement is the date of the signature last affixed to this Agreement.

Platte Basin Water Project Coalition

Central Platte Natural Resources District

By: \_\_\_\_\_

by: \_\_\_\_\_

Mr. Kent O. Miller, Chairman

Mr. Lyndon Vogt, CPNRD Manager

Date: \_\_\_\_\_

Date: \_\_\_\_\_

## **SHORT FORM AGREEMENT BETWEEN OWNER AND HDR ENGINEERING, INC. FOR PROFESSIONAL SERVICES**

**THIS AGREEMENT** is made as of this 2<sup>nd</sup> day of August, 2016, between the Platte Basin Coalition (“OWNER”) and HDR ENGINEERING, INC., (“ENGINEER”) a Nebraska corporation, with principal offices at 8404 Indian Hills Drive, Omaha, Nebraska, 68114 for services in connection with the project known as OA/FA Refinements - refinement of estimates developed to establish the overall difference between over-appropriated and fully appropriated (“Project”);

**WHEREAS**, OWNER desires to engage ENGINEER to provide professional engineering, consulting and related services (“Services”) in connection with the Project; and

**WHEREAS**, ENGINEER desires to render these Services as described in SECTION I, Scope of Services.

**NOW, THEREFORE**, OWNER and ENGINEER in consideration of the mutual covenants contained herein, agree as follows:

### **SECTION I. SCOPE OF SERVICES**

ENGINEER will provide Services for the Project, which consist of the Scope of Services as outlined on the attached Exhibit A.

### **SECTION II. TERMS AND CONDITIONS OF ENGINEERING SERVICES**

The “HDR Engineering, Inc. Terms and Conditions for Professional Services,” which are attached hereto in Exhibit B, are incorporated into this Agreement by this reference as if fully set forth herein.

### **SECTION III. RESPONSIBILITIES OF OWNER**

The OWNER shall provide the information set forth in paragraph 6 of the attached “HDR Engineering, Inc. Terms and Conditions for Professional Services.”

### **SECTION IV. COMPENSATION**

Compensation for ENGINEER’S services under this Agreement shall be on the basis of

- Direct Labor Costs times a factor of 3.15 for the services of ENGINEER’S personnel engaged on the Project, plus Reimbursable Expenses, with total charges not to exceed \$40,000 without prior authorization by OWNER.

The amount of any sales tax, excise tax, value added tax (VAT), or gross receipts tax that may be imposed on this Agreement shall be added to the ENGINEER’S compensation as Reimbursable Expenses.

Compensation terms are defined as follows:

Direct Labor Cost shall mean salaries and wages, (basic and overtime) paid to all personnel engaged directly on the Project. The Direct Labor Costs will be adjusted annually as of the first of every year to reflect equitable changes to the compensation payable to Engineer.

Reimbursable Expense shall mean the actual expenses incurred directly or indirectly in connection with the Project for transportation travel, subconsultants, subcontractors, technology charges, telephone, telex, shipping and express, and other incurred expense.

#### **SECTION V. PERIOD OF SERVICE**

Upon receipt of written authorization to proceed, ENGINEER shall perform the services within the time period(s) described in Exhibit A.

Unless otherwise stated in this Agreement, the rates of compensation for ENGINEER'S services have been agreed to in anticipation of the orderly and continuous progress of the project through completion. If any specified dates for the completion of ENGINEER'S services are exceeded through no fault of the ENGINEER, the time for performance of those services shall be automatically extended for a period which may be reasonably required for their completion and all rates, measures and amounts of ENGINEER'S compensation shall be equitably adjusted.

**SECTION VI. SPECIAL PROVISIONS**

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first written above.

Platte Basin Coalition

“OWNER”

BY: \_\_\_\_\_

NAME: Kent O. Miller

TITLE: PBC Chair

ADDRESS: 111 South Dewey St. 2<sup>nd</sup> Floor  
P.O. Box 1347  
North Platte, NE 69103-1347

HDR ENGINEERING, INC.

