CPNRD Stakeholder Meeting #4 Minutes

Project:	2nd Increment Stakeholder Process for Central Platte NRD Integrated Management Plan (IMP)
Subject:	Stakeholder Meeting #4
Date:	Tuesday, February 26, 2019 from 1:00 p.m. – 4:00 p.m.
Location:	Holiday Inn Express, Kearney NE

I. Welcome

a. Lyndon Vogt, CPNRD, opened the meeting at 12:59 p.m. CT. He thanked stakeholders for coming and participating, and acknowledged that this is the final stakeholder meeting.

b. Stephanie White, HDR, introduced herself and asked the stakeholders to introduce themselves. The attendance sheet is included (Attachment E).

c. Stephanie acknowledged that the group has been provided with a draft copy of the Integrated Management Plan and a copy of the PowerPoint presentation (Attachment B).

II. Administration

a. Stephanie stated that a notice for this meeting was published in the newspaper (Attachment D) and that there is a copy of the Open Meetings Act present. She reviewed the November meeting, which included the Robust Review results, the Basin-Wide Plan, and a conversation on drought planning.

b. Copies of all presentations are included (Attachment B).

III. Review Draft Integrated Management Plan (IMP)

a. Jennifer Schellpeper, NeDNR, introduced Jessie Strom, NeDNR. Jennifer emphasized that this is a draft document, they are looking for stakeholder input on the concepts. Jennifer stated this document is meant to be read as a whole and not any one part in isolation.

b. Jessie noted that it is welcome to interject if anyone has questions along the way. Jessie went through the Table of Contents. The effective date (Chapter 1) is to be determined

once everything is finalized after the hearing and formal adoption of the plan. She briefly reviewed Chapter 2: Authority and Chapter 3: Background.

Question: The map of the overappropriated (OA) boundary (Figure 2, page 8) developed with old COHYST model. The new model may or may not change the boundary. Does it matter if it changes that boundary?

Jennifer: No, and we are not planning on changing the OA hydrologically connected area because of how the statue is written. We have two maps: the fully appropriated (FA) area and the OA area (Chapter 4). The plan applies to the entire district.

c. Jessie read Chapter 5: Vision.

Question: Are the "existing users" users today or back when the first increment was developed?

Lyndon Vogt, CPNRD: Existing users are people right now. CPNRD has the ability to remove acres, but I don't anticipate us ever doing that. We added acres in 2011 and 2012, all below Chapman, and we haven't added any since.

d. Jessie reviewed Chapter 6: Funding, and Chapter 7: Science and Methods. Section 7.1 describes the first increment science used, including an overview of the original COHYST model and the split of COHYST 2010 and the Western Water Use Management (WWUM) Model. Section 7.2 includes the set of basin-wide tenets regarding science and methods to be used moving forward.

Question: You said this section will be identical in all IMPs, but the WWUM is not applicable to this NRD? Is this more basin-wide?

Jessie: Yes, we included the WWUM because it is a basin-wide concept.

Stakeholder: Suggested saying "NRDs" instead of "this NRD" at the start of 7.2.

e. Jessie continued into Section 7.3, Information Considered in Developing this IMP, and stated that the list is rough, and needs some formatting.

Question: Is not only 7.2, but also all of Chapter 7 is consistent for all NRDs?

Jessie: Yes, relatively.

Question: In 7.3, the Upper Platte INSIGHT analysis, when will that be available?

Jessie: We're in the process of reviewing that right now. It will go through one final review from us and the NRDs and we plan to have it posted on the INSIGHT website by July.

Question: So it was used for this plan?

Jessie: Yes, the data and the analyses were used, but not the report. We previously presented the results from the INSIGHT analysis; that presentation is available on our website. The results have not changed, but the report has gone through several revisions.

Question: We have only seen parts of the Robust Review, INSIGHT, and the Basin-Wide plan, yet they were relied on for this IMP. All of those are major components that we haven't seen. We would like to see data and final documents.

Jennifer: The first draft of the Basin-Wide Plan is under review from NeDNR and the NRDs. The Robust Review is under second review by the NRDs, and we have a first draft of the Total Depletions report. The intent on all of them is to have them available before the hearing, so you will be able to review them and provide testimony.

Stakeholder: Do we have 30 days after the hearing notice until the hearing?

Jennifer: I think it's four weeks.

Stakeholder: So we will have these before the first notice?

Jennifer: Yes, if not sooner.

Stakeholder: Overall, this IMP looks like it is following consistent with the goals that were approved, but I'm not sure if I'm ready to okay it without seeing the underlying documents. If the numbers are correct then this looks correct, but if we see a fundamental problem later, there may be issues.

Stephanie: So your support might be contingent on final results of the numbers?

Stakeholder: Yes. I don't want to say we're okay with it, then go to the hearing and it turns out we're not.

Jennifer: We're wanting to get a vote on, "Do you agree with these *concepts* as they're laid out in the plan?", not on the fine-tuned details. If there are specific questions about the Robust Review, INSIGHT, or Depletions analysis, we could answer them for you today.

Stakeholder: I'm interested in having another summary or sample graph or something from those. I'm interested in seeing the Robust Review Report. But, if the minutes will reflect that the stakeholders were asked for agreement on the *concepts*, then that clarification makes things a lot easier for me.

Stephanie: The minutes also reflect the frustration you expressed and the desire to have the data with adequate time for reviewing before the hearing.

Lyndon: The notices begin June 17th for the July 15th hearing date.

Stakeholder: Are you anticipating a grand tour for the hearings?

Jennifer: Yes, the plan is to stop at all the NRDs during the week of the hearing. We have a timeline that we can send out.

Stephanie: Action item: get them the full calendar so they can plan accordingly.

Stakeholder: Will you have not only have individual IMPs, but final Basin-Wide Plan, final Robust Review Report, and final information all in advance to review?

Jennifer: Yes.

f. Jessie continued to Chapter 8: First Increment Accomplishments, noting sections on assessing available water, conservation measure studies, the conjunctive management study, and the inventory of sandpits and small reservoirs.

Question: In section 8.1.3, it refers to Western Canal. The Western Canal study doesn't have an impact on this NRD.

Jessie: There was a case study that was done by HDR in 2011. It contains concepts and outlines that apply basin-wide.

g. Jessie summarized Section 8.2 on management actions that were carried out in the first increment.

Question: In 8.2.3 last sentence, is that the exchange?

Lyndon: Yes.

h. Jessie reviewed Section 8.3, the Robust Review section, which followed the process that was outlined in the first increment IMP. There is a map (Figure 3, page 18) that shows the two different stream reaches. Jessie noted the charts (Figures 4 and 5, pages 19 and 20) display the modeled results as the solid blue line with the dots, the small dotted line is the trend line of those modeled results, and the gray band shows the inter-annual variability—the high and low range.

Question: Are these two charts (Figures 4 and 5) something you would find in the Robust Review? Does any part of the Robust Review break these down into monthly or seasonal analyses? This only shows annual.

Jessie: We have those charts in the draft of the Robust Review. We do have the data on a monthly timescale and we plan to make the data available.

Stakeholder: Suggested future Robust Reviews to have monthly numbers. Also, the more important location than Elm Creek would probably be Cozad – the last canal that takes water for irrigation. We can get the depletions offset at that location, it helps all the canals upstream.

Question: Is there a reason there is a graph within a graph? It is harder to see the small one here.

Jessie: The small one is zoomed in so you can get an idea of the variability and the scale with more detail. These charts came directly from the Robust Review Report, so we have each of the districts on the same scale; it is a little out of context here.

Stakeholder: I'm assuming the 'Robust Review' is the same as the '2019 Robust Review'?

Jennifer: Yes. Noted future Robust Reviews will have dates associated with them.

i. Jessie went through Section 8.4: Assessment of the FA Condition. The reports aren't finalized but the analyses are done. She showed the Total Depletions analysis on the PowerPoint (Slide 12) – the chart with the gray and orange lines, and the INSIGHT graphic (also in plan, Figure 6, page 22), the figure with the red and green bar. The year 1950 is when the model starts.

Question: Can you walk us through Figure 6 (page 22; INSIGHT graphic)?

Jessie: The INSIGHT analysis, which is where this chart comes from, looked at supplies and demands in the basin and compares the balance to see where we're at in terms of, "do we have enough water to meet all demands?" If you start on the left/green, we are at about a positive one million acre-feet (af), the supply. When we add in the surface water, groundwater and municipal and industrial uses, that drops it to about 850,000 af of water available. If we add into that our net surface water loss, which is the water that is used to convey surface water irrigation water, that drops it down to about 225,000 af. If we add into that the non-consumptive uses, so if we consider the downstream demands, that drops it down to 180,000 af. If we then instead look at just the instream flow demand, that would put it at a negative 45,000 af. If we put in the hydropower demand, it takes it down to negative 960,000 af.

Question: I've heard people say the basin has been FA or less many times in the last few years. So, if we are saying FA is when supplies and demands are equal, and long term average shows significantly different, are we wrong in that we aren't always FA? Or is INSIGHT methodology flawed?

Stakeholder: The reason people are inaccurate in saying we are FA, is because they are doing that on instantaneous evaluation. The language in the statute is pretty clear, you have to take into consideration the long term and potential droughts. When someone says were FA right now, they aren't using the statutory language, but as a layperson.

Stakeholder: This chart makes it look like we're only in a bad condition because of hydropower? What are you trying to convey in this chart? What is the need to put it in the IMP?

Jessie: This is one of the analyses used to determine what FA is and how far we are from that condition. This chart is showing that when you add in different pieces of the demand, it slides the scale from positive to negative. There might be a better way to display it.

Stephanie: I would like to take note of the graphic on page 22 and note that it has been confusing and that there is a request to look at a different way to display that information.

Jessie: To be clear, the basin-wide numbers are on this chart, not CPNRD numbers.

Lyndon: It doesn't matter how you rearrange it – it is correct.

Stakeholder: I think the concern is whether it is confusing and how you choose which is green and which is red.

Stephanie: Asked for stakeholder comments:

- Fine with document, but don't fully understand it the way others here do, the pace of the meeting has been good
- Agree, the concerns voiced today are legitimate – I am concerned myself
- Most of my concerns have already been addressed
- I was clear before I came here, but too much information can be hazardous
- Concerns with not seeing Robust Review

j. Jessie covered Section 8.5 about basin-wide coordination and the Platte Basin Coalition. Chapter 9 states goals and objectives. We have three goals.

Goal 1: To incrementally achieve and sustain a FA condition while maintaining economic viability, social and environmental health, safety, and welfare of the basin.

Objective 1.1 is to offset depletions due to water uses after 1997, in incremental pieces by the end of the current increment. Under that objective we have our targets (Tables 1 and 2). Short-term values (Table 1) came out of the Robust Review; we used the values from the trend line. We do anticipate these will change as we continue to refine the models and with future Robust Reviews. Our long-term target (Table 2), is the number at the end of the 50 year period; we averaged the last five years of the period to get that number.

Question: Can we add clarification that it is in acre-feet for Table 1 (page 25)?

Jessie: Yes, and in the long-term we should add five-year *average*.

Objective 1.2 is to maintain the previous increment progress. Downstream of Elm Creek we need to maintain a positive balance. We have the tables (Tables 3 and 4) with the number results – we will add the units of acre-feet there as well.

Question: Objective 1.2, is there a missing narrative right after Targets, similar to Objective 1.1?

Jessie: The same concept was covered under Objective 1.1 and I didn't want to be repetitive. We can make a note to refer back.

Objectives 1.3 – 1.5 are to make progress toward a FA condition, review the implementation of the IMP, and then once we reach a FA condition, to maintain that through the implementation of the IMP.

Goal 2: To ensure that no act or omission of the CPNRD would cause noncompliance by Nebraska with any interstate decree, compact, or other formal state contract or agreement.

This is about complying with the Platte River Recovery Implementation Program (PRRIP) and the Nebraska New Depletion Plan (NNDP). Jessie reviewed Objectives 2.1 – 2.4.

Question: Should this section the goals and objectives say 'no act or omission of CPNRD or NeDNR?'

Jessie: Yes, we will add NeDNR.

Goal 3: Keep the IMP current, maintain consistency with the Basin-Wide Plan, and keep water users informed.

Jessie reviewed Objectives 3.1 – 3.5.

k. Jessie introduced Chapter 10: Action Items. It starts with a list of non-regulatory action items – things that aren't controls, including information education programs, incentive programs (state and NRD programs), water banking, and conjunctive management.

Question: In 10.3.C (page 31), is this plan to be limited to direct pumpers or surface water districts too? Should we clarify in the plan?

Lyndon: The wording is probably sufficient.

Jennifer: There would be a consultation with the NeDNR with surface water retirements or changes.

Jessie: The first bullet point on page 31, "work with the irrigation districts, not just individual land owners…"

l. Jessie mentioned Section 10.5 is about the drought plan the district will be developing, which follows the Basin-Wide Drought Plan.

Stakeholder: I would appreciate if you would consider putting into this section that the development of the drought plan at the district level would include consultation and collaboration with stakeholders, not to have a veto on it, but to have input.

Lyndon: I have a problem with stakeholders having a say in the drought plan. I don't have an issue with input, but an issue with letting stakeholders give a 'thumbs up' or 'thumbs down' on our drought plan.

Jennifer: From the basin-wide standpoint, the process will involve consultation.

Lyndon: Our drought planning board is not going to approve a plan that shuts off groundwater pumping during drought, but there are lots of things we can do to help with your water shortage in times of drought.

Stakeholder: We need to be consistent with the other NRDs. Maybe it should be others who you need input from, but the drought plan should have a way to have input.

Stephanie: I am noting to include the word 'Stakeholder' or 'impacted parties' to Section 10.5.

m. Jessie continued to Section 10.6: Controls for the Current Increment. Section 10.6.1, groundwater controls, is the same as the first increment plan. The municipal and industrial counting has changed, in 2026 statute changes and at that point there will be baseline allocations set for these users and new uses above the baseline will need to be offset by the municipal and industrial parties.

Question: On 'D' (page 36) there is a section for transfers out of state. Is that really an issue with this NRD?

Jessie: It could be, but is not a current issue. It is from the prior IMP.

Question: On 'E2', p. 38, titled "Non-Municipal Industrial Use and Accounting," it immediately says, "the District calculated a baseline consumptive use for each *municipality*." Is it supposed to be *non-municipal use*?

Jessie: Yes, it should be *industrial*.

n. Jessie moved on to Section 10.6.2: Triggers. This section talks about check-in points to make sure we are making adequate progress toward reaching the goals and objectives of the plan. It is divided into two sections – 1) for the portion above Elm Creek since we still have post-97 depletions to make up there, and 2) for the portion below Elm Creek to Chapman since we don't have those post-97 depletions in that reach. We do recognize the Robust Review only looks at activities through 2013 and that things can be updated in the models and changed. In 2023, we will do another Robust Review and at that point look at what the results are compared to the target numbers that are in the goals and objectives chapter.

Question: When you do that Robust Review in 2023, what year will it be through?

Jennifer: We haven't determined what year it will be through yet. There is a lag.

Jessie: 2023 is when we will have the results from the Robust Review to check in and compare to the target, we will be looking at what the Robust Review numbers say for a given year versus what the IMP says for a given year. It can go faster this time now that there is a process developed.

Question: In terms of Trigger 2, why is 70% used?

Jessie: That is our long-term number, so we are not expecting we will have everything in place to be fully offsetting those depletions 50 years down the road. We will be doing more things in the coming years that are going to help get to that point too.

Question: "In 2027, 70% of the fifty year number will be less than the 2027 number." Is this irrelevant?

Jessie: The 2027 number – we will look at what the table says for 2027 and what the Robust Review results say for 2027 at that time.

Stakeholder: Your current number might be a bigger obligation than 70% of your long-term number.

Jessie: We are not looking at what the model says we have in 2027 to what this long-term number is and seeing how those match up. We're looking at what the model says we're going to be at in 50 years and what our original said we're going to be at in 50 years.

Stakeholder: So, if it turns out that by the time we get to the Robust Review in 2027, if 70% of the long-term number is smaller than the current number, we're going to back off?

Jennifer: You still need to meet your current term number. They are separate. We have our indicator, which is in 2023, Trigger 1, which is looking at the current year *and* 2027.

Question: It says, 'throughout the *first* ten year increment", but the first ten year increment is behind us, right?

Jessie: That should be the *current* ten-year increment.

Stakeholder: There are several mentions of "first" where it should be "current." Page 42 also.

o. Jessie brought everyone's attention to the flow chart (Figure 7) on page 41 which lays out the triggers in the plan and the checkpoint years of when they will be looked at.

Question: 10.6.2.3, p. 43, number four – Is it possible that we implement them within only a portion of the NRD? If you have both a FA and OA, you only might need to do it in one area. It might be interpreted wrong.

Lyndon: This was taken out of our old IMP.

p. **Jessie**: Trigger 10.6.3 outlines our surface water controls. This section is the same as in the first increment IMP, but rearranged to be more clear. We have added 10.6.3.2 which is a summary of the processes used for these variance, application and transfers and examples.

Question: On 10.6.3.1, G (i), says provided in "(b)" below, is that supposed to be "(ii)" below?

Jessie: Yes, let us know if we missed things like that.

Question: In 10.6.3.2, the second to last sentence (page 45), what does "more scrutiny than assessing" mean?

Jennifer: Discussed section and noted the confusion. Suggested possibly making it more clear or removing.

Question: How are projects ranked and when will the rankings be?

Jennifer: We don't have the ranking process, but have the concepts in this paragraph, like operational plans, having better measurements, better data, reaching IMP goals – those are some of the things that will be in the ranking process. There are also concepts back in the conjunctive management section. Feedback here would be good. We could do an annual ranking, but we recognize that some things would be situational.