“ENGINEER”

BY: \_\_\_\_\_

NAME: Matthew B. Tondl

TITLE: Senior Vice President

ADDRESS: 8404 Indian Hills Drive  
Omaha, NE 68114

**EXHIBIT A**  
**SCOPE OF SERVICES**

## Scope of Work

**OBJECTIVE:** To assist the Platte Basin Coalition (PBC) and Platte Over-Appropriated Committee (POAC) with refinement of estimates developed to establish the overall difference between over-appropriated and fully appropriated. This refinement will be focused on providing additional context to the preliminary results that have been obtained from the analyses performed to date with the aim of developing useful summary data to support second increment basin-wide planning. It is anticipated that this effort will be completed at the basin level, with subsequent refinement to sub-basin/NRD levels, as necessary, in the future.

**DESCRIPTION OF WORK:**

- 1.0 **Meeting and Administration** - This task will consist project administration, coordination with subconsultant (The Flatwater Group), one meeting with the POAC to review draft results, and one meeting with PBC to present findings.
  
- 2.0 **Development of New Summaries for the Balance between Overappropriated and Fully Appropriated-** This task will consist of developing new summary balances of the difference between overappropriated and fully appropriated in a variety of combinations to illustrate how the balance of water supplies and demands changes both spatially and temporally when demand categories are modified. The following combinations will be among those combinations that will be evaluated. The tables associated with each combination describe the approach to building the incremental water uses for the combination, with reference to the data source in the current spreadsheet developed for the current to fully appropriated evaluation that the Technical Committee has been reviewing and utilizing over the past year.

2.1 Near-Term - Municipal/Industrial and Agricultural Use vs. Supply

<b>Term</b>	<b>Description</b>	<b>Spreadsheet sheet/column</b>
Supply	SWCU + GWDP + Res Evap	'Full Upper Platte NonIRR' and 'Full Upper Platte IRR' Column G
Municipal/Industrial Agricultural Uses	COHYST/WWUM Models	'Full Upper Platte NonIRR' and 'Full Upper Platte IRR': GWDP: Column E GWCU: Column J SWCU: Column C SW Demand: Column I

2.2 Near-Term - Municipal/Industrial, Agricultural, and Net Surface Water Loss vs. Supply Two versions will be developed to provide an envelope of the range for the Net Surface Water Loss category

<b>Term</b>	<b>Description</b>	<b>Spreadsheet sheet/column</b>
Supply	SWCU + GWDP + Res Evap	'Full Upper Platte NonIRR' and 'Full Upper Platte IRR' Column G
Municipal/Industrial Agricultural Uses	COHYST/WWUM Models	'Full Upper Platte NonIRR' and 'Full Upper Platte IRR': GWDP: Column E GWCU: Column J SWCU: Column C SW Demand: Column I
Net Surface Water Loss		'Full Upper Platte NonIRR' and 'Full Upper Platte IRR': Column K

2.3 Near-Term -Municipal/Industrial, Agricultural, Net Surface Water Loss, and downstream demands vs. Supply

<b>Term</b>	<b>Description</b>	<b>Spreadsheet sheet/column</b>
Supply	SWCU + GWDP + Res Evap	'Full Upper Platte NonIRR' and 'Full Upper Platte IRR' Column G
Municipal/Industrial Agricultural Uses	COHYST/WWUM Models	'Full Upper Platte NonIRR' and 'Full Upper Platte IRR': GWDP: Column E GWCU: Column J SWCU: Column C SW Demand: Column I
Net Surface Water Loss		'Full Upper Platte NonIRR' and 'Full Upper Platte IRR': Column K
Downstream Demands		'Full Upper Platte NonIRR' and 'Full Upper Platte IRR': Column N

2.4 Near-Term -Municipal/Industrial, Agricultural, Net Surface Water Loss, downstream demands, and non-consumptive demands (hydropower/instream flow vs. Supply)

Term	Description	Spreadsheet sheet/column
Supply	SWCU + GWDP + Res Evap	'Full Upper Platte NonIRR' and 'Full Upper Platte IRR' Column G
Municipal/Industrial Agricultural Uses	COHYST/WWUM Models	'Full Upper Platte NonIRR' and 'Full Upper Platte IRR': GWDP: Column E GWCU: Column J SWCU: Column C SW Demand: Column I
Net Surface Water Loss		'Full Upper Platte NonIRR' and 'Full Upper Platte IRR': Column K
Downstream Demands		'Full Upper Platte NonIRR' and 'Full Upper Platte IRR': Column N
Hydro/Instream Flow		'Full Upper Platte NonIRR' and 'Full Upper Platte IRR': Instream: Column L Hydro: Column M

### 3.0

#### **Projected Balance Changes in the Next Planning Increment with No Additional**

**Actions-** Previous evaluations have defined the supplies and uses based on long-term demands (that is, based on the effects of the ultimate long-term demands of ground water irrigation full consumptive use). This task will focus of providing a link, consistent with the incremental planning approach, between current level of depletions due to groundwater uses and the ultimate full consumptive use. It will also consider the effects of management activities that have occurred during the first increment. Using current conditions as a baseline, this “no action” evaluation will update the summaries developed in Task 2 and reflect the likely changes that will occur within the next planning increment (2019-2029). The two primary changes, and the proposed approach to quantify the changes, are summarized below.

- 3.1 Increases in groundwater depletions from existing uses through 2029. Depletion estimates have been developed for the overappropriated area from 1950 to 2012 utilizing the COHYST and WWUM modeling tools. The increases in groundwater depletions due to existing uses through 2029 will be estimated by projecting the depletion curves predicted by the modeling tools through 2029. As results from the robust review and other potential modeling efforts or model improvements become available, they may be substituted for the projected depletions in this effort. This analysis will account for the overall depletions of current uses. The portion of the overall depletions due to post-1997 uses will be determined through the robust review study. This will provide the POAC with:

- 1) Current level of depletions,
- 2) Projected depletions from current uses (overall and post-1997 from the robust review) at the end of the second increment in 2029,
- 3) And the full consumptive use of current uses.

3.2 Effects of management actions implemented during the first increment. The effects of management actions undertaken by member NRDs and the DNR over the first increment will be estimated. In addition, activities of the PRRIP will be considered. Estimates of these effects have been previously developed in most cases and documented in reports such as those provided in the annual basinwide meeting reports, the annual PRRIP report, etc. These estimates will be compiled from DNR and NRD sources, reviewed and estimates of total effects developed.

Note that this evaluation will not focus on fully developing new supply and use estimates for each term of the basin water supply and demand, but rather focus on the incremental effects of these two elements. In addition, these estimates are projections based on currently available data and modeling results. However the tools of the analysis will be flexible and provide a template to allow for updated results from modeling efforts associated with the robust review to be incorporated into the evaluation upon their completion.

Updated balance summaries will be developed incorporating the above listed elements to provide supporting information to answer such questions as:

- What is the incremental increase in total depletions in 2029?
- How much of this total increase will likely be mitigated by current management actions or those management actions that will be necessary to mitigate post-1997 uses associated with the second increment?
- How are the current near-term balances likely to change by 2029?
- How might the various demand categories be impacted?

Answers to these questions will assist in the development of goals, objectives, and actions that will be incorporated in the second increment basinwide plan.

4.0 **Summary Report** – A draft report will be prepared that describes the methods utilized in the evaluation along with the results. The results will summarize the balances associated with each scenario along with a list of key assumptions. Following review by the POAC and PBC, comments will be incorporated into the final report.

**WORK PRODUCTS:** The PBC shall be provided an electronic copy of the final report along with a copy of all data files and tools developed to support the analyses.

**SCHEDULE:** Work on this task order will commence upon execution by all parties with a draft report submitted to the POAC the first week in September 2016. A review meeting with the POAC will be held in September and a presentation of final study results in October 2016.