Question: Some of those rankings may not fall in line with the constitution, which says if you have beneficial use, priority will determine who gets that water. Have you considered that at all?

Jennifer: That has been discussed and we are aware of the law.

Jesse Bradley (NeDNR): We will do whatever we need to, to make sure it's legal. We're trying to tie the purposes of excess flow water use to specific IMP management goals and objectives. We need to retain flexibility to use those last drops of water in the most effective way throughout the basin.

Stakeholder: We need to know more about the ranking and what goes into it so we can develop projects that will rank higher.

Jennifer: We are not far enough along to put it in the plan, but as we do, we are always thinking about transparency for the users.

q. Jessie mentioned 10.7 is the monitoring section, which includes three sub-points. First, Data and Tracking of Water Use Activities for NRD and NeDNR, which will make the Robust Review easier. Second, Reporting, where we describe the annual report or review process. We say when we will make those available to the public and will be presented at the basin-wide meeting annually. And third, Measuring the Success of Meeting the Goals

and Objectives of this IMP. Under Section 10.7.3.1, the first section (A) is about our annual review, section B outlines the process for the Robust Review.

Question: In the original Robust Review document, we've heard over and over that the first ten-year increment goals were met. Were they met due to J2 being planned and pursued or were they met anyway?

Jennifer: J2 was definitely a part of it, but now that the project has gone away, we have to come up with other ways to get us there.

Stakeholder: I would prefer in the future if a project is pursued in good faith and fails for whatever reason, that we note the goals weren't met, but good efforts were made, rather than just saying we met our goals.

Stakeholder: Under the Nebraska New Depletion Plan, Nebraska does get credit if they are actively involved in a project alongside the program.

Lyndon: We met our first increment goals without J-2.

r. Jessie continued with the general process of the Robust Review. This section has been updated to have equations (page 54) instead of sentences saying how it will be done.

Question: The last paragraph of 10.7.3.2, on page 56, "NeDNR and the NRDs have and will continue to work with impacted water users on the process for determining the difference between the current and FA condition of the basin." I'd like to see more details here, and if I don't, every year at the meeting I'll ask you how and when you're going to work with us on that. We would like to know how it will proceed forward.

s. Jessie read from Section 10.8: Current Increment Studies, which is broken down into priority studies and potential studies. Priority studies are called to out of statute or the Basin-Wide Plan – a large one is looking into the comingled area and their impacts and drought impacts. Potential studies are the same as what was in the first increment IMP.

Section 10.9 is Review of and Modifications to the IMP, which describes the process we will go through to revise this IMP, a section on Basin-Wide Plan Disputes, and the last section 10.9.3 looks at any additional ten year increments and the process we would go through to initiate a third increment.

t. Discussion:

- Stephanie's notes:
  - **The need for final plans and reports before giving full support of the plan**
  - **The graphic on page 22 is confusing and frustrating**
    - **What is the message trying to convey?**
  - **10.5 Drought Plan, request to add language or the desire to include stakeholders in the drought planning – no**
  - **Include ranking criteria transparency – item 10.6.3.2**

- **Conversation on paper water versus real water (determined goals met without J2)**
- **10.7.3.2 regarding the language of user collaboration regarding the designation of FA**

u. Stephanie took a vote including the updates discussed:
- Thumbs up: 7
- Thumbs sideways: 1
  - Comfortable with concepts: yes; Comfortable with details: maybe
- Thumbs down: 0

IV. Public comment: No public comment.

V. Meeting adjourned: 2:53 p.m. CT

VI. Attachments:
- **Attachment A – Agenda**
- **Attachment B – Copies of all presentations**
- **Attachment C – Draft IMP**
- **Attachment D – Affidavit of Publication of Notice of Meeting**
- **Attachment E – Copy of attendance sheet**

Agenda

Project:	2nd Increment Stakeholder Process for Central Platte NRD Integrated Management Plan (IMP)
Subject:	Stakeholder Meeting #4
Date:	Tuesday, February 26, 2019 from 1:00 p.m. – 4:00 p.m.
Location:	Younes Conference Center 416 Talmadge Street, Kearney NE

Topics:

1. Welcome
2. Administration
    a. November meeting recap
3. Review Draft Integrated Management Plan (IMP)
4. Public comment

CPNRD IMP

Meeting 3

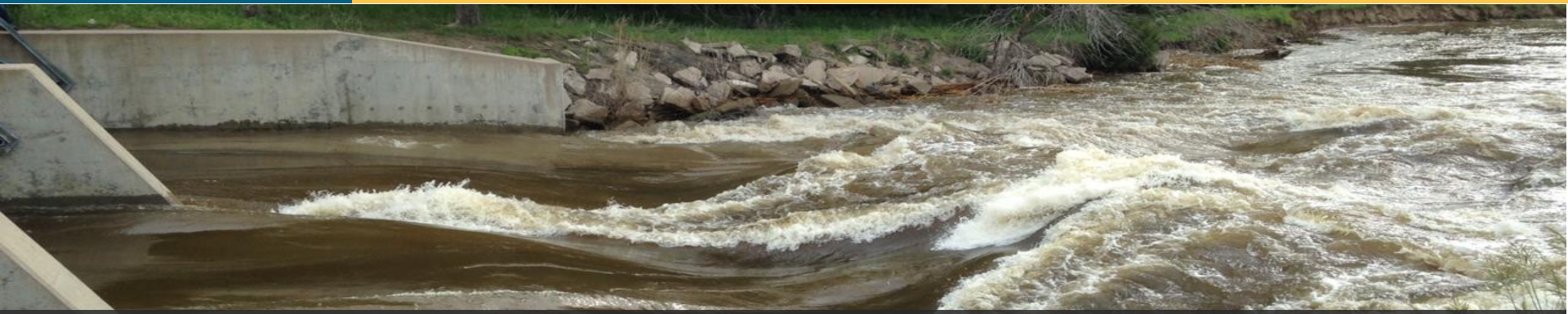
February 26, 2019

TODAY'S AGENDA

1. Welcome
2. Administration
    a. November Meeting Recap
3. Review of Draft Integrated Management Plan (IMP)
4. Public Comment

WELCOME

- Open meeting notice
- Safety & logistics



ADMINISTRATION

November Meeting Recap

NEBRASKA
DEPT. OF NATURAL RESOURCES

Meeting #3 Recap

- Robust Review results
- Reviewed Basin-Wide Plan

REVIEW OF DRAFT IMP

NEBRASKA
DEPT. OF NATURAL RESOURCES

Integrated Management Plan (Draft)

1. EFFECTIVE DATE
2. AUTHORITY
3. BACKGROUND
4. MAPS AND MANAGEMENT AREA BOUNDARIES

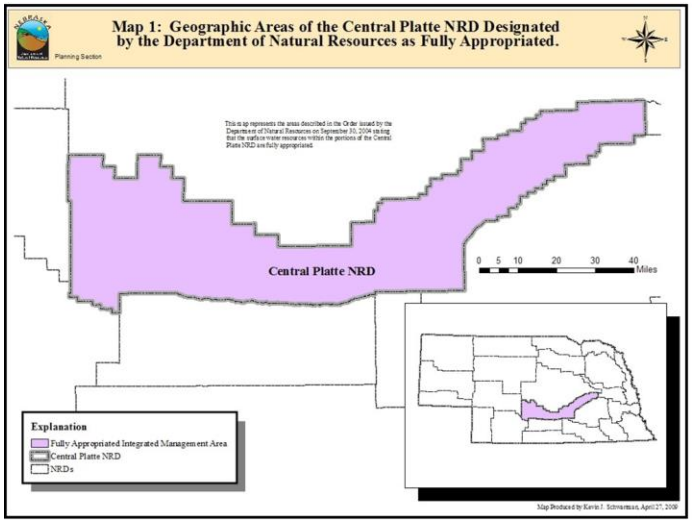


Figure 1: FA

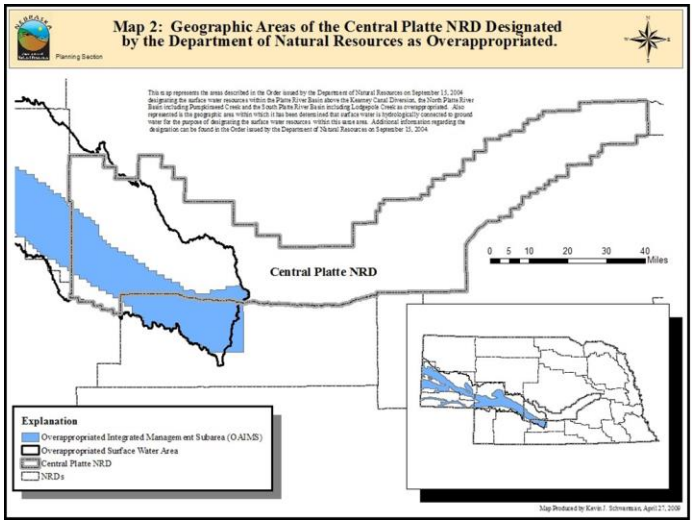


Figure 2: OA

Integrated Management Plan (Draft)

5. VISION

The CPNRD, in cooperation with the NeDNR, will implement this IMP to achieve and/or maintain a balance between water uses and water supplies so that the economic viability, social and environmental health, safety, and welfare can be achieved and maintained for both the near term and long term, considering the effects on existing surface water appropriators and groundwater users.

Joint goals of CPNRD and NeDNR are to secure future water supply projects, to provide for water consumption that does not exceed full appropriation, to maintain the District's water resources while allowing for economic growth, to provide an adequate water supply for beneficial uses, to resolve conflicts between users, and to ensure the IMP complies with the law, with interstate agreements, and with the basin-wide plan.

To do this, CPNRD and NeDNR will develop regulations to protect existing users by treating the fully and overappropriated areas equitably, develop rules, regulations, and programs to balance water use and water supply, promote water use efficiency, promote programs that reduce water consumption by invasive species, implement potential incentive programs that encourage water conservation, reduce consumptive use, maximize funding, and will allow for groundwater transfers.

Integrated Management Plan (Draft)

6. FUNDING
7. SCIENCE AND METHODS
   - 7.1 First Increment
   - 7.2 Best Available Science, Methods, Data, and Tools to be Used in the Ongoing Increments
   - 7.3 Information Considered in Developing this IMP

Integrated Management Plan (Draft)

8. FIRST INCREMENT ACCOMPLISHMENTS
   - 8.1 Studies Conducted in the First Increment
   - 8.2 Summary of Management Actions in the First Increment
   - 8.3 Assessment of First Increment (Robust Review)

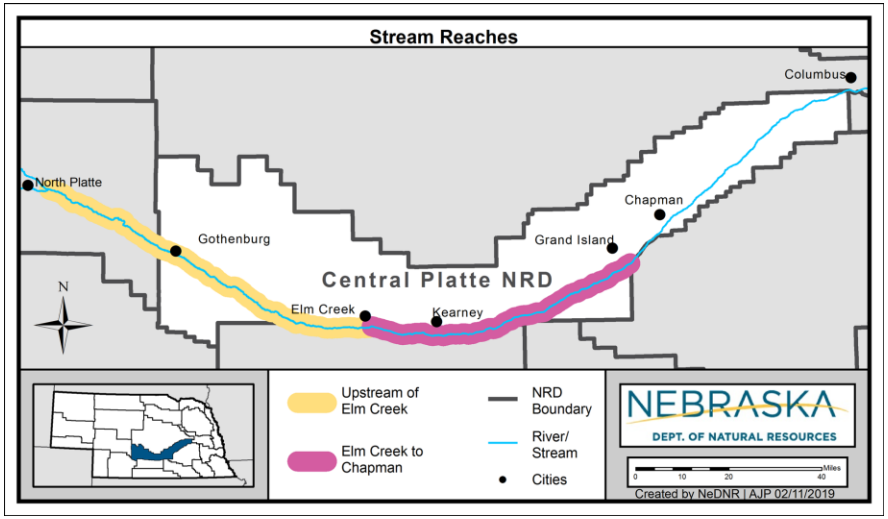


Figure 3

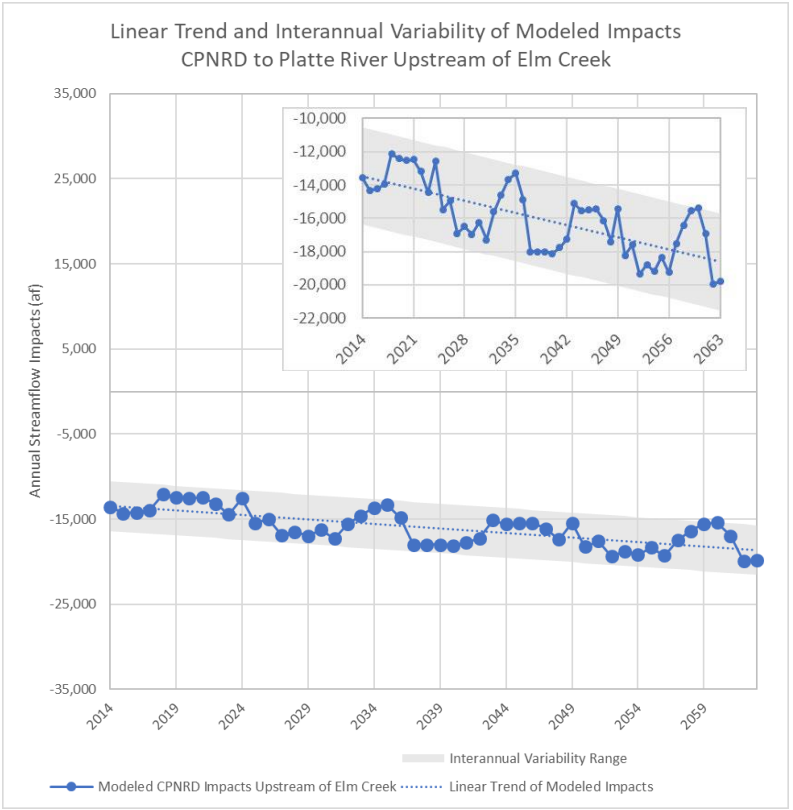


Figure 4

Integrated Management Plan (Draft)

8. FIRST INCREMENT ACCOMPLISHMENTS

8.3 Assessment of First Increment (Robust Review)

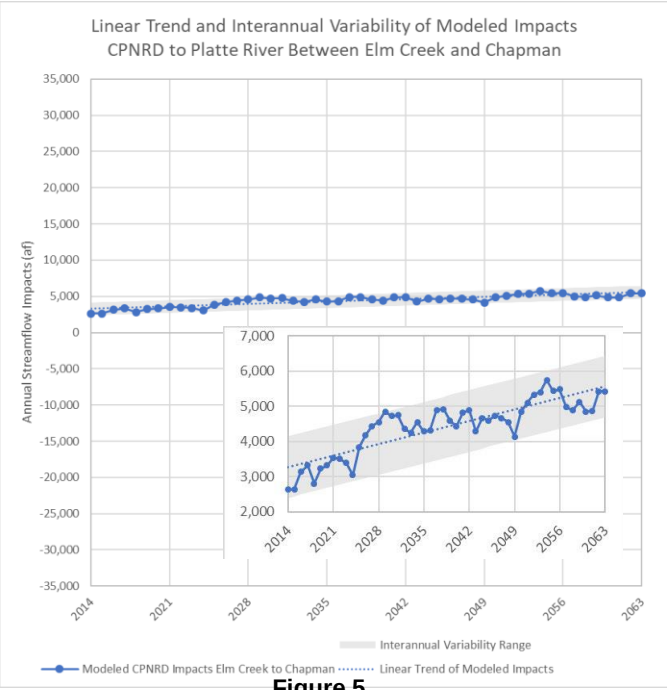


Figure 5

Integrated Management Plan (Draft)

8. FIRST INCREMENT ACCOMPLISHMENTS

8.4 Assessment of Fully Appropriated Condition

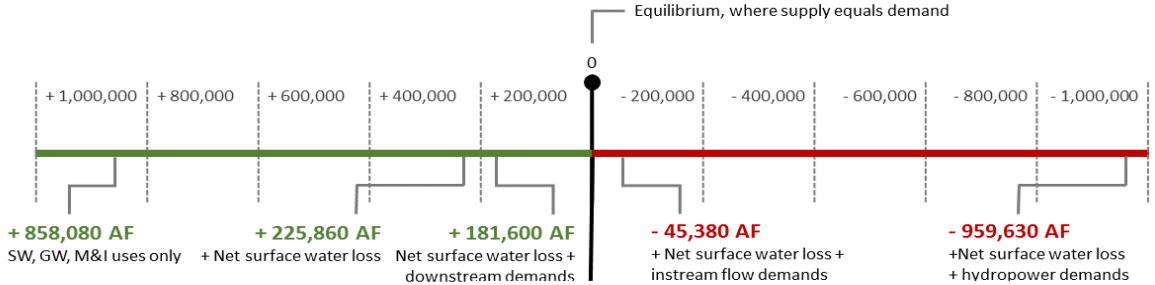


Figure 6

8.5 Basin-Wide Coordination in the First Increment (Platte Basin Coalition)

Integrated Management Plan (Draft)

9. Goal 1: Reach and Maintain a Fully Appropriated Condition

1.1 Within this increment of this IMP, implement measures to address impacts of streamflow depletions to surface water appropriations and water wells constructed in aquifers dependent upon recharge from streamflow to the extent those depletions are due to water use initiated after July 1, 1997.

Short Term Target Depletions to Offset Upstream of Elm Creek	
Year	Upstream of Elm Creek
2019	-14,000
2020	-14,100
2021	-14,200
2022	-14,300
2023	-14,400
2024	-14,500
2025	-14,600
2026	-14,700
2027	-14,800
2028	-14,900
2029	-15,000

Long Term Target Depletions to Offset Upstream of Elm Creek	
Year	Upstream of Elm Creek
2059-2063	-18,400

Integrated Management Plan (Draft)

9. Goal 1: Reach and Maintain a Fully Appropriated Condition
   - 1.2 Maintain previous increment mitigation progress.
   - 1.3 Make progress toward a fully appropriated condition.
   - 1.4 Review the implementation of this IMP to ensure that the IMP provisions are adequate to sustain progress toward and/or maintain a fully appropriated condition.
   - 1.5 Once a fully appropriated condition is achieved, maintain such condition through the implementation of the IMP.

Integrated Management Plan (Draft)

9. Goal 2: Interstate Compliance

2.1 To ensure that no act or omission of the CPNRD would cause noncompliance by Nebraska with the NNDP included within PRRIP, for as long as PRRIP exists.

2.2 Ensure that the groundwater and surface water controls adopted in the individual NRD IMPs are sufficient to ensure that the state will remain in compliance with the NNDP.

2.3 Collectively, as defined in the NNDP, offset the new depletions caused by new uses within the Platte River Basin NRDs.

2.4 Ensure that for post-1997 new or expanded uses, including irrigation, municipal, industrial, rural domestic and other new water related activities are assessed and offset for compliance with the NNDP. This assessment will be part of the Robust Review, explained in Section 10.7.3.

Integrated Management Plan (Draft)

9. Goal 3: Consistency and Updates
   - 3.1 Amend this IMP as needed to remain consistent with the Basin-Wide Plan.
   - 3.2 Participate in basin-wide planning activities.
   - 3.3 Improve information sharing with interested parties.
   - 3.4 Conduct planning for subsequent increments of the plan, as necessary.
   - 3.5 If appropriate and necessary, follow the dispute resolution process in the Basin-Wide Plan.

Integrated Management Plan (Draft)

10. ACTION ITEMS
    - 10.1 Information and Education Programs
    - 10.2 Incentive Programs
    - 10.3 Water Banking
    - 10.4 Conjunctive Management
    - 10.5 Drought Plan
    - 10.6 Regulatory Action Items (Controls)
        - 10.6.1 Ground Water Regulatory Action Items
        - 10.6.2 Triggers
        - 10.6.3 Surface Water Regulatory Actions (Controls)

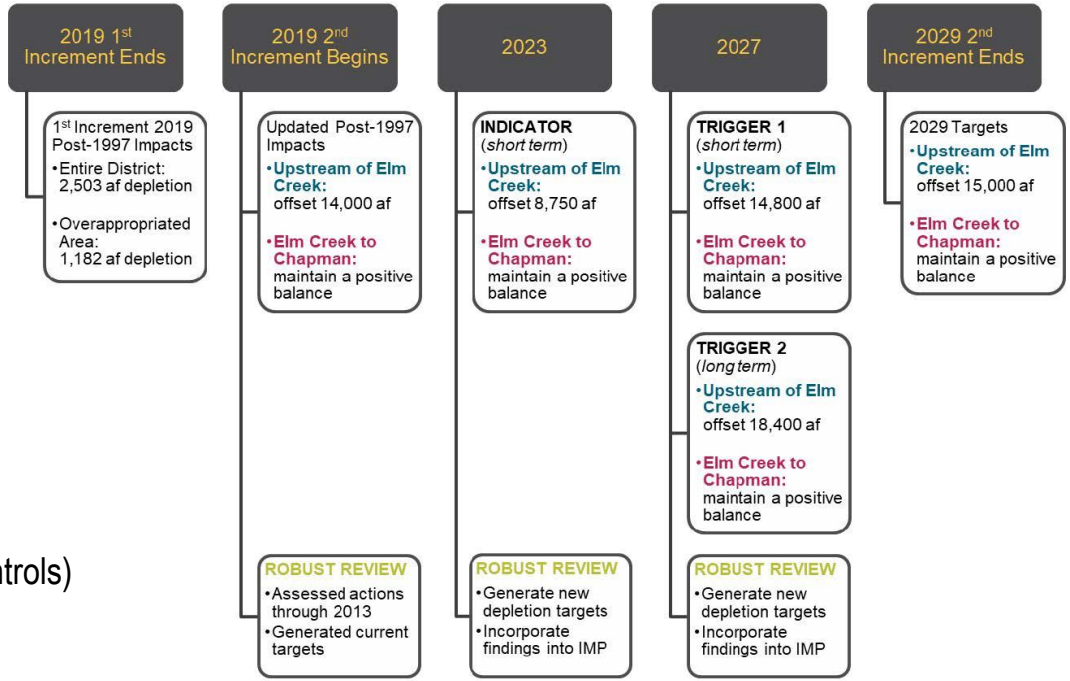


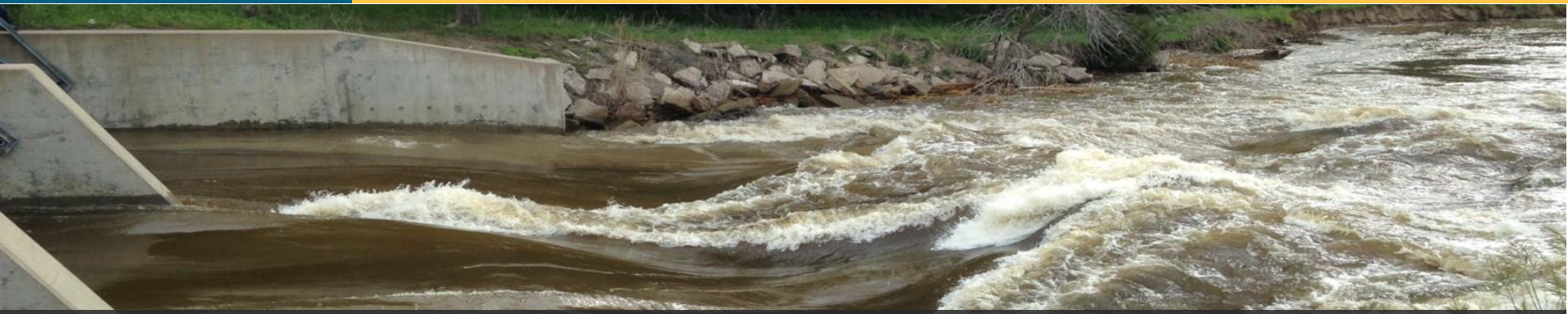
Figure 7

Integrated Management Plan (Draft)

10. ACTION ITEMS (continued)
    - 10.7 Monitoring
        - 10.7.1 Data and Tracking of Water Use Activities
        - 10.7.2 Reporting
        - 10.7.3 Evaluation: Measuring the Success of Meeting the Goals and Objectives of this IMP
    - 10.8 Current Increment Studies
    - 10.9 Review of and Modifications to the IMP

NEXT STEPS

NEBRASKA
DEPT. OF NATURAL RESOURCES



PUBLIC COMMENT

Thank you

NEBRASKA
DEPT. OF NATURAL RESOURCES

DRAFT INTEGRATED MANAGEMENT PLAN
Cooperatively Developed by the
Central Platte Natural Resources District and the
Nebraska Department of Natural Resources

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1: EFFECTIVE DATE

This current increment Integrated Management Plan was adopted by the Central Platte Natural Resources District on August _____, 2019, and by the Nebraska Department of Natural Resources on August _____, 2019. This IMP became effective on September _____, 2019.

2: AUTHORITY

This Integrated Management Plan (IMP) was prepared by the Board of Directors of the Central Platte Natural Resources District (CPNRD or District) and the Nebraska Department of Natural Resources (NeDNR or Department) in consultation and collaboration with the District Stakeholders Group in accordance with *Neb. Rev. Stat*. §§ 46-715 through 46-720.

3: BACKGROUND

This document presents the IMP developed by the District and the Department for Integrated Groundwater and Surface Water Management within the District.

Key components of the Integrated Management Plan are a description of the groundwater reservoir(s) within the NRD and a description of the surface water systems and supplies within the District.

The groundwater aquifer characteristics of the Central Platte Valley of Nebraska may be the most studied in the State, if not in the high-plains region. Considerable information is available and has recently been expanded and improved through the efforts of COHYST- a cooperative hydrology study carried out by a coalition of natural resources districts, two public power districts, and two state agencies, with the assistance of numerous other federal and state agencies, and several statewide and local organizations[1].

The best means of describing the physical aquifer system, surface water systems and existing uses is through maps, charts, tables and graphs showing the different characteristics (e.g. hydraulic conductivity, transmissivity, certified acres, surface water rights) that are important to resource assessment and management planning. These items are referenced in CPNRD's first increment IMP, which is available by contacting the District, and contains current information on the aquifer system and irrigation across the District.

[1] See Section 7.1 of this document for more information on the COHYST Model.

The District lies almost entirely within the Central Platte River Basin with the Platte River being not only the largest surface water feature, but also the major source of water for the six surface water irrigation projects located in Dawson and western Buffalo counties. Annual flows in the Platte River average approximately 1.1 million-acre feet per year.

Water rights for irrigation, instream flows, storage, and storage use are held by numerous individuals and organizations on both the Platte River and on the Platte River tributaries across the Natural Resources District. The District has an instream flow water right that represents the largest quantity of surface water within the District. In addition to providing irrigation water to approximately 81,000 acres of cropland in Dawson and Buffalo counties, Nebraska Public Power District (NPPD) also has a water right to produce electricity. The Gothenburg, Dawson County, and Kearney Canals are all owned and operated by NPPD. The four other Canals (Cozad, Orchard Alfalfa, Six-Mile and Thirty-Mile) underwent extensive changes during the Districts first IMP. Cozad Canal, Orchard Alfalfa (now South Side Irrigation District) (SSID) and Thirty-Mile (now Thirty-Mile Irrigation District) (TMID) all underwent complete renovation. This included reshaping of the canals, tree removal and gate structure repairs and replacements. The District closed Six-Mile, filled it in, and is in the process of transferring the water rights to TMID, of which, the District will be half owner. The District has 30-year O & M agreements with Cozad Canal and SSID.

The primary source of irrigation water is groundwater, with 17,580 registered irrigation wells irrigating 936,894 certified acres. Total certified and inventoried acres are 1,028,616 and are supplied by surface water, groundwater, or both.

Groundwater supplies all municipalities, cities, towns suburban areas, and rural downstream water users, as well as the vast majority of commercial and industrial users not on a municipal supply.

The first increment CPNRD IMP became effective on September 15, 2009. The revised IMP became effective on May 21, 2012.

In developing this current IMP, the District and the Department consulted and collaborated with stakeholders who rely upon water from within the designated area that, after being notified of the commencement of the plan development process, indicated in writing or in person, their desire to participate in the process. Invited stakeholders include representatives from surface water users, municipalities, wildlife and environmental interests, economic development, financial organizations, county boards, agricultural organizations, and well drillers (Appendix C).

This collaboration and consultation with stakeholders took place during stakeholder meetings held in Kearney, Nebraska on August 14, 2018, September 18, 2018, November 13, 2018, and February 26, 2019 (Appendix C).

It is the intent of this IMP that the goals, objectives and action items apply to the entirety of the Central Platte Natural Resources District (Figure 1).

On July 1, 1997, the State of Nebraska entered into the Cooperative Agreement for Platte River Research and other Efforts relating to Endangered Species Habitats along the Central Platte River, Nebraska. In 2006, all parties to the 1997 agreement, revised the cooperative agreement with the signing of the Platte River Recovery Implementation Program (PRRIP) Agreement which, among other things, provides Endangered Species Act compliance for existing and new water related activities[2] including surface water irrigation, hydropower projects, and groundwater uses. In 2004, the Nebraska Legislature adopted LB962 which required the integrated management of hydrologically connected waters to achieve state compliance with interstate agreements such as the PRRIP Agreement.

[2] For purposes of this Program Document and its attachments, the term “water related activities” means activities and aspects of activities which (1) occur in the Platte River basin upstream of the confluence of the Loup River with the Platte River; and (2) may affect Platte River flow quantity or timing, including, but not limited to, water diversion, storage and use activities, and land use activities. Changes in temperature and sediment transport will be considered impacts of a “water related activity” to the extent that such changes are caused by activities affecting flow quantity or timing. Impacts of “water related activities” do not include those components of land use activities or discharges of pollutants that do not affect flow quantity or timing. “Existing water related activities” include surface water or hydrologically connected groundwater activities implemented on or before July 1, 1997. “New water related activities” include new surface water or hydrologically connected groundwater activities including both new projects and expansion of existing projects, both those subject to and not subject to section 7(a)(2) of the ESA, which may affect the quantity or timing of water reaching the associated habitats and which are implemented after July 1, 1997.

4: MAPS AND MANAGEMENT AREA BOUNDARIES

The area subject to this IMP is the entire geographic area of the CPNRD, including the area within the boundaries of the CPNRD determined to be fully appropriated (Map 1, Figure 1) and the area designated as overappropriated (Map 2, Figure 2). The goals, objectives, and action items described in this plan pertain to the entire District.

4.1 Fully Appropriated Area

The fully appropriated portion of CPNRD is the entire geographic area of the District (Map 1, below).

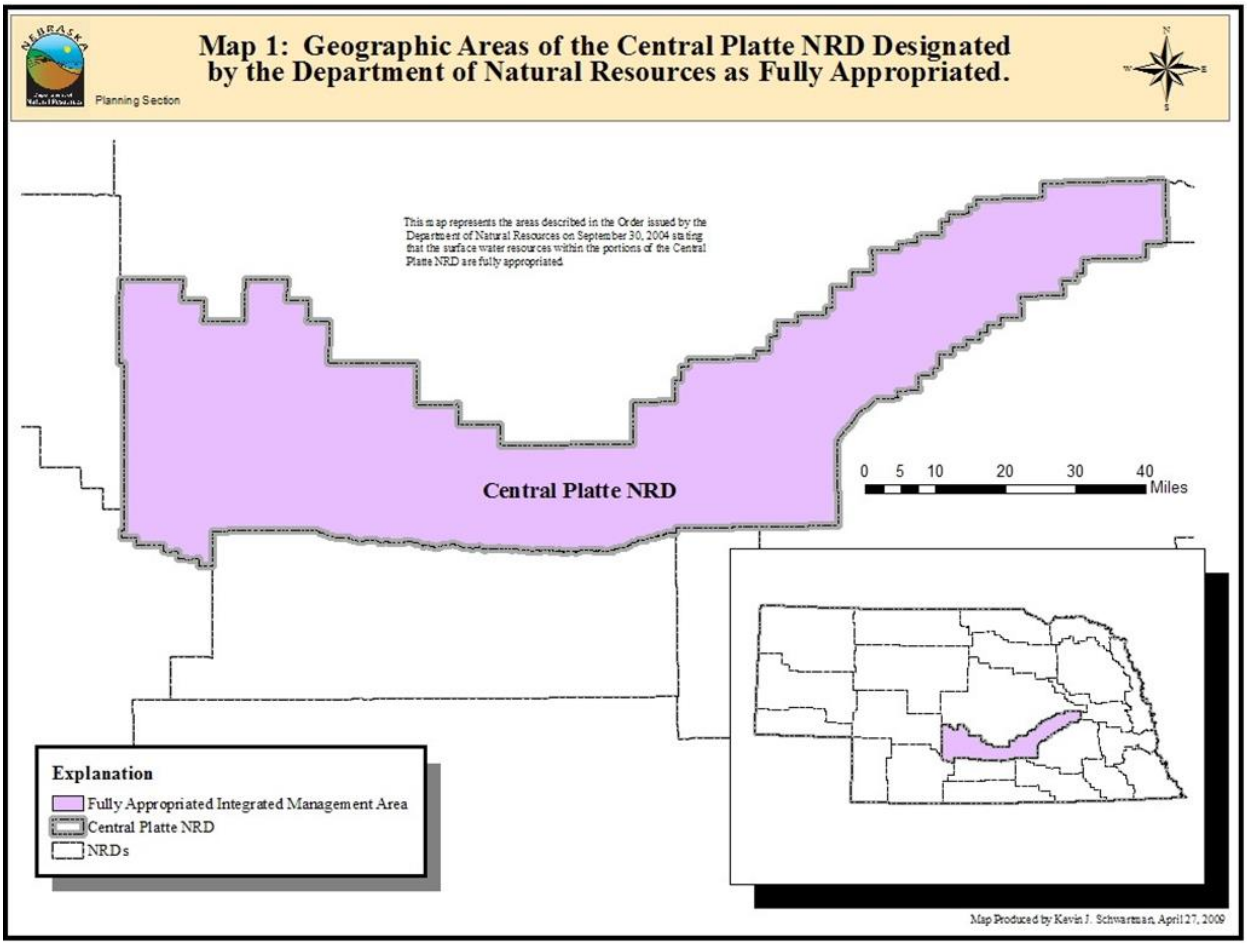

Figure 1: Map 1, fully appropriated area of CPRND. This is the entire geographic area of the CPNRD, all of which is included in the goals, objectives, and action items described in this IMP.

4.2 Overappropriated Area

The overappropriated portion of CPNRD designated by the Department on September 15, 2004 (Map 2, below). This area is referred to as the overappropriated integrated management subarea (OAIMS).