**BUDGET:** The estimated costs associated with this work are outlined in the table below.

Table 1. Budget Estimate

<b>Task</b>	<b>Budget</b>
Task 1 – Meetings and Project Administration	\$8,200
Task 2 - Development of New Summaries	\$11,800
Task 3 - Projected Balance Changes in Next Increment	\$14,000
Task 4 – Documentation	\$6,000
<b>TOTAL</b>	<b>\$40,000</b>

**EXHIBIT B**

**TERMS AND CONDITIONS**

# HDR Engineering, Inc.

## Terms and Conditions for Professional Services

### 1. STANDARD OF PERFORMANCE

The standard of care for all professional engineering, consulting and related services performed or furnished by ENGINEER and its employees under this Agreement will be the care and skill ordinarily used by members of ENGINEER's profession practicing under the same or similar circumstances at the same time and in the same locality. ENGINEER makes no warranties, express or implied, under this Agreement or otherwise, in connection with ENGINEER's services.

### 2. INSURANCE/INDEMNITY

ENGINEER agrees to procure and maintain, at its expense, Workers' Compensation insurance as required by statute; Employer's Liability of \$250,000; Automobile Liability insurance of \$1,000,000 combined single limit for bodily injury and property damage covering all vehicles, including hired vehicles, owned and non-owned vehicles; Commercial General Liability insurance of \$1,000,000 combined single limit for personal injury and property damage; and Professional Liability insurance of \$1,000,000 per claim for protection against claims arising out of the performance of services under this Agreement caused by negligent acts, errors, or omissions for which ENGINEER is legally liable. OWNER shall be made an additional insured on Commercial General and Automobile Liability insurance policies and certificates of insurance will be furnished to the OWNER. ENGINEER agrees to indemnify OWNER for claims to the extent caused by ENGINEER's negligent acts, errors or omissions. However, neither Party to this Agreement shall be liable to the other Party for any special, incidental, indirect, or consequential damages (including but not limited to loss of profits or revenue; loss of use or opportunity; loss of good will; cost of substitute facilities, goods, or services; and/or cost of capital) arising out of, resulting from, or in any way related to the Project or the Agreement from any cause or causes, including but not limited to any such damages caused by the negligence, errors or omissions, strict liability or breach of contract.

### 3. OPINIONS OF PROBABLE COST (COST ESTIMATES)

Any opinions of probable project cost or probable construction cost provided by ENGINEER are made on the basis of information available to ENGINEER and on the basis of ENGINEER's experience and qualifications, and represents its judgment as an experienced and qualified professional engineer. However, since ENGINEER has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractor(s)' methods of determining prices, or over competitive bidding or market conditions, ENGINEER does not guarantee that proposals, bids or actual project or construction cost will not vary from opinions of probable cost ENGINEER prepares.

### 4. CONSTRUCTION PROCEDURES – NOT USED

### 5. CONTROLLING LAW

This Agreement is to be governed by the law of the state where ENGINEER's services are performed.

### 6. SERVICES AND INFORMATION

OWNER will provide all criteria and information pertaining to OWNER's requirements for the project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations. OWNER will also provide copies of any OWNER-furnished Standard Details, Standard Specifications, or Standard Bidding Documents which are to be incorporated into the project.

OWNER will furnish the services of soils/geotechnical engineers or other consultants that include reports and appropriate professional recommendations when such services are deemed necessary by ENGINEER. The OWNER agrees to bear full responsibility for the technical accuracy and content of OWNER-furnished documents and services.

In performing professional engineering and related services hereunder, it is understood by OWNER that ENGINEER is not engaged in rendering any type of legal, insurance or accounting services, opinions or advice. Further, it is the OWNER's sole responsibility to obtain the advice of an attorney, insurance counselor or accountant to protect the OWNER's legal and financial interests. To that end, the OWNER agrees that OWNER or the OWNER's representative will examine all studies, reports, sketches, drawings, specifications, proposals and other documents, opinions or

advice prepared or provided by ENGINEER, and will obtain the advice of an attorney, insurance counselor or other consultant as the OWNER deems necessary to protect the OWNER's interests before OWNER takes action or forebears to take action based upon or relying upon the services provided by ENGINEER.