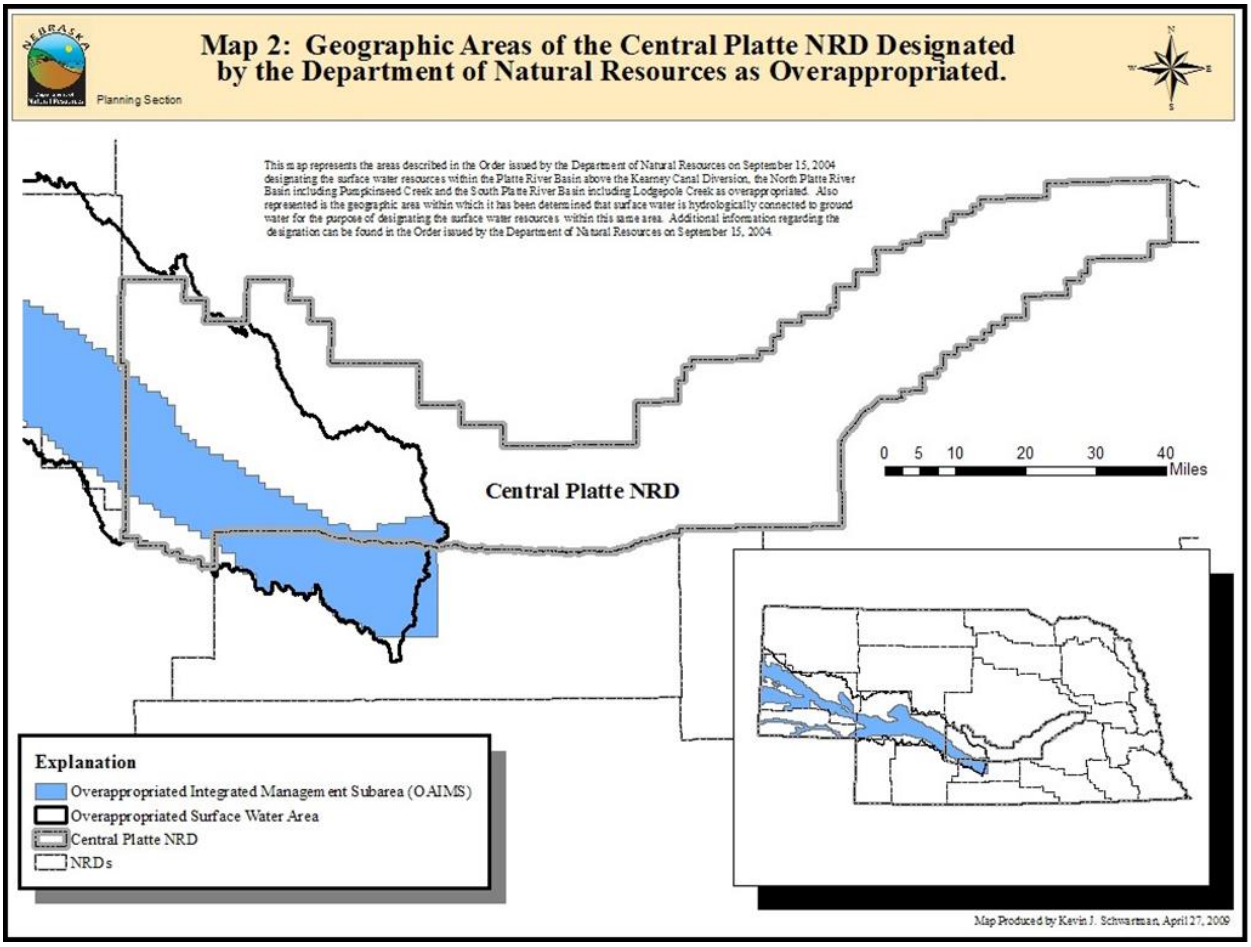

Figure 2: Map 2, overappropriated area of CPNRD.

4.3 Stratigraphic Boundaries of Plan

The stratigraphic boundaries subject to this IMP include all sediments from ground level downward through all aquifer units.

5: VISION

The CPNRD, in cooperation with the NeDNR, will implement this IMP to achieve and/or maintain a balance between water uses and water supplies so that the economic viability, social and environmental health, safety, and welfare can be achieved and maintained for both the near term and long term, considering the effects on existing surface water appropriators and groundwater users.

Joint goals of CPNRD and NeDNR are to secure future water supply projects, to provide for water consumption that does not exceed full appropriation, to maintain the District's water resources while allowing for economic growth, to provide an adequate water supply for beneficial uses, to resolve conflicts between users, and to ensure the IMP complies with the law, with interstate agreements, and with the basin-wide plan.

To do this, CPNRD and NeDNR will develop regulations to protect existing users by treating the fully and overappropriated areas equitably, develop rules, regulations, and programs to balance water use and water supply, promote water use efficiency, promote programs that reduce water consumption by invasive species, implement potential incentive programs that encourage water conservation, reduce consumptive use, maximize funding, and will allow for groundwater transfers.

6: FUNDING

NeDNR and CPNRD will use available funds and actively pursue new funding opportunities to cost effectively offset depletions as well as to develop, maintain, and update data and analytical tools needed to implement this plan. Funding sources may include federal, state, and local partners in addition to NeDNR and NRD contributions. Additionally, NRDs have various taxing authorities they may use to fund projects and studies, including the occupation tax provided in *Neb. Rev. Stat.* § 2-3226.05, funds granted to the District by the State or Federal government, or the levy authority authorized by *Neb. Rev. Stat.* § 2-3225. The Platte Basin Coalition, described in more detail in Section 8.5, is another mechanism for funding projects and studies in the NRD/basin.

Funding priorities identified in this plan include:

- Reductions in consumptive use
- Enhancement of water supplies
- Maintenance of existing projects and implementation of proposed projects to meet goals of this plan
- Data acquisition and maintenance, and model improvements for plan implementation

The ability of NeDNR and CPNRD to implement the goals, objectives, and action items for this IMP, including their ability to meet the implementation timeline and intermediate deadlines set forth herein, may be limited by the availability of resources, including (but not limited to) funding or staff resources.

If limited resources prohibit completion or initiation of a specific management action, or if they delay the ability of NeDNR or CPNRD to complete a task by an established deadline, such limitations and delays will be discussed by NeDNR and the NRDs. If such a delay results in the need for revisions to this Plan, the necessary revisions will be made following the procedures set forth in Section 10.9.

7: SCIENCE AND METHODS

NeDNR and the Central Platte NRD, North Platte NRD, South Platte NRD, Tri-Basin NRD, and Twin Platte NRD (Upper Platte Basin NRDs) will utilize the best readily available science, data, and methods when implementing and reviewing the Upper Platte Basin second increment IMPs. This maintains consistency with state statute and the first increment processes and methodologies. Consistency in the science, data, and methods used to evaluate water management actions across the basin is paramount to provide a consistent basis for comparison of the effectiveness of various water management actions, regardless of location. Statutes and prudent scientific practices call for clear and transparent procedures to track depletions and accretions. The Department and Upper Platte Basin NRDs will jointly develop and agree to all of the data, science, and methods utilized for the implementation, review, and evaluation of this IMP. The methodologies may be revised upon review of any new information, data, and science by the Department and NRDs. The action items in Chapter 10 reference actions outlined within this Chapter that are instrumental to the implementation and review of the IMP. This Chapter briefly overviews the first increment data, science, and methods with a comparison of how these aspects pertain to the current increment of the Nebraska New Depletion Plan[3] (NNDP) included within the PRRIP.

7.1 First Increment: Best Available Science, Methods, Data, and Tools

The first increment and associated implementation of the NNDP utilized the Cooperative Hydrology Study (COHYST) model[4] as the best available tool to determine both groundwater depletions and set mitigation targets for each NRD. The analysis used to determine the targets for the first increment is described in the 2008 COHYST report[5].

[3] More information on the NNDP can be found here: https://dnr.nebraska.gov/sites/dnr.nebraska.gov/files/doc/water-planning/upper-platte/platte-river-recovery-implementation-program/ne-new-depletion-plan.pdf

[4] More information on the COHYST Model can be found at https://cohyst.nebraska.gov

[5] Luckey, R. R. (2008). *Estimated Stream Baseflow Depletion by Natural Resources District in the Nebraska Platte Basin due to Gained and Lost Groundwater Irrigated Land after July 1, 1997*. Aurora, CO: High Plains Hydrology, LLC. Retrieved from https://dnr.nebraska.gov/water-planning/upper-platte-river-publications

This analysis set the basis for the procedures for the Upper Platte Basin NRDs and NeDNR to perform consistent, ongoing analysis throughout the first increment. Consistency in evaluation is crucial in order to compare the results from the analysis used to determine targets with the results of the analysis to determine how particular management actions meet those targets.

The NRDs and the NeDNR developed an annual protocol to evaluate IMP progress[6] toward the targets using analytical methods coupled with COHYST model data to assess annual changes in permit activity regarding changes in consumptive use and streamflow depletions. The annual protocol methods are consistent with the 2008 IMP targets to provide a valid comparison. The annual process was utilized each year and results of those analyses can be found on the NeDNR website[7].

Evaluation of the initial COHYST model led to two major areas of scientific understanding. First, the massive expanse of the COHYST model area would be best modelled as two separate areas, the Western Water Use Management Modeling (WWUMM) area and the COHYST 2010 area, due to distinct and significant differences in geology, climate, and land management. Second, splitting the COHYST model area required a reconstruction and recalibration of the groundwater models. This fundamental reorganization and rebuilding of the models meant that neither model is currently consistent with the original 2008 COHYST report modeling analysis and results. Therefore, these models are not an appropriate tool to use as a direct comparison with the targets as described within the first increment IMP. Modifications to the original 2008 COHYST report analysis are necessary to redefine the targets for a true comparison.

COHYST 2010

The COHYST 2010 Model includes a portion of the Platte River Basin, extending westward from Chapman to the upstream end of Lake McConaughy. This model is used for the CPNRD, TPNRD, and TBNRD. The goal of COHYST 2010 is to support water management to maintain the region's extensive irrigation economy and protect river habitats used by endangered species. This goal is accomplished through reasonable and replicable model analysis to determine depletions and accretions that result from various water management actions.

The revised models improve the overall understanding of basin hydrology during implementation of the first increment plan. The first increment Robust Review utilized this updated understanding and science for all aspects of the analysis. Application of these tools and understanding resulted in refined estimates of post-1997 depletions that

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[6] The protocol document, *Basin-wide Technical Committee Guidance Document – Procedures for Annual Accounting Review and Robust Review to Assist Integrated Management Planning and Facilitate Reporting to the Platte River Recovery Implementation Program*, can be found at https://dnr.nebraska.gov/water-planning/other-upper-platte-river-documents

[7] Annual reports for the Upper Platte River Basin can be found at https://dnr.nebraska.gov/water-planning/upper-platte-basin-wide-meetings-and-annual-reports

are typically greater than the original estimates included in the first increment plan. The Robust Review also provided estimates of the first increment offsets achieved by each of the NRDs. A description of the Robust Review can be found in Section 8.3 of this IMP.

7.2 Ongoing Increments: Best Available Science, Methods, Data, and Tools

There are several basin-wide tenets regarding best available science, data, and methods that the NRD and the Department will follow while implementing this IMP:

1. Maintain, improve, or acquire data and modeling tools, such as the COHYST 2010 model, land-use, climate data, and other programs and projects needed to implement and assess the progress of this IMP.

2. Use the models or data and tools derived from the COHYST 2010 and WWUM models to analyze potential management actions, conduct an annual review of progress of the IMP, perform the next robust reviews, and carry out any relevant studies identified in this IMP or the BWP uniformly across the basin.

3. Maintain and expand model applications through collaboration of model user groups.

4. Substantial changes to the model, for example changes to the hydrologic properties or refinements of model grids, will be agreed to by the Department and NRDs before using those changes to evaluate the IMP and management actions.

5. All Basin-Wide Plan or Integrated Management Plan compliance-based analysis must utilize conceptually consistent methods such that stream depletion estimates or calculations performed in one area of the basin are comparable to stream depletion estimates or calculations in another area of the basin.

6. Any analysis that evaluates progress toward achieving IMP targets will be consistent with the original analysis or tools used to develop the targets. If necessary, new tools will be used to re-evaluate targets as well as progress toward those targets; in either case both the targets and the values estimating progress will be developed in a conceptually consistent manner so that they can be compared.

7. Continue to evaluate and refine stream depletion and accretion analysis methods by gathering and evaluating data for potential incorporation into these analyses upon agreement by NeDNR and NRDs. As new tools, information, and understanding is applied, it is anticipated that the values for depletions or accretions from the Robust Review (shown in Goal 1 in Chapter 9) may change.

8. As updates to data, models, analysis tools, or hydrologic understanding occur, NeDNR, and the NRDs will share these advances with the public. Methods, tools, and data used will be made available to the stakeholders and the public, as

described in the basin wide plan. The process for incorporating new information and results into this plan document and/or supporting appendices will include a public hearing at the annual meeting.

9. The depletions estimates will be reviewed periodically using agreed upon modeling tools as the models, supporting data, information, and the understanding of the Basin's hydrology continue to evolve.

The term 'uniform' in this plan when referring to consistency in analysis is not intended to dictate that same methods be used throughout the basin, as differences in available data, water supply and uses, climate, etc. across the basin will require differences in the methodologies employed. Rather the term 'uniform' is intended to indicate that the methodologies must be scientifically-based and proven as conceptually consistent equivalents through either the scientific literature or independent evaluation of NeDNR and the NRDs.

7.3 Information Considered in Developing this IMP

Information used in the preparation of this IMP and to be used in the subsequent implementation of this IMP can be found in the list below. These materials can be obtained by contacting the CPNRD or the NeDNR.

- the Order of Final Determination of River Basins, Subbasins, or Reaches as Fully Appropriated, and Describing Hydrologically Connected Geographic Area in the Matter of the Portion of the Platte River Basin Upstream of the Loup River Confluence, the North Platte River Basin, and the South Platte River Basin within the South Platte Natural Resources District, the Twin Platte Natural Resources District, and the Central Platte Natural Resources District (Appendix D)
- the Order Designating Overappropriated River Basins, Subbasins, or Reaches, and Describing Hydrologically Connected Geographic Area in the Matter of the Platte River Basin upstream of the Kearney Canal Diversion, the North Platte River Basin, and the South Platte River Basin (Appendix E)
- the CPNRD Groundwater Management Plan
- the CPNRD Rules and Regulations
- the first increment CPNRD Integrated Management Plan
- COHYST, COHYST 2010, and WWUM Models
- The Nebraska New Depletion Plan (NNDP)
- Total Depletions
- the Robust Review analysis
- the Upper Platte INSIGHT analysis
- Platte Basin Coalition information?
- the first increment Upper Platte Basin-Wide Plan
- the Upper Platte Second Increment Basin-Wide Plan
- additional data on file with the CPNRD and the Department
- Applicable Nebraska Revised Statues

- *Department of Natural Resources Rules for Process and Procedures, Title 454, Neb. Admin. Code*
- *Department of Natural Resources Rules for Groundwater, Title 456, Neb. Admin. Code*
- *Department of Natural Resources Rules for Surface Water, Title 457, Neb. Admin. Code*

8: FIRST INCREMENT ACCOMPLISHMENTS

8.1 Studies Conducted in the First Increment

The Upper Platte Basin NRDs and NeDNR conducted several studies in the first increment, which were specifically identified by the IMPs Large amounts of information and data were collected and used in these studies and other analyses. The purpose was to help evaluate the potential effectiveness of various strategies in achieving the goals and objectives of that IMP and to help gage progress during the first increment.

8.1.1 Assessing Available Water

A. Surface Water

The Available Water Study determined the availability, in time and location, of unappropriated surface water for the period 1954 to 2008, by compiling a list of existing surface water appropriations (2010[8], 2013[9]). The studies identified times when unappropriated surface water is available for relocation or retiming projects. Most excess flow events occurred in May and June, and some events were in excess of 30,000 AF. An outcome of the studies was a planning tool to estimate amount, duration, and frequency of excess flow by reach.

B. Groundwater

To assist in assessing available groundwater, the CPNRD certified all groundwater irrigated acres and other uses of groundwater. This database continues to be maintained as a GIS database of the certified acres which tracks transfers, retirements, and other changes to certified acres.

8.1.2 Conservation Study Phases I and II

The 2013 Conservation Study Phase I Final Technical Memorandum[10] assessed which conservation measures[11] the Platte Basin Coalition should consider

[8] HDR and The Flatwater Group, Inc. (2010). *Evaluation of Historic Platte River Streamflow in Excess of State Protected Flows and Target Flows*. Retrieved from https://dnr.nebraska.gov/water-planning/upper-platte-river-publications

[9] HDR and The Flatwater Group, Inc. (2013). *Evaluation of Historic Platte River Streamflow in Excess of State Protected Flows and Target Flows, Technical Memorandum*. Retrieved from https://dnr.nebraska.gov/water-planning/upper-platte-river-publications

[10] The Flatwater Group, Inc. (2013). *Final Technical Memorandum of Conservation Study*. Retrieved from https://dnr.nebraska.gov/water-planning/upper-platte-river-publications

implementing. The memo assessed potential methods for developing basin-wide estimates of impacts to streamflow due to the conservation measures in both the fully and overappropriated areas of the basin. Phase I provided a Matrix that outlined, for each conservation measure, the magnitude of impact to streamflow, the required resources, and cost of each method. Conservation measures assessed included structural (e.g., terraces, dams, canals, etc.) and non-structural (e.g., tillage, irrigation management and efficiency, crop rotation, soil monitoring, buffers, etc.) measures.

Phase II, which is a technical assessment of impacts from changes in tillage practices and irrigation efficiencies, is in progress.

8.1.3 Conjunctive Management Study

A case study[12] evaluated several hypothetical projects on Western Canal, a 20-mile canal that diverts from the South Platte River, to provide information regarding conjunctive management outcomes. Conjunctive management[13] involves managing surface and groundwater together to maximize storage, timing, and use of the resource. For successful conjunctive management projects, identification and quantification of surface water and groundwater supplies is essential. Projects generally include three components, 1) diversion of surface water, 2) recharge facilities, and 3) use of the water. The case study evaluated project impacts that include water yield, water quality, economics, environmental impacts, and legal constraints. The study also stressed the importance of a monitoring plan to assess project performance.

8.1.4 Inventory of Sandpits and Small Reservoirs

As part of Nebraska's commitment to PRRIP, the Department has been charged with estimating the cumulative impacts of new or expanded, unregulated surface water activities. Therefore, in 2013, the Department conducted an inventory and analysis of sandpits and reservoirs with capacity below 15 acre-feet throughout Upper Platte River Basin[14]. This analysis used multi-temporal aerial imagery from 2005 and 2010, and implemented remote sensing techniques to delineate and compare the number, size, and distribution of these water bodies. Baseline data generated from 2005 imagery were compared to 2010 imagery in order to identify changes in the overall surface areas of these unregulated water bodies within the

[11] The Final Technical Memorandum defines conservation measures as "practices designed to control or prevent soil erosion, enhance the beneficial use of precipitation and irrigation water, or reduce non-beneficial water consumption."
[12] HDR and The Flatwater Group, Inc. (2011). *Conceptual Design of a Conjunctive Management Project*. Retrieved from https://dnr.nebraska.gov/water-planning/upper-platte-river-publications
[13] The Conjunctive Management Study defines conjunctive management as "the coordinated and planned use and management of both surface water and groundwater resources to maximize the availability and reliability of water supplies in a region to meet various water needs."
[14] Zoller, A. (2014). *2005 – 2010 Consumptive Use of Small Man-made Water Bodies in the Platte Surface Water Basin Above Columbus* [PowerPoint Presentation]. Retrieved from https://dnr.nebraska.gov/water-planning/upper-platte-river-publications

basin. Once these new or expanded water bodies were identified, the Natural Resources Conservation Service (NRCS) Evapo-Transpiration (ET) calculator was used to estimate the resulting change in consumptive use due to ET.

The inventory component of the study was extremely labor intensive and required approximately 2,500 labor hours to identify, measure, and categorize over 13,000 remotely sensed features. After comparing data from both years, the study found 94 new or expanded sandpits and 9 new reservoirs. New and expanded sand pits represented a cumulative increase in open water surface area of 728 acres and new reservoirs were responsible for a cumulative increase of 19 acres for a total of 747 new acres of unregulated surface water throughout the basin from 2005 to 2010.

Once the change in open water acreage attributed to unregulated surface water was determined, the NRCS calculator was used to estimate the resulting change in consumptive use due to ET. The results of the NRCS analysis found a pronounced decrease in consumptive use due to ET during the growing season with a modest increase in consumptive use during the non-growing season. Additionally, the NRCS analysis identified a very slight increase in consumptive use due to new reservoirs, which was consistently distributed across all months. Ultimately, the NRCS analysis estimated that the increase in unregulated surface water acreage from 2005 to 2010 resulted in a net decrease in consumptive use of 678 acre-feet per year throughout the basin. The results of this study were presented to the PRRIP's Water Advisory Committee on May 6, 2014.

8.2 Summary of Management Actions in the First Increment

8.2.1 The Department continued the formal moratorium on all new surface water appropriations for the CPNRD.

8.2.2 The CPNRD and NeDNR conducted several conjunctive management projects in cooperation with Irrigation Districts. Excess streamflows were diverted into irrigation canals, pits, and reservoirs for intentional recharge to retime and augment baseflows.

8.2.3 Throughout the first increment, CPNRD undertook various water management actions to address and meet some of the mitigation targets. These actions include cooperative agreements with four surface water canals. The restrictions of new irrigated acres and retirement or groundwater irrigated acres reduces the amount of future groundwater pumping and subsequent groundwater depletions. The retirement of surface water acres, while allowing for new groundwater wells, retimes the depletions to later dates. The agreements with the larger surface water canals allows for opportunities recharge groundwater from excess flows, as well as store unused irrigation water in reservoirs.

8.2.4 The CPNRD assisted groundwater users in signing up for incentive programs.

8.2.5 Additionally, the following is a summary of the management actions carried out by the CPNRD:

A. The District has closed the management area to the issuance of new well permits and the expansion of irrigated acres and limited increases in the consumptive use of groundwater withdrawals from water wells used for irrigation or other beneficial purposes. The District may issue a water well construction permit provided that the permit conditions require an offset for any new or expanded use or if as a result of issuing the permit, there will not be an increase in consumptive use due to any new or expanded use of groundwater. New or expanded groundwater uses may occur if an offset is provided.

B. The purpose of certifying groundwater uses as of the dates below was to identify the current groundwater uses in the District. Different types of irrigated land were determined as part of the certification process, such as irrigated cropland, irrigated hay land, irrigated pasture, and sub-irrigated uses. In certifying the irrigated acres, the District used 2004 as the base year for those areas within the fully appropriated area that was under the original state stay on new wells and new irrigated acres. 2005 was used as the base year for the remainder of the area designated as fully appropriated. All groundwater uses, with the exception of domestic uses and range livestock uses, have been certified by the District.

C. Any variance granted by the District must consider the timing, location and amount of any depletion associated with the variance and any associated offset to ensure that there will not be an adverse impact to existing groundwater or surface water users or on the state's ability to comply with PRRIP.

D. The purpose of a groundwater transfer is to be able to allow for the consumptive use of water to be changed either in location or purpose without causing an increase in depletions to the river or an impact to existing surface water or groundwater users.

E. The District partnered with surface water canals within its boundaries to take advantage of excess flows in the Platte River and to temporarily transfer uses back to the canals to enhance streamflow.

F. The District retired groundwater and surface water irrigation in the overappropriated area of the District to increase baseflow to the Platte River.

8.3 Assessment of First Increment (Robust Review)

As required by statute, NeDNR and the Upper Platte Basin NRDs conducted a Robust Review of the progress being made toward achieving the goals, objectives, and targets of the first increment. The previous IMP outlined the process for the Robust Review in order to compare the results of that analysis with the 2008 COHYST report (Section 7.1). The Robust Review was an update of that study. The evaluation used data and information from the annual reports and updates developed in support of BWP and NNDP implementation.

This evaluation provides summarized estimates of the streamflow impacts resulting from gained and lost irrigated land, controls (allocations and transfers), expansion and contraction of municipal and industrial uses, managed recharge, stream augmentation, and permitted uses that occurred through 2013. The report is a synthesis of all of these efforts and provides summarized updates of new targets that will be used to guide second increment planning goals and objectives.

The Robust Review Report outlines the methods, limitations, and results of the most recent robust review and represents the best available science to support second increment planning. The general method for conducting the Robust Review can be found in Section 10.7.3.1.B. Figure 3 illustrates the geographic extent of the stream reaches that are impacted by actions within the NRD. The data in the figures correspond to these reaches. Figures 4 and 5 below illustrate the results for the CPNRD for the period of 2019 – 2029 (current increment). Positive values for stream flow impacts indicate accretions to and negative values indicate depletions.

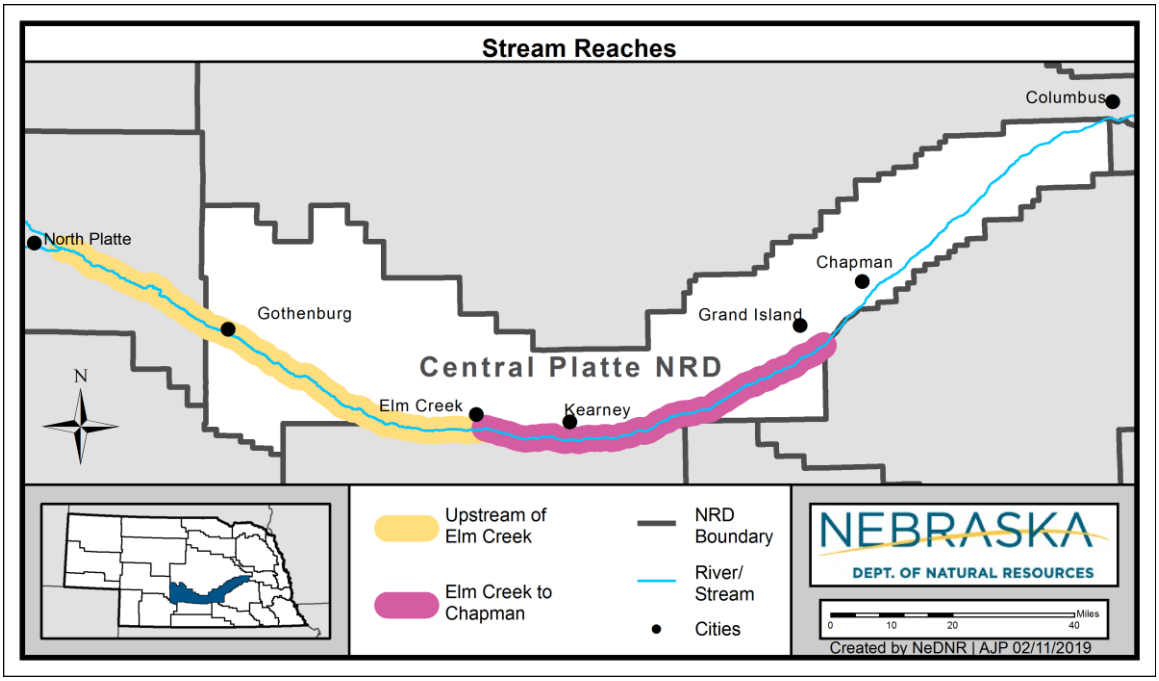

Figure 3: Stream reaches for Robust Review analysis.

Figure 4 displays the modeled post-1997 impacts of CPNRD to the Platte River upstream of Elm Creek (including groundwater-only irrigation, municipal and industrial development, groundwater irrigated acres retirements, and recharge projects on the Platte River contracted by CPNRD). The impacts of changes, activities, and actions take through 2013 are reflected in the data. A linear trend line has been added to the modeled impacts from 2014 – 2063, and the inter-annual variability range of modeled impacts across the trend. The inset in Figure 4 shows the same data at a smaller scale.

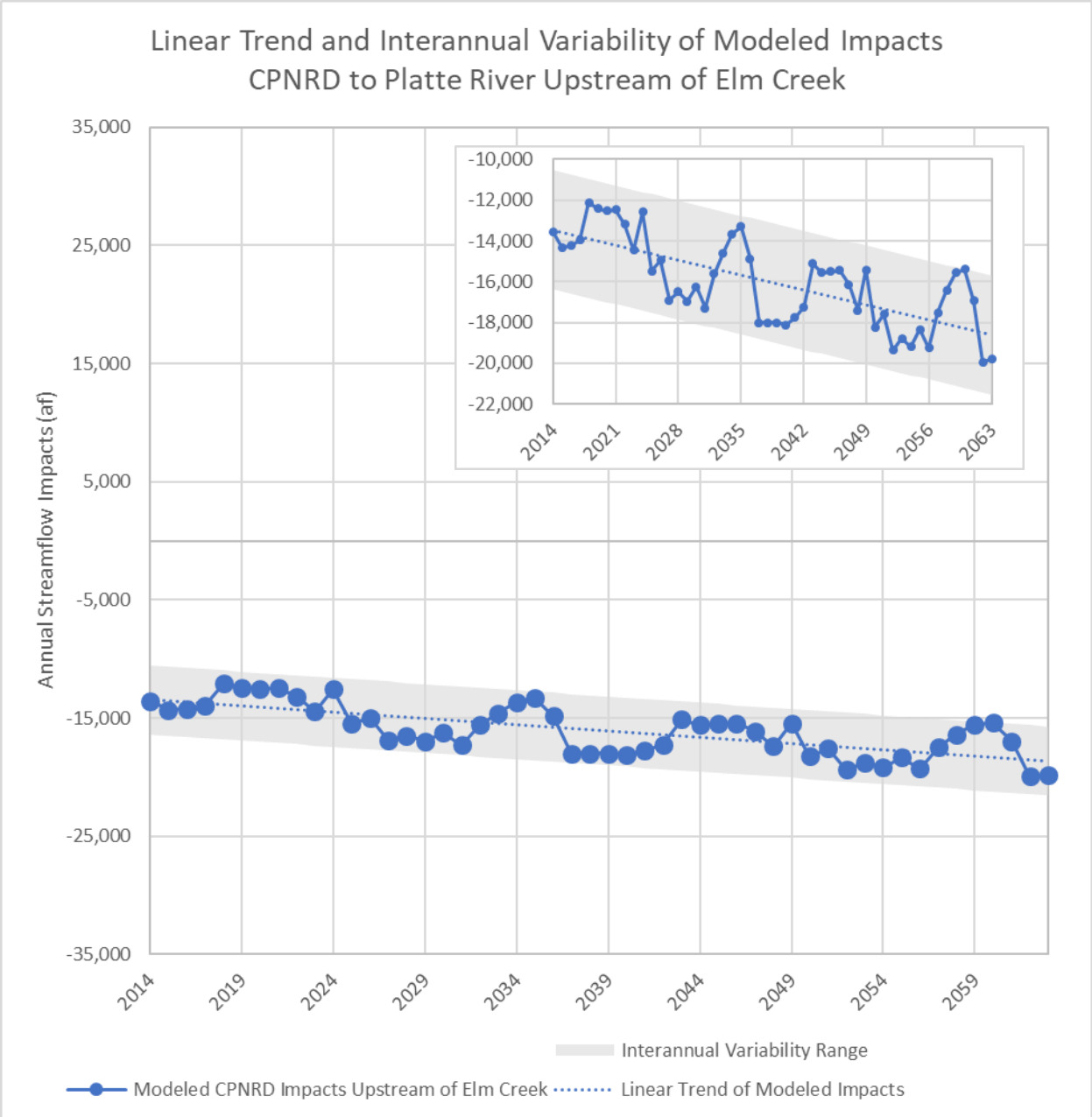

Figure 4: Modeled CPNRD post-1997 impacts to the Platte River upstream of Elm Creek, the linear trend line of the modeled impacts 2014 – 2063, and the interannual variability range of modeled impacts across the trend. The inset shows the same data at a smaller scale.

Figure 5 displays the modeled post-1997 impacts to the Platte River between Elm Creek and Chapman (including groundwater-only irrigation, municipal and industrial development, groundwater irrigated acres retirements, and recharge projects on the Platte River contracted by CPNRD). The impacts of changes, activities, and actions take through 2013 are reflected in the data. A linear trend line has been added to the modeled impacts from 2014 – 2063, and the inter-annual variability range of modeled impacts across the trend is shown by the grey band. The inset in Figure 5 shows the same data at a smaller scale.

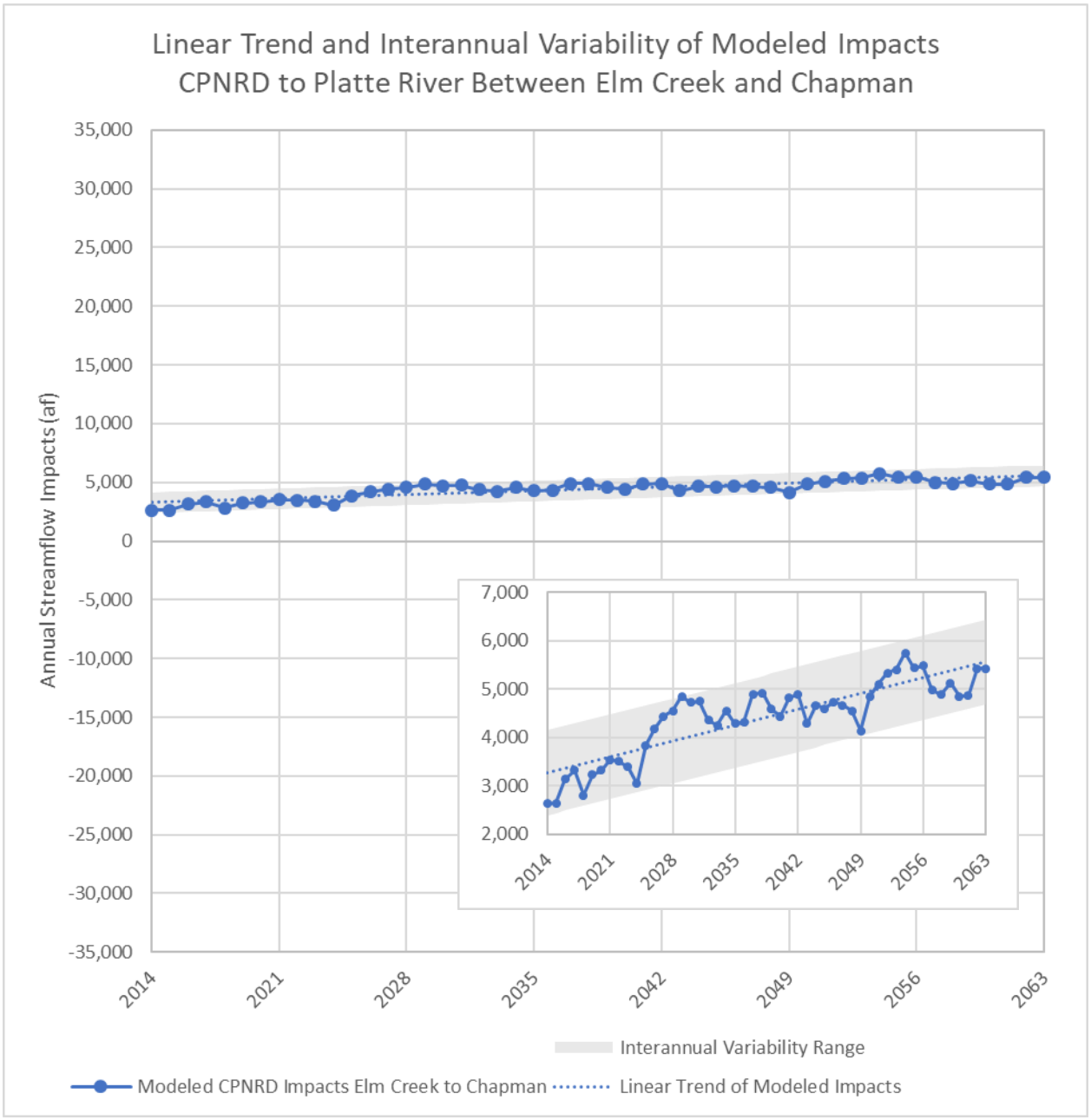

Figure 5: Modeled CPNRD post-1997 impacts to the Platte River between Elm Creek and Chapman, the linear trend line of the modeled impacts 2014 – 2063, and the interannual variability range of modeled impacts across the trend. The inset shows the same data at a smaller scale.