### 7. SUCCESSORS, ASSIGNS AND BENEFICIARIES

OWNER and ENGINEER, respectively, bind themselves, their partners, successors, assigns, and legal representatives to the covenants of this Agreement. Neither OWNER nor ENGINEER will assign, sublet, or transfer any interest in this Agreement or claims arising therefrom without the written consent of the other. No third party beneficiaries are intended under this Agreement.

### 8. RE-USE OF DOCUMENTS

All documents, including all reports, drawings, specifications, computer software or other items prepared or furnished by ENGINEER pursuant to this Agreement, are instruments of service with respect to the project. OWNER retains ownership of all such documents. OWNER may retain copies of the documents for its information and reference in connection with the project; however, none of the documents are intended or represented to be suitable for reuse by OWNER or others on extensions of the project or on any other project. Any reuse without written verification or adaptation by ENGINEER for the specific purpose intended will be at OWNER's sole risk and without liability or legal exposure to ENGINEER, and OWNER will defend, indemnify and hold harmless ENGINEER from all claims, damages, losses and expenses, including attorney's fees, arising or resulting therefrom. Any such verification or adaptation will entitle ENGINEER to further compensation at rates to be agreed upon by OWNER and ENGINEER.

### 9. TERMINATION OF AGREEMENT

OWNER or ENGINEER may terminate the Agreement, in whole or in part, by giving seven (7) days written notice to the other party. Where the method of payment is "lump sum," or cost reimbursement, the final invoice will include all services and expenses associated with the project up to the effective date of termination. An equitable adjustment shall also be made to provide for termination settlement costs ENGINEER incurs as a result of commitments that had become firm before termination, and for a reasonable profit for services performed.

### 10. SEVERABILITY

If any provision of this agreement is held invalid or unenforceable, the remaining provisions shall be valid and binding upon the parties. One or more waivers by either party of any provision, term or condition shall not be construed by the other party as a waiver of any subsequent breach of the same provision, term or condition.

### 11. INVOICES

ENGINEER will submit monthly invoices for services rendered and OWNER will make payments to ENGINEER within SIXTY (60) days of OWNER's receipt of ENGINEER's invoice.

ENGINEER will retain receipts for reimbursable expenses in general accordance with Internal Revenue Service rules pertaining to the support of expenditures for income tax purposes. Receipts will be available for inspection by OWNER's auditors upon request.

If OWNER disputes any items in ENGINEER's invoice for any reason, including the lack of supporting documentation, OWNER may temporarily delete the disputed item and pay the remaining amount of the invoice. OWNER will promptly notify ENGINEER of the dispute and request clarification and/or correction. After any dispute has been settled, ENGINEER will include the disputed item on a subsequent, regularly scheduled invoice, or on a special invoice for the disputed item only.

OWNER recognizes that late payment of invoices results in extra expenses for ENGINEER. ENGINEER retains the right to assess OWNER interest at the rate of one percent (1%) per month, but not to exceed the maximum rate allowed by law, on invoices which are not paid within SIXTY (60) days from the date OWNER receives ENGINEER's invoice. In the event undisputed portions of ENGINEER's invoices are not paid when due, ENGINEER also reserves the right, after seven (7) days prior written

notice, to suspend the performance of its services under this Agreement until all past due amounts have been paid in full.

## **12. CHANGES**

The parties agree that no change or modification to this Agreement, or any attachments hereto, shall have any force or effect unless the change is reduced to writing, dated, and made part of this Agreement. The execution of the change shall be authorized and signed in the same manner as this Agreement. Adjustments in the period of services and in compensation shall be in accordance with applicable paragraphs and sections of this Agreement. Any proposed fees by ENGINEER are estimates to perform the services required to complete the project as ENGINEER understands it to be defined. For those projects involving conceptual or process development services, activities often are not fully definable in the initial planning. In any event, as the project progresses, the facts developed may dictate a change in the services to be performed, which may alter the scope. ENGINEER will inform OWNER of such situations so that changes in scope and adjustments to the time of performance and compensation can be made as required. If such change, additional services, or suspension of services results in an increase or decrease in the cost or time required for performance of the services, an equitable adjustment shall be made, and the Agreement modified accordingly.