The charts show the range of uncertainty around the trend line of the modeled data. Potential future offsets are impacted by the variability in climate, therefore a trendline is shown to smooth out the potential future effects of climate variability. Values are the result of the most recent robust review conducted by NeDNR. Details on the analysis are (in the Robust Review report).

It is recognized that while they were not analyzed during this robust review, several canal diversions for recharge occurred in after 2013 in the first increment which would also provide accretions to the stream. The agreements with the larger surface water canals also allows for storage of unused irrigation water in reservoirs, which counts as credit toward achieving the first increment IMP offsets. The NRD and NeDNR will also continue to purse conjunctive management projects and other projects to provide accretions to the stream.

8.4 Assessment of Fully Appropriated Condition

There are several potential approaches to assess the difference between the current level of development in the Upper Platte Basin and a fully appropriated condition. Identifying this difference is critical in making progress toward a fully appropriated condition in the basin.

8.4.1 Total Depletions

(Waiting on write-up)

8.4.2 INSIGHT

The INSIGHT methodology is an approach to assess the balance between water supplies and water demands within a basin. INSIGHT consolidates data from several sources, including NeDNR, the United States Geological Survey (USGS), the United States Bureau of Reclamation (USBR), and local NRDs. That hydrologic data is used to conduct an analysis of the following items at the basin- and subbasin-level: 1) streamflow water supplies available for use, 2) the current amount of demand on these supplies, 3) the long-term demand on these water supplies due to current uses, 4) the projected long-term demand on these water supplies due to five percent growth in total use, and 5) the balance between these water supplies and demands.

If a basin’s near-term demand and/or the long-term demand of hydrologically connected groundwater and surface water exceeds the basin water supplies, then supplies may not be sufficient to sustain the demands over the long term.

The figure below shows the average balance of water supplies in the basin compared to the various levels of demands. When all demands in the basin are considered, the demands outweigh the supplies by approximately 960,000 acre-feet. This means that there may be years when the supplies are not adequate to meet all the demands.

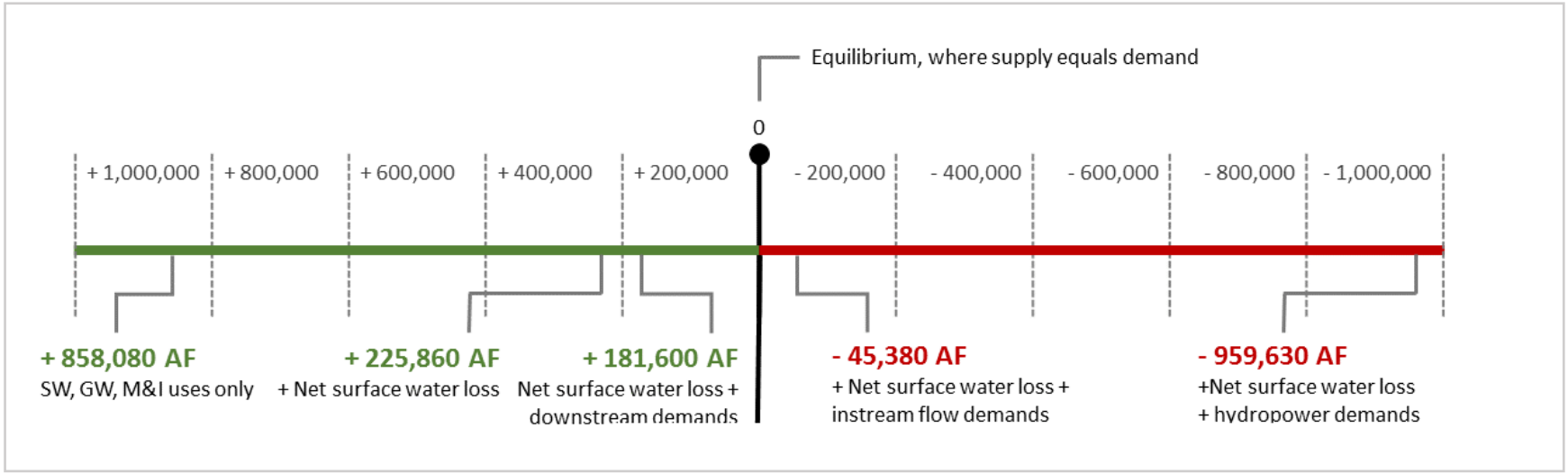

Figure 6: Basin-wide supply and demand balance.

8.5 Basin-Wide Coordination in the First Increment (Platte Basin Coalition)

The first increment IMP called for the development of a list of criteria to evaluate the potential to use available surface water and groundwater supplies as management projects to meet the goals and objectives of the IMP. In order to create a unified approach across the basin, the Department and the five Upper Platte Basin NRDs through an interlocal cooperative agreement (ILCA), created the Platte Basin Coalition (PBC or Coalition). This coalition serves as a venue for obtaining funding, project evaluation criteria, and technical support, in order to scrutinize incentive programs aimed at reducing consumptive use within the overappropriated portion of the Platte River Basin.

8.5.1 Protocols

The Coalition developed a protocols that will be followed to evaluate potential projects, including the retirement of water uses and the implementation of other offset projects. This protocol provides a means to evaluate potential projects to assess the appropriate amount of funding that will be allocated toward that project from the Coalition. The evaluation incorporates data from the COHYST and the WWUM models and other tools. Projects with a greater or quicker impact on the stream are given preference over those which do not have as much an impact. Project costs, benefits, permitting and regulatory constraints are also considered.

8.5.2 Funding

The ILCA and associated projects are financed by the Water Resources Cash Fund (WRCF), the NRDs, and NeDNR. The WRCF receives monies from both the general fund and the Nebraska Environmental Trust. By statute in the over or fully appropriated areas, the WRCF may be used for projects to study, develop, and implement management actions that result in the reduction of consumptive uses, the enhancement of streamflows, or groundwater recharge. Funding of projects through the PBC is shared between the NRDs and the Department. Coalition members approve all expenditures, while simultaneous seeking outside sources of funding to increase the leveraging ability of the local dollars spent on projects.

8.5.3 Technical Work

The Five Upper Platte Basin NRDs and NeDNR have a technical working group to address technical issues and statutory aspects of the BWP and IMPs. NRD managers and NeDNR will agree to technical analyses prior to beginning any work, and the PBC will approve any reimbursed expenditures for technical work.

The technical working group evaluates all aspects of analysis, including the conceptual design, data evaluation, analysis, and evaluation of the results. It is then the responsibility of the technical group to translate the results of any analyses to the administrators for either incorporation into this plan or evaluation toward meeting plan goals.

During the next increment, the technical group will evaluate various aspects of data and models that may include the effects of conservation measures on depletion results, more efficient methods to track changes regarding irrigated lands, or areas where analyses may be simplified. The technical group will follow the basin-wide tenets outlined in Section 7.2 while carrying out any work necessary for the implementation of this IMP.

9: GOALS AND OBJECTIVES

The Department and the five Upper Platte Basin NRDs conducted a Robust Review as part of the actions required in the first increment. This analysis provided each NRD with the information necessary to assess their progress in meeting the goals and objectives of their individual IMPs as well as the progress for the Upper Platte Basin. The outcome of the Robust Review showed that the CPNRD met their IMP targets, as defined in the first increment. The Robust Review also indicated that the current increment is necessary to continue to meet the goals and objectives. The Robust Review results have provided IMP targets for this second/current increment.

Actions to support the successful implementation of the Goals and Objectives in this Chapter can be found in Chapter 10: Action Items.

Goal 1: Reach and Maintain a Fully Appropriated Condition
To incrementally achieve and sustain a fully appropriated condition while maintaining economic viability, social and environmental health, safety, and welfare of the basin. Refer to Figure 3 in Section 8.3 for a map of the planning reaches described within this Goal.

Objective 1.1: Within this increment of this IMP, implement measures to address impacts of streamflow depletions to surface water appropriations and water wells constructed in aquifers dependent upon recharge from streamflow to the extent those depletions are due to water use initiated after July 1, 1997.

1. Post-1997 depletions must be offset in incremental pieces by the end of the current increment.

2. Targets:
   A summary of offset actions taken during the first increment can be found in Section 8.2 of this plan. These offset actions were analyzed as part of the Robust Review to determine their impacts on streamflows and meeting post-1997 targets. The results of the Robust Review indicate that additional incremental management actions are required by the CPNRD. Based on the current Robust Review results, the CPNRD will need to implement post-1997 mitigation measures of 15,000 acre-feet by 2029

upstream of Elm Creek (Table 1 below). However, based on preliminary results of the 2013 Conservation Study[15], it is expected that incorporation of data representing post-1997 tillage practice changes and other efficiency improvements will modify the current increment post-1997 mitigation measures. The inclusion of mitigation actions after 2013 will also change the results. Other modeling limitations identified in the Robust Review Report will be evaluated and incorporated into updated post-1997 mitigation targets prior to September 2023. Therefore, the NeDNR and CPNRD have agreed to implement current increment mitigation measures through an incremental approach, as described in Chapter 10 (Figure 7).

A. Short Term Target Depletions to Offset Upstream of Elm Creek

Year	Upstream of Elm Creek
2019	-14,000
2020	-14,100
2021	-14,200
2022	-14,300
2023	-14,400
2024	-14,500
2025	-14,600
2026	-14,700
2027	-14,800
2028	-14,900
2029	-15,000

Table 1: Modeled depletions to the Platte River from the 2019 Robust Review analysis for CPNRD upstream of Elm Creek. The depletion amounts shown in Table 1 are subject to change based upon the best scientific data and information available. Table 1 corresponds to Figure 4 in Section 8.3.

Table 1 shows the trend in modeled depletions and accretions to the Platte River from the 2019 Robust Review analysis of groundwater only irrigation development after 1997, expansion of municipal and industrial uses after 1997, and management activities through 2013 in CPNRD. The depletion amounts shown in Table 1 are subject to change based upon the best scientific data and information available. The methods used to develop the post-1997 targets for the CPNRD are described in the Robust Review Document/Section 8.3. Figure 4 (in Section 8.3) depicts the Robust Review results for CPNRD upstream of Elm Creek. Triggers for the implementation of regulatory controls based upon these targets can be found in the action items in Chapter 10.

[15] See Section 8.1.2: Conservation Study Phases I and II.

B. Long Term Target Depletions to Offset Upstream of Elm Creek

Year	Upstream of Elm Creek
2059-2063	-18,400

Table 2: Long term modeled depletions to the Platte River from the 2019 Robust Review analysis for CPNRD upstream of Elm Creek. Table 2 corresponds to Figure 4 in Section 8.3.

Long-term planning target - within the current ten (10) year increment, offset depletions to the Platte River and seek opportunities to further reduce impacts to the Platte River streamflows for the period 2059 – 2063. The average depletions for that time-period for the Platte River upstream of Elm Creek are shown in the table above. This rate is the current best estimate and is subject to change based upon new data and information.

3. If post-1997 depletions are offset before the end of this increment, that progress must be maintained throughout this increment. This falls under Objective 1.2 of this goal.

Objective 1.2: Maintain previous increment mitigation progress.

A summary of offset actions taken during the first increment can be found in Section 8.2 of this plan. Many successful programs and projects were implemented. These offset actions were analyzed as part of the Robust Review to determine their impacts on streamflows and meeting post-1997 targets.

It is recognized that some actions undertaken in the first increment are temporary projects, which may come to an end during the current increment.

Post-1997 depletions are required to be offset, as stated above. Below Elm Creek, CPNRD has exceeded their post-1997 offset requirements. The CPNRD needs to maintain a neutral to positive balance in this reach for this increment.

1. NeDNR and the NRD will keep policies, projects, and practices in place, as appropriate, that provide offsets or supply equivalent offsets so that the current level of depletions is not exceeded.

2. Targets

A. Short Term Target Accretions to Maintain Between Elm Creek and Chapman

Year	Between Elm Creek and Chapman
2019	3,500
2020	3,600
2021	3,600
2022	3,600
2023	3,700
2024	3,700
2025	3,800
2026	3,800
2027	3,900
2028	3,900
2029	4,000

Table 3: Modeled accretions to the Platte River from the 2019 Robust Review analysis for CPNRD between Elm Creek and Chapman. The accretion amounts shown in Table 2 are subject to change based upon the best scientific data and information available. Table 3 corresponds to Figure 5 in Section 8.3.

The Table above shows the best estimate of accretions to the Platte for the next increment of the IMP. The methods used to develop the post-1997 targets for the CPNRD are described in the Robust Review Document/Section 8.3. Figure 5 (in Section 8.3) depicts the Robust Review results for CPNRD between Elm Creek and Chapman. Triggers for the implementation of regulatory controls based upon these targets can be found in the action items in Chapter 10.

B. Long Term Target Accretions to Maintain Between Elm Creek and Chapman

Year	Between Elm Creek and Chapman
2059-2063	5,500

Table 4: Long term modeled accretions to the Platte River from the 2019 Robust Review analysis for CPNRD upstream of Elm Creek. Table 4 corresponds to Figure 5 in Section 8.3.

Long-term planning target: within the current ten (10) year increment, maintain current levels of accretions to the Platte River and seek opportunities to further reduce impacts to the Platte River

streamflows for the period 2059 – 2063. The average accretions for that time-period are 5,500 acre-feet to the Platte River between Elm Creek and Chapman. This rate is the current best estimate and is subject to change based upon new data and information.

Objective 1.3: Make progress toward a fully appropriated condition.
Impacts of streamflow depletions to surface water appropriations and water wells constructed in aquifers dependent upon recharge from streamflow to the extent those depletions are due to water use initiated prior to July 1, 1997, may be addressed prior to a subsequent increment with the intent of achieving a fully appropriated condition.

During the first increment, two analyses were performed to estimate the balance of water supplies and demands within the Upper Platte Basin. This included an estimate of all groundwater depletions to streamflow (Total Depletions) and the INSIGHT analysis. Both are described in Section 8.4. [Brief Highlights of some values from the Total Depletions Analysis & INSIGHT Analysis]

- Continue to evaluate total depletions
- Continue to evaluate water supply and demands
- Continue to develop an estimate for a fully appropriated condition

Objective 1.4: Review the implementation of this IMP to ensure that the IMP provisions are adequate to sustain progress toward and/or maintain a fully appropriated condition.

Objective 1.5: Once a fully appropriated condition is achieved, maintain such condition through the implementation of the IMP.

Goal 2: Interstate Compliance
To ensure that no act or omission of the CPNRD would cause noncompliance by Nebraska with any interstate decree, compact, or other formal state contract or agreement.

Objective 2.1: To ensure that no act or omission of the CPNRD would cause noncompliance by Nebraska with the NNDP included within PRRIP, for as long as PRRIP exists.

Objective 2.2: Ensure that the groundwater and surface water controls adopted in the individual NRD IMPs are sufficient to ensure that the state will remain in compliance with the NNDP.

Objective 2.3: Collectively, as defined in the NNDP, offset the new depletions caused by new uses within the Platte River Basin NRDs.

Objective 2.4: Ensure that for post-1997 new or expanded uses, including irrigation, municipal, industrial, rural domestic and other new water related

activities are assessed and offset for compliance with the NNDP. This assessment will be part of the Robust Review, explained in Section 10.7.3.

Goal 3: Consistency and Updates
Keep the IMP current, maintain consistency with the Basin-Wide Plan, and keep water users informed.

Objective 3.1: Amend this IMP as needed to remain consistent with the Basin-Wide Plan.

Objective 3.2: Participate in basin-wide planning activities

Objective 3.3: Improve information sharing with interested parties.

Objective 3.4: Conduct planning for subsequent increments of the plan, as necessary.

Objective 3.5: If appropriate and necessary, follow the dispute resolution process in the Basin-Wide Plan.

10: ACTION ITEMS

Chapter 10 contains the action items necessary to achieve the goals and objectives of the IMP. These actions range from ongoing non-regulatory actions such as information and education efforts, to maintenance of current regulatory actions, and the potential for future increased controls if certain triggers cannot be achieved through the other actions taken by the NRDs or DNR. As described within this Chapter, more details on the statutes or rules followed by the NRDs or DNR can be found at the offices of each respective agency. For purposes of transparency/simplicity, the full length of those documents are not repeated herein, so the reader is directed to each agency to read the full details on how any particular action item may be carried out.