## **13. CONTROLLING AGREEMENT**

These Terms and Conditions shall take precedence over any inconsistent or contradictory provisions contained in any proposal, contract, purchase order, requisition, notice-to-proceed, or like document.

## **14. EQUAL EMPLOYMENT AND NONDISCRIMINATION**

In connection with the services under this Agreement, ENGINEER agrees to comply with the applicable provisions of federal and state Equal Employment Opportunity for individuals based on color, religion, sex, or national origin, or disabled veteran, recently separated veteran, other protected veteran and armed forces service medal veteran status, disabilities under provisions of executive order 11246, and other employment, statutes and regulations, as stated in Title 41 Part 60 of the Code of Federal Regulations § 60-1.4 (a-f), § 60-300.5 (a-e), § 60-741 (a-e).

## **15. HAZARDOUS MATERIALS – NOT USED**

## **16. EXECUTION**

This Agreement, including the exhibits and schedules made part hereof, constitute the entire Agreement between ENGINEER and OWNER, supersedes and controls over all prior written or oral understandings. This Agreement may be amended, supplemented or modified only by a written instrument duly executed by the parties.

## **17. ALLOCATION OF RISK**

**OWNER AND ENGINEER HAVE EVALUATED THE RISKS AND REWARDS ASSOCIATED WITH THIS PROJECT, INCLUDING ENGINEER'S FEE RELATIVE TO THE RISKS ASSUMED, AND AGREE TO ALLOCATE CERTAIN OF THE RISKS, SO, TO THE FULLEST EXTENT PERMITTED BY LAW, THE TOTAL AGGREGATE LIABILITY OF ENGINEER (AND ITS RELATED CORPORATIONS, SUBCONSULTANTS AND EMPLOYEES) TO OWNER AND THIRD PARTIES GRANTED RELIANCE IS LIMITED TO THE GREATER OF \$100,000 OR ITS FEE, FOR ANY AND ALL INJURIES, DAMAGES, CLAIMS, LOSSES, OR EXPENSES (INCLUDING ATTORNEY AND EXPERT FEES) ARISING OUT OF ENGINEER'S SERVICES OR THIS AGREEMENT REGARDLESS OF CAUSE(S) OR THE THEORY OF LIABILITY, INCLUDING NEGLIGENCE, INDEMNITY, OR OTHER RECOVERY. THIS LIMITATION SHALL NOT APPLY TO THE EXTENT THE DAMAGE IS PAID UNDER ENGINEER'S COMMERCIAL GENERAL LIABILITY INSURANCE POLICY.**

## **18. LITIGATION SUPPORT**

In the event ENGINEER is required to respond to a subpoena, government inquiry or other legal process related to the services in connection with a legal or dispute resolution proceeding to which ENGINEER is not a party, OWNER shall reimburse ENGINEER for reasonable costs in responding and compensate ENGINEER at its then standard rates for reasonable time incurred in gathering information and documents and attending depositions, hearings, and trial.

## **19. UTILITY LOCATION – NOT USED**



July 28, 2016

Platte Basin Coalition  
C/O Duane Woodward, Central Platte Natural Resources District  
215 Kaufman Avenue  
Grand Island, Nebraska 68803

RE: Difference between the Current and Fully Appropriated Levels of Development - Additional Costs

Dear Duane,

Adaptive Resources, Inc. (ARI) has been contracted with Central Platte Natural Resources District to provide modeling analyses and technical support to complete the Difference between the Current and Fully Appropriated Levels of Development project. A cost estimate of \$115,000 was provided to the Platte Basin Coalition through a letter dated October 2, 2014 (attached) based on the draft scope of work titled: "Difference between the Current and Fully Appropriated Levels of Development" dated September 10, 2014 (SOW). As of July 27, 2016, ARI has \$7,505 of additional costs above the original cost estimate for the SOW. Also, additional funding is required to complete the ground water modeling depletion analysis documentation and review the HDR documentation of the project. The additional costs are a consequence of several unanticipated tasks outside the scope of work and are outlined below:

1. To complete the ground water modeling analysis to determine the depletions associated with the pumping within North Platte NRD and South Platte NRD from 1953 through 2013, as described in task 2) a. ii. 1. of the SOW, ARI's cost estimate only included work completed by its staff. However, to complete the task, The Flatwater Group (TFG) of Lincoln, NE was required by the POAC Technical Committee to perform a watershed model run to remove all the pumping and irrigation inefficiency recharge. ARI provided the money to complete this task totaling \$3,395.00 as outlined in invoice # 15-1795 dated 9/11/2015 from TFG (attached).
2. Provided in the cost estimate within the notes by ARI under item 4) b. i. and in the **Overall Project Costs** section, we described a potential insufficient understanding of the complexity of the commingled pumping in the INSIGHT Methods and the possibility of additional costs to complete this task. Here is the language provided in the cost estimate provided by ARI in the notes of 4) b. i.:

*A portion of this task will be completed by ARI in task 2. a. ii. 1. and ARI will compile the crop mix NIR for the long term supplies. Concern: The INSIGHT Methods document does not address the complexity of commingled pumping and the*

different approaches to calculating the pumping by both the WWUM and COHYST Modeling. As a consequence, the estimate to complete this portion of work does not include possible additional data analysis to determine the ground water demand from commingled lands. To complete this portion of the task, additional funds outside the estimate may need to be allocated to this task.

Here is the cost estimate language provided in the Overall Project Costs section from ARI:

Also as described under Phase I – Project Data and Documentation in portion 4. b. i., there is a possibility that additional work and funds will be needed to determine the commingled pumping portion of the Ground Water Demand beyond what is described in the SOW and as provided in this cost estimate. If this occurs, ARI will notify the PBC of the need for additional funds to complete task 4. b. i.

As described in the cost estimate, additional work to split the commingled pumping into either surface water or ground water consumptive use was performed beyond what was originally anticipated and totaled \$675. This split in the commingled pumping was discussed at the March 2, 2016 POAC Technical Committee meeting in Lincoln, NE at TFG's office.

3. At the March 2, 2016 POAC Technical Committee meeting in Lincoln, NE at TFG's office, HDR and DNR discussed the use of the maximum surface water consumptive use (SWCU) that was derived from the multiplication of the net irrigation requirement and the total surface water acres to provide the surface water supply term. This analysis and information was provided by ARI for the WWUM Modeling area in 2015. At that meeting, ARI was tasked with providing the SWCU based on the actual diversions to the surface water system as determined by the surface water operations model to replace the maximum SWCU as the surface water supply term. This task was not anticipated and the additional cost for this task was \$3,435.

The overall unanticipated task cost is \$7,505. All but \$3,080.20 has been billed under the original contracted amount of \$115,000. The remaining unbilled amount, plus \$4,500 is required to complete the ground water modeling depletions analysis documentation and review of the HDR documentation included in the SOW. The total additional request of \$7,580.20 is needed to cover these costs.

Discussions with Duane Woodward of Central Platte NRD, John Berge and Tracy Zayac of North Platte NRD, and Rod Horn of South Platte NRD, resulted in the request that ARI continue to provide WWUM Modeling dataset support and technical review of the HDR scope of work seeking to refine the estimates of the overall difference between over-appropriated and fully

appropriated project. To complete this task, we anticipate that there will be one additional meeting in either Lincoln, NE or North Platte, NE to review and discuss the projects results. This task will also include review, evaluation, and comments on the work products by HDR. Additionally, ARI will assist in questions regarding the provided datasets being used to complete the analysis, use of the robust review and other management action information, and a general evaluation of the results and their appropriateness to provide answers to task 3.0 (including the sub-tasks) of HDR's scope of work. Including the meeting, this task is estimated to cost \$12,000 and provides 64 hours of support and review work for this task.

The estimated total cost for the additional request from the original analysis and the next phase of the analysis is \$19,580.20. The modeling documentation and new task will be completed on a time and material basis.

Please let me know if you have any questions.

Sincerely,



Thad A. Kuntz  
Principal Hydrogeologist  
Adaptive Resources, Inc.