10.1 Information and Education Programs

The CPNRD and the Department will provide educational materials to the public and/or carry out educational activities that may include, but not be limited to, the following:

- The fully appropriated determination
- The overappropriated designation
- The IMP
- The Nebraska New Depletion Plan (NNDP)
- The Platte River Recovery Implementation Program (PRRIP)
- Hydrologically connected groundwater and surface water
- Invasive species management
- Conversion of irrigated acres to dryland agriculture or wildlife habitat

- Limited irrigation cropping systems
- Soil residue and tillage management
- Alternative crops
- Water use measurement techniques
- Eco-tourism, crop diversification, changes in land use, to support diversity in revenue streams of water users within the basin, as a means of maintaining economic viability
- Educational programs to support the implementation of Incentive Programs
- Funding sources for programs that enhance water supply

These educational materials and/or activities may include, but not be limited to, joint public meetings, pamphlets, and website information.

10.2 Incentive Programs

The Department and/or the CPNRD intend to establish, implement, and/or continue financial or other incentive programs to reduce consumptive use of water within the CPNRD to meet the goals and objectives of this IMP.

A. State or Federal Programs

Incentive programs include any program authorized by state law and/or federal programs such as the Environmental Quality Incentive Program (EQIP).

B. Other State or NRD Programs

The CPNRD and the Department may investigate opportunities to reduce the consumptive use of water in order to enhance water supply as well as other water supply improvement projects. The CPNRD and the Department may develop an incentive-based program if such an opportunity exists. All projects and programs will:

1. Use the best science readily available. This will follow the basin-wide tenets outlined in Section 7.2. These will be consistently evaluated according to the protocol developed by the PBC. Benefits will be assessed using the agreed upon methods and tools.
2. Enhance groundwater quantity, groundwater quality, and recognition of the value of return flows.
3. Remain in compliance with any state or federal laws, contracts, interstate compacts, or decrees that govern the water use of the irrigation districts

The general process for permanent or temporary retirements includes:

1. For existing surface water appropriations, contact the appropriators to determine willingness to cooperate, lease and/or sell those appropriations. If willing, develop and execute contract(s) with appropriator(s).

- Working with irrigation districts, not just individual landowners served by the irrigation district, when potential projects affect the operation of the irrigation district.
- Permanent or temporary retirement of surface water rights. While typically a surface water right which has not been used for more than five years may be cancelled due to nonuse, under *Neb. Rev. Stat.* § 46-229.04, if the appropriation is not being used because it is part of an acreage reserve program, or other state or federal program, there is sufficient cause for nonuse and the right is still valid.

2. For existing groundwater uses, contact the landowner(s) to determine willingness to cooperate with the proposed project(s). If willing, develop and execute contract(s) with such landowner(s).
3. Submit the required permit application(s).
4. Implement the approved projects.

C. Other Identified Potential Programs

At this time, other programs that have been identified are:

1. Potential purchase or lease of surface water irrigation district appropriations in order to transfer those appropriations to intentional recharge appropriations.

10.3 Water Banking

A. The CPNRD has established a water bank. The CPNRD will purchase or otherwise acquire certified groundwater irrigated acres or other groundwater uses or surface water use appropriations. The CPNRD will hold the water in its water bank for purposes including but not limited to:

1. Offsetting new or expanded consumptive uses
2. Saving water to meet statutory requirements or interstate agreement obligations
3. Saving water to meet future incremental targets toward achieving a fully appropriated condition

B. The CPNRD and the Department will follow the basin-wide tenets from Section 7.2 while implementing the water bank.

C. The CPNRD will contact the Department prior to purchasing or acquiring surface water appropriations for deposit in the water bank. The Department will conduct a field investigation of the surface water appropriation and notify the CPNRD of the results of that investigation within 90 days. The CPNRD will work collaboratively with the Department in performing the analysis to evaluate the bankable volume of water resulting from the retirement of the surface water appropriation. The CPNRD will follow the appropriate statutes and rules and regulations of the

Department for approval if the surface water appropriation is to be transferred to another use.

D. The CPNRD will obtain and maintain permanent easements, lease agreements or other agreements on all property from which surface water or groundwater uses have been retired for purposes of the water bank.

E. The CPNRD shall annually report water banking transactions as part of the tracking and reporting requirements in Section 10.7.1.A.

F. When carrying out any water banking activity, the CPNRD shall follow the procedures for any groundwater regulatory action (e.g. transfers, certification, or municipal and non-municipal industrial accounting) applicable to such activity. When carrying out any surface water related water banking activity, the CPRND shall follow the appropriate state statute and Department rules and regulations.

10.4 Conjunctive Management

Conjunctive management projects[16] allow for the optimum use of hydrologically connected surface water and groundwater supplies, so that the variability seen in surface water supplies can be smoothed out over time, allowing water users to wisely store water during periods of surplus and, in a managed fashion, withdraw that stored water in times of shortage, overall increasing the available supply through time. Conjunctive management projects can also create benefits such as, mitigating groundwater level declines and offsetting depletions. The Department and the NRD will identify conjunctive management opportunities and implement such projects with the purpose of meeting the goals and objectives of this IMP.

Conjunctive Management may include, but is not limited to:

1. Surface water appropriations that encourage recharge during either the irrigation or non-irrigation season, or temporary excess flow appropriations for recharge
2. Develop new infrastructure (e.g. dams or canals) that may include groundwater recharge projects, and recovery when appropriate
3. Temporarily transfer surface water appropriations within the NRD to streamflow augmentation, instream flow appropriations, or an instream use[17]
4. Develop other groundwater projects for the purpose of providing net accretions to the river

[16] See Section 8.1.3: Conjunctive Management Study for more information and a definition of “conjunctive management.”

[17] *Neb. Rev. Stat.* § 46-290(5) in part states that “For any transfer or change approved [to augment flow in a specific stream reach for any instream use determined by the Department to be a beneficial use,] the Department shall be provided with a report at least every five years […] to indicate whether the beneficial instream use for which the flow is maintained or augmented continues to exist”. Title 457 of the Department Rules for Surface Water Chapter 9 Section 002.01 states “For purposes of 46-290(5) R.R.S. 1943, as amended, beneficial use for instream uses shall include: a. Water Quality Maintenance b. Water necessary for compliance with compacts, decrees or other state contracts.”

5. Facilitate contractual agreements between water users
6. Reduce consumptive use by permanently or temporarily retiring irrigated land

The Department and TBNRD also reserve the right to explore other options consistent with state and federal law, this IMP and the Platte Basin-wide Plan in addition to those listed above.

The NRDs and NeDNR will mutually develop procedures to determine when and where projects can be carried out (for example determining and communicating when and where excess flows are available), procedures for carrying out projects (permitting, contracting, and payment procedures), tracking projects and maintaining data records, sharing data, cooperating with other entities wishing to utilize excess flows, and methods for determining benefits from projects (annually for IMP/BWP/PRRIP reporting and for Robust Review purposes). Conjunctive management projects can be passively managed or actively managed. Actively managed projects, such as storage of excess water, can be returned to the stream at a specific time in controlled volumes. Passively managed, such as recharge of groundwater through excess flow diversions, return to the stream gradually over time and the rate and volume depends on the underlying aquifer material and proximity to the stream.

The ability to capture and use excess flows is dependent on advanced notice of the availability of excess flows. NeDNR will develop a protocol for assessing, predicting, and communicating 1) the potential of excess flows to basin water users, and 2) notice of actual availability of excess flows. The CPNRD and NeDNR will work collaboratively to record the excess flows diverted, the excess flows diverted into recharge sites, and the amount of water returning to the river at canal return flow structures. Additionally, CPNRD and NeDNR will collaboratively review and analyze the data from the excess flow diversions to determine the amount of recharge that occurred during the event within the canal and recharge pits. Data on canal recharge and conjunctive management projects will be shared as part of the annual reporting process, described in Section 10.7.2. The recharge will be analyzed in future Robust Review or other analyses.

In order to optimize the implementation of various conjunctive management projects where diversions of excess streamflow will occur, operational plans for each project should be developed. These operational plans should include enhanced monitoring and flow of information and data to effectively manage and utilize any available water. These operational plans will provide the Department with objective criteria by which various projects may be prioritized in order to most effectively utilize available excess flows. The public interest will be best served when the most effective projects are selected for diversion during excess flow periods. In addition, such plans and operational attributes will be useful in establishing good cause and passing public interest tests when petitions and applications are filed with the Department.

10.5 Drought Plan

The basin drought contingency plan will serve as a guide for plans developed by each individual NRD. District-level mitigation measures and response actions corresponding to the drought conditions will be identified and implemented at the individual NRD level. Elements of the NRD drought plan include:

- Drought vulnerabilities (Action Item)
- Drought monitoring protocols (basin plan)
- Drought triggers (individual NRD plans)
- Drought mitigation actions (individual NRD plans – potentially basin-wide activities)
- Drought response actions (individual NRD plans – potentially basin-wide activities)
- Drought plan administration (individual NRD plans and basin plan)

The basin-wide drought plan is to be completed within the first three to five years of the increment. It is anticipated that the NRD drought plan would be completed after the basin-wide drought plan, as the basin-wide drought plan is to provide guidance on the NRD drought plan.

10.6 Controls for the Current Increment

10.6.1 Groundwater Regulatory Actions (Controls)

The District will consider the timing, location, and amount of the depletion for all actions in order to prevent adverse impacts on existing groundwater and surface water users.

Actions include, but are not limited to, these controls: moratorium variances, certified acre modifications, transfers, municipal and industrial permits, and other variances.

The evaluation criteria for a control or other action include, but are not limited to, the following:

1. Impact to existing groundwater or surface water users
2. Change in consumptive use
3. The amount, location and timing of any changes in depletions or accretions to the river
4. Any adverse effects on the state's ability to comply with PRRIP
5. Consistency with the purpose of the IMP
6. Protection of the public interest and public welfare

The District will, by order, adopt controls in the fully appropriated areas to achieve the goals and meet the objectives of this plan.

The District will periodically review the controls being implemented to carry out the goals and objectives of this IMP. Any changes to the controls must not be in conflict with the goals and objectives of this IMP. The District may adjust or modify the controls or expand to include additional controls as deemed necessary and appropriate by the Board of Directors to achieve the goals and meet the objectives outlined in this IMP. However, if the Board decides to remove any of the controls (for 4(a), 4(b), 4(c), or 4(d) listed below), the District and the Department shall amend this IMP prior to removal of these controls. Changes to these controls may be the result of the annual review of progress being made toward achieving the goals of this IMP, according to 46-715(5)(d)(ii).

The District and the Department will coordinate with the other Upper Platte Basin NRDs to develop a consistent method of calculation, following the basin-wide tenets outlined in Section 7.2, that will be applied when calculation of depletions or accretions to the stream are necessary to implement groundwater controls. Any actions taken by the CPNRD will be documented and shared with the Department pursuant to Section 10.7. The CPNRD will work with the well owner to update the water well registration to reflect the permitted actions to reflect the new or additional use.

Briefly, the District plans to manage groundwater in the following ways:

- Controls to limit an increase in the amount of irrigated land in the management area or otherwise limit increases in consumptive use of water for any purpose
- Requiring approval of transfer permits and placing conditions on such transfers)
- Closing of the management area to the issuance of additional groundwater well construction permits unless the permit is conditioned to meet the purposes for which the management area was designated
- Adapting different controls for different categories of groundwater uses
- Establishing different requirements for water wells constructed before the designation of a management area and those drilled afterward

The District will put into place the following controls:

A. Groundwater Moratorium

The CPNRD has implemented a moratorium on the issuance of water well construction permits and on new or expanded groundwater uses. The CPNRD may grant a variance from the moratorium if there is an offset for any new or expanded use, or if there will be no increase in consumptive use due to the new or expanded use.

B. Certification of Groundwater Uses

All groundwater irrigation uses have been certified by the CPNRD. The CPNRD may grant modifications to certified acres.

C. Groundwater Variances

The CPNRD may grant a variance for good cause shown for any of the controls in this IMP or within the NRDs rules and regulation.

D. Groundwater Transfers

The purpose of a groundwater transfer is to allow for the consumptive use of groundwater to be changed either in location or purpose. A transfer permit from the CPNRD shall be required before any transfer as identified in the bulleted list below may be allowed.

The CPNRD may permit, regulate, or take action on the following types of groundwater transfers:

- Physical transfer of groundwater off of the overlying land
- Transfer of the type of use or addition of use
- Transfer of certified irrigated acres
- Physical transfer of groundwater and transfer of certified irrigated acres between the CPNRD and an adjoining NRD
- Municipal transfer permit
- Industrial transfer permit
- Transfers out of state

The following types of groundwater transfers involve coordination communication between the Department and the CPNRD when issuing a permit:

- Municipal Transfer Permits – (1) transfers without a municipal and rural domestic transfer permit from the Department will require a transfer permit from the CPNRD
- Industrial Transfer Permits – (1) transfers without an industrial transfer permit from the Department will require a transfer permit from the CPNRD
- Transfer Out of State – (1) The Department will consult with the CPNRD when considering applications filed to transfer groundwater out of state, pursuant to *Neb. Rev. Stat.* § 46-613.01. The District will take action to approve or deny the transfer request based on the same criteria that the Department uses prior to issuing a transfer permit; and (2) a water well construction permit shall not be issued unless and until the board of the CPNRD has granted a variance to the moratorium on the issuance of water well construction permits and has approved the transfer permit.

E. Municipal and Industrial Accounting

Required for the Calculations of Baselines and the Determination of Allocations

As described within Goal 2, Objective 2.4 of this plan, for purposes of compliance with the NNDP the CPNRD will be responsible for offsetting all increases in consumptive use that result in streamflow depletions due to changes in municipal and industrial consumptive use after 1997, unless some portion of the increase is greater than an allocation of the municipality or industry that was set in accordance with *Neb. Rev. Stat.* § 46-740, then the NRD may require the municipality or industry to provide offsets for that portion.

The CPNRD has enacted baseline accounting calculations for municipal and industrial uses to be consistent with *Neb. Rev. Stat.* § 46-740. On January 1, 2026, the CPNRD will establish baselines and allocations for municipal and industrial users and will require for any increases in the consumptive use of water above the annual allocation that result in a decrease in streamflow shall be offset by the municipality or industry.

Within the fully appropriated area of the District, CPNRD implemented the following regulatory action items through their Rules and Regulations during the first increment IMP and will continue to do so in the future.

1. Municipal Use and Accounting

a. The District calculated a baseline consumptive use for each municipality in the District based on historic consumptive use data for the interval August 1, 2001, through July 31, 2006. Consumptive use was determined from groundwater pumping volumes, wastewater discharge volumes (when available), and/or computer modeling, and converted to a per capita volume. The baseline per capita volume, plus the annual population growth estimated by the Nebraska Department of Economic Development and/or U.S. Census Bureau will be used to determine changes in consumptive uses. Changes in consumptive use will be tracked for each municipality through a reporting and database system administered by the District.

b. Every five (5) years, or when requested by the Department or as determined by the District, the District will re-calculate the per capita consumptive use based upon similar, but updated, data described in section 5 (a) above, and make any necessary adjustments to the per capita offset requirements.

c. Until 2026, the District will be responsible for offsetting all increases from the baseline consumptive use as estimated by population growth, except any new or expanded single commercial/industrial consumptive use, served by the municipal water system, of more than twenty-five (25) million gallons per year.

d. The municipality shall be responsible for reporting to the District and offsetting to the river, any new or expanded single commercial/industrial consumptive use served by the municipal water system, if that new or expanded consumptive use is greater than twenty-five (25) million gallon per year.

2. Non-Municipal Industrial Use and Accounting

a. The District calculated a baseline consumptive use for each municipality in the District based on historic consumptive use data for the interval August 1, 2001, through July 31, 2006. Consumptive use was determined from groundwater pumping volumes, wastewater discharge volumes (when available), and/or computer modeling. The baseline will be used to determine changes in consumptive use.

b. These changes in consumptive use will be tracked for each non-municipal commercial/ industrial user through a reporting and database system administered by the District.

c. Until 2026, if the new or expanded single commercial/industrial use is less than or equal to twenty-five (25) million gallons per year, the District will be responsible for offsetting the entire new or expanded use below the amount granted in the industrial transfer permit, if applicable.

d. If the new or expanded non-municipal commercial/industrial use exceeds twenty-five (25) million gallons per year and they do not have a transfer permit, the user will be responsible for offsetting all new or expanded consumptive uses. If the new or expanded non-municipal commercial/industrial use has a transfer permit, the user is responsible for offsetting all new or expanded uses above the amount granted in the industrial transfer permit.

10.6.2 Triggers

10.6.2.1 Upstream of Elm Creek

In order to determine whether additional ground water regulatory actions are needed to meet the streamflow targets for the Platte River upstream of Elm Creek within the CPNRD, the annual stream depletion amounts shown in Table 1 under Goal 1 Objective 1 will be compared to the stream accretions resulting from the actions taken by the CPNRD and any new depletions resulting from new uses and increased depletions resulting from existing uses. The values within the table are determined from the trendline of the model results. As long as the annual net sum of the accretions resulting from the actions taken by the CPNRD and the annual depletions (shown in Table 1) are greater than or equal to zero, regulatory actions will not be required (assumes accretions are a positive number and depletions are negative). Based on the information shown in Table 1, the stream accretions from existing management actions, projects, or programs analyzed in the current Robust Review have not been great enough to obtain a net sum of accretions and depletions of less than or equal to zero in the next increment in the reach upstream of Elm Creek within the CPNRD. Therefore, further action must be taken to offset the currently identified post-1997 depletions.

The Department and the CPNRD recognize the potential for the implementation of voluntary programs, incentive measures, or other projects to provide stream accretions that will help bring the post-1997 depletions and accretions to a net sum of greater than or equal to zero in the next increment, and will work diligently to implement measures to provide stream accretions in a timely manner. The Department and the CPNRD also recognize that the current Robust Review results have limitations which will be addressed throughout the plan increment and that as Robust Review results are updated to address those limitations that the target values described within the plan sections below may need to be updated. Regular progress toward meeting the goal of a net sum of accretions and depletions of greater than or equal to zero must be demonstrated. Annual progress will be measured using a checkbook accounting of new accretions and depletions as compared to the values in Table 1. Regular progress will be determined by the following indicator and triggers.

To determine if progress toward a net sum of accretions and depletions to the river upstream of Elm Creek within the CPNRD equal to or exceeding zero has been achieved and to determine progress toward meeting the goals and objectives of this IMP, the Department and the District will jointly perform a new Robust Review analysis in 2023 and 2027 to evaluate the overall affects to streamflow and assess the indicator and triggers below. The New Robust Review analyses may change the values found in Table

1 under Goal 1 Objective 1 and therefore may change the target values the indicator and triggers.

A. **Indicator:** If, by the end of 2023, an accretion to the river upstream of Elm Creek within the CPNRD equal to or exceeding the values in Table 1 throughout the first ten (10) year increment has not been met, the Department and the CPNRD will jointly determine whether any additional regulatory actions will need to be put in place by the beginning of the 2025 irrigation season.

i. If the indicator of acre-feet annually and every year thereafter throughout the first increment has not been met by the end of 2023, but programs and/or projects that have been or will be implemented for the purpose of meeting this indicator will provide accretions to the river of acre-feet annually and every year thereafter throughout the current ten (10) year increment by the end of 2024, the Department and the TPNRD will jointly determine that steps to implement regulatory actions will not be required

B. **Trigger 1:** If, by the end of 2027, an accretion to the river upstream of Elm Creek within the CPNRD equal to or exceeding the annual values resulting from the most recent robust review that year and every year thereafter throughout the ten (10) year increment has not been met, the Department and CPNRD will jointly determine what steps need to be taken to ensure that the agreed upon regulatory actions will be in place by the beginning of the 2028 irrigation season.

C. **Trigger 2:** By the end of 2027, measures will be in place to achieve an accretion to the river upstream of Elm Creek within the CPNRD equal to or exceeding an annual rate of seventy percent (70%) of the 50-year long-term planning target (Table 2). If this trigger has not been met, the Department and CPNRD will jointly determine what steps need to be taken to ensure that the agreed upon regulatory actions will be in place by the beginning of the 2028 irrigation season.

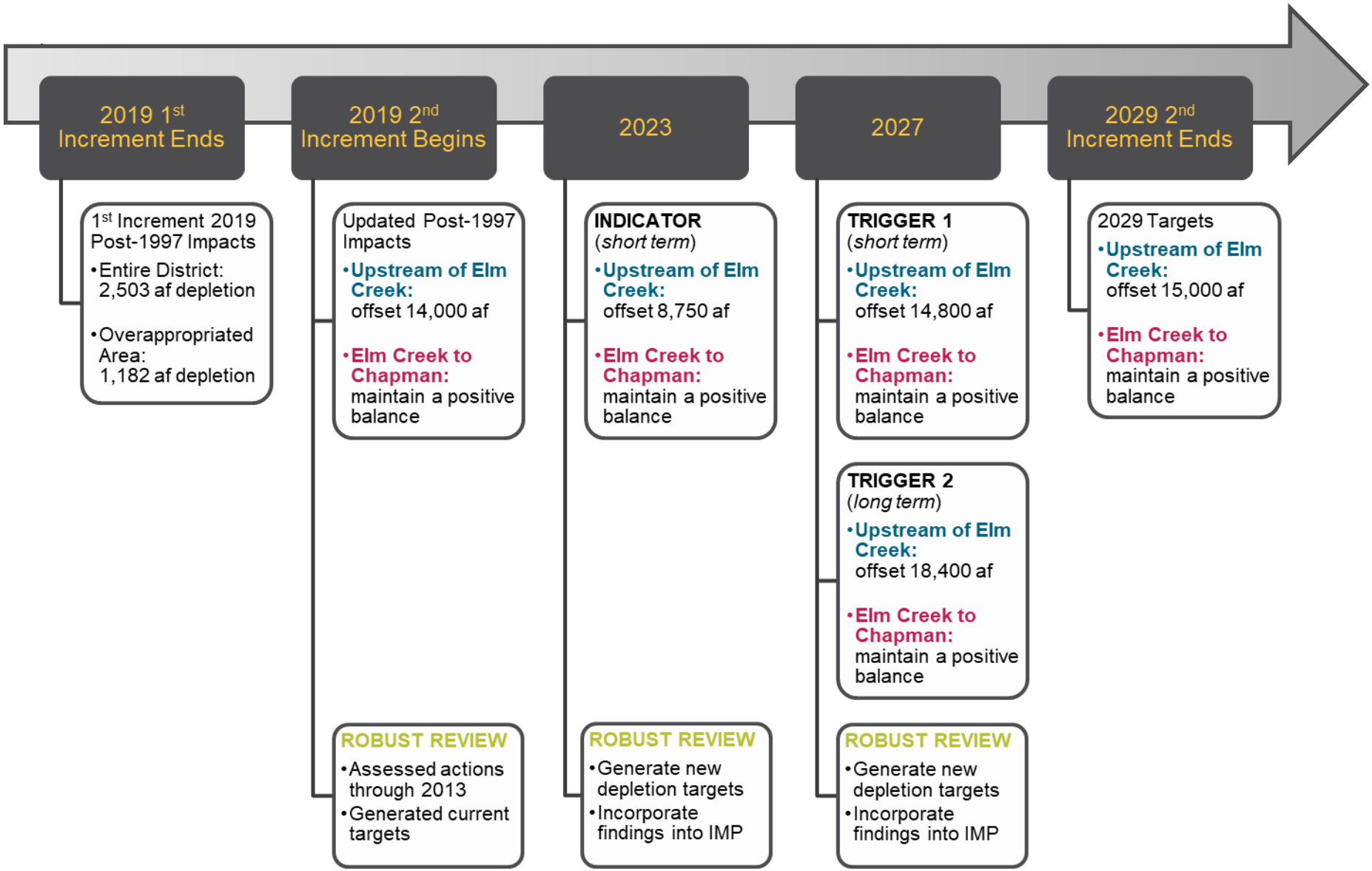

Figure 7: Timeline showing Indicator, Trigger 1, and Trigger 2 for the two stream reaches in CPNRD for the current increment. The Robust Review is also included on the timeline.

10.6.2.2 Elm Creek to Chapman

In order to determine whether additional ground water regulatory actions are needed to maintain progress for the Platte River Elm Creek to Chapman within the CPNRD, the annual stream accretion amounts shown in Table 3 under Goal 1 Objective 2 will be compared to the stream accretions resulting from the actions taken by the CPNRD and any new depletions resulting from new uses and increased depletions resulting from existing uses. The values within the table are determined from the trendline of the model results. Based on the information shown in Table 3, the stream accretions from existing management actions, projects, or programs have been provided in amounts necessary to obtain a net sum of accretions and depletions of greater than or equal to zero in the next increment (assumes accretions are represented as a positive number and depletions are negative) for the Elm Creek to Chapman reach. As long as the annual net sum of the accretions resulting from the actions taken by CPNRD and the annual depletions are greater than or equal to the values show in Table 3, regulatory actions will not be required in this reach.

A net sum of accretions and depletions of greater than or equal to zero must be maintained. Annual progress will be measured using a checkbook accounting of new accretions and depletions as compared to the values in Table 3. Regular progress will be determined by the following indicator and triggers.

To determine if progress toward a net sum of accretions and depletions to the river between Elm Creek and Chapman equal to or exceeding zero has been sustained and to determine progress toward meeting the goals and objectives of this IMP, the Department and the District will jointly perform a new Robust Review analysis in 2023 and 2027 to evaluate the overall affects to streamflow, and assess the indicator and triggers below. The New Robust Review analyses may change the values found in Table 3 under Goal 1 Objective 2 and therefore may change the target values the indicator and triggers.

A. **Indicator:** If, by the end of 2023, an accretion to the river between Elm Creek and Chapman equal to or exceeding the values in Table 3 throughout the first ten (10) year increment has not been sustained, the Department and the CPNRD will jointly determine whether any additional regulatory actions will need to be put in place by the beginning of the 2025 irrigation season.

B. **Trigger 1:** If, by the end of 2027, an accretion to the river between Elm Creek and Chapman equal to or exceeding the annual values resulting from the most recent robust review that year and every year thereafter throughout the ten (10) year

increment has not been met, the Department and CPNRD will jointly determine what steps need to be taken to ensure that the agreed upon regulatory actions will be in place by the beginning of the 2028 irrigation season.

C. **Trigger 2:** By the end of 2027, measures will be in place to achieve an accretion to the river between Elm Creek and Chapman equal to or exceeding an annual rate of seventy percent (70%) of the 50-year long-term planning target (Table 4). If this trigger has not been met, the Department and TBNRD will jointly determine what steps need to be taken to ensure that the agreed upon regulatory actions will be in place by the beginning of the 2028 irrigation season.

Chapter 10.7 describes how progress toward achieving the indicator and triggers will be measured.

10.6.2.3 Actions in Response to Triggers

At this time, the Department and the CPNRD have identified the following groundwater controls as potential regulatory actions that may be implemented in response to triggers:

3. Prior to implementation of any of the groundwater controls listed below, the CPNRD and the Department will agree to the method of implementation and the methods used to measure the success of the control(s) in reaching the goals and objectives of Chapter 9 of this IMP.

4. In order to reach these goals and objectives, a limit on the amount of consumptive use on certified irrigated acres within the boundaries of the NRD may be implemented. The methods by which a limit on the amount of consumptive use would be implemented include, but are not limited to, the following:

e. Crop Rotation (*Neb. Rev. Stat.* § 46-739(b))
Crop rotation would mean planting a mix of crops that would have an upper limit on the consumptive use within the amount determined by the District and the Department over a specified period of years for the certified irrigated acres.

e. Reduction of Certified Irrigated Acres
A reduction of irrigated acres would mean a set percentage reduction in certified irrigated acres. The percentage of the reduction would be determined prior to the implementation of the control and agreed to by the District and the Department.

10.6.3 Surface Water Regulatory Actions (Controls)

10.6.3.1 The following surface water controls as authorized by *Neb. Rev. Stat*. § 46-716 will be implemented and/or continued by the Department:

A. The Department will continue the moratorium on new surface water appropriations in the portion of the Platte River Basin within the boundaries of the CPNRD, unless a variance is granted by the Department according to its rules.

B. The Department will continue to require measuring devices for new appropriations and to close any non-metered diversions during times of shortage regardless of priority.

C. Transfers of surface water appropriations will be in accordance with statutes and Department rules.

D. The Department shall continue to administer surface water appropriations according to the provisions of the permit, statute, Department rules and regulations, and any applicable interstate compact decree or agreement.

E. The Department shall continue to monitor the use of surface water to prevent unauthorized uses.

F. For conjunctive management projects as described in Section 10.4, the Department may, via the permit approval process, require additional monitoring, measurements, and reporting of diversions, returns, seepage, and/or evaporation.

G.

(i) Except as provided in (b) below, the Department will not require surface water appropriators to apply or use conservation measures.

(ii) If, at some point in the future, the Department requires surface water appropriators to apply or use conservation measures, in accordance with *Neb. Rev. Stat.* § 46-716(2), the surface water appropriators will be allowed a reasonable amount of time, not to exceed one hundred eighty (180) days unless extended by the Department, to identify conservation measures to be applied or used and to develop a schedule for such application and use.

H.

(i) Except as provided in (b) and (c) below, the Department will not require any other reasonable restrictions on surface water use.

(ii) If, at some point in the future, the Department requires other reasonable restrictions on surface water use, such restrictions must be consistent with the intent of *Neb. Rev. Stat*. § 46-715 and the requirements of *Neb. Rev. Stat.* § 46-231.

(iii) If, at some point in the future, the Department requires other reasonable restrictions on surface water use, in accordance with *Neb. Rev. Stat.* § 46-716(2), the surface water appropriators will be allowed a reasonable amount of time, not to exceed one hundred eighty (180) days unless extended by the Department, to comment on the proposed restrictions.

10.6.3.2 Summary of Variance, Application, and Transfer Process Considerations

The goals and objectives of this plan will be considered when vetting petitions and applications for diversion of excess flows (unappropriated water). In fully and over-appropriated areas projects designed to meet the goals and objectives of the plan are of primary importance. In addition to showing good cause in support of the goals and objectives, the effectiveness of each project will be considered. Operational plans that show effective use of water along with measuring and monitoring will be required. In assessing the public interest and whether a project should receive an appropriation, the Department must consider reasonable conditions that may be imposed upon prospective appropriations to ensure that the best use is made of available water. The public interest will best be served when projects are selected for diversion during excess flow periods, which are most effective at meeting plan goals. Administering appropriations that are issued for the purpose of achieving these goals and objectives will require more scrutiny than assessing when the application was filed. Ranking projects according to performance and benefits will be required.

(1) Variance Process for new surface water appropriations

(i) *Department Rules for Surface Water, Title 457* provides a process in which a person may request permission to file an application for a new surface water right in a moratorium area.

(ii) Prior to filing an application in a moratorium area, a person must first petition the Department for leave (request permission) to file an application in a moratorium area. These petitions are called a “variance,” or a “variance petition.”

(iii) Because the Platte River Basin is currently undergoing integrated management for the purposes of reducing depletions to streamflow, any new consumptive use or retiming of stream base flow must be examined for its potential effects on extant surface and groundwater users and upon all matters of significant public interest and concern. This includes assessing both positive and negative impacts on the State’s ability to comply with interstate agreements, programs, decrees and compacts, including PRRIP. Thus, any proposed project must be scrutinized to prevent conflict with (a) the goals and actions necessary to implement the IMPs adopted by the Platte River Basin NRDs and the Department and (b) the water needs of projects that will be implemented under PRRIP. Applications for potential beneficial uses that are not clearly non consumptive will be presumed to be at least partially consumptive.

(iv) Therefore, an analysis of the effects of a proposed new diversion on existing uses and responsibilities is required in order to determine whether sufficient good cause exists to grant a variance to apply for a new use.

(v) Within the process for granting a variance the Department shall review the information provided with the petition and shall make a determination as to whether it is sufficient to indicate good cause for allowing further consideration of the application.

(a) *Nebraska Revised Statute* § 46-706 defines “good cause shown” as, “a reasonable justification for granting a variance for a consumptive use of water that would otherwise be prohibited by rule or regulation and which the granting agency, district, or organization reasonably and in good faith believes will provide an economic, environmental, social, or public health and safety benefit that is equal to or greater than the benefit resulting from the rule or regulation from which a variance is sought;”

(b) If the Department grants the variance petition, the petitioner may then file the application for the project. The

decision to grant the petition shall not bind the Director to approve any application to which it relates, or in any way be used as evidence of prejudice for the Director's future decisions concerning the specific approval requirements of such an application. The Department will specify the conditions under which an application may be filed in order to protect the public interest.

(2) Application Review Process

(i) The Department's application review process is driven by Nebraska statutes, including but not limited to *Neb. Rev. Stat*. § 46-233 to 46-235. The following is not an exhaustive list of all factors used to reach a decision on approval or denial of an application.

(j) There must be unappropriated water available in the source of supply and requirements of a variance petition approval must be met.

(k) The proposed use must be determined to be beneficial.

(l) An appropriation must not be detrimental to the public welfare.

(m) Denial of the application is not demanded by the public interest.

(n) If the application will be approved, the Department will impose conditions to protect other appropriators and the public interest.

(3) Transfer Review Process

(i) Pursuant to Chapter 46 transfer statutes, the Director shall review an application for a transfer proposing a change in the location of use; type of appropriation; and or purpose of use, including but not limited to the following:

(a) The proposed use of water after the transfer or change will be a beneficial use of water;

(b) A request to transfer the location of use is within the same river basin;

(c) The change will not diminish the supply of water available or otherwise adversely affect any other water appropriator;

(d) The quantity of water that is transferred for diversion or other use at the new location may be the historic consumptive use;

(e) The appropriation is not subject to termination or cancellation;

(f) If the transfer is to be permanent the preference category may not change;

(g) If the transfer is to be temporary, it will be for no less than one year;
(h) The transfer or change will not be inconsistent with any applicable state or federal law and will not jeopardize the state's compliance with any applicable interstate water compact or decree or cause difficulty in fulfilling the provisions of any other formal state contract or agreement;
(i) The transfer will be in the public interest.
- Consistent with *Neb. Rev. Stat*. § 46-294, the director's considerations relative to the public interest shall include, but not be limited to, (1) the economic, social, and environmental impacts of the proposed transfer or change and (2) whether and under what conditions other sources of water are available for the uses to be made of the appropriation after the proposed transfer or change.
- Transfers subject to *Department Rules for Surface Water, Title 457, Neb. Admin. Code*, Chapter 9, § 002, are required to be determined to be in the public interest, "… the Director shall determine whether the benefits of the proposed transfer outweigh any adverse impacts that might occur giving consideration to the economic, social and environmental impacts and whether and under what conditions other sources of water are available for the uses to be made of the appropriation after the proposed transfer or change."
- The director may impose any reasonable conditions deemed necessary to protect the public interest.

10.7 Monitoring

The overarching purpose of the monitoring and studies section is to ensure that the CPNRD reach and maintain a fully appropriated condition. The objective of the monitoring and studies section of this IMP is to gather and evaluate data, information, and methodologies to increase understanding of the surface water and hydrologically connected groundwater system; to test the validity of the conclusions and information upon which this IMP is based; and to assist decision makers in properly managing the water resources within the CPNRD. The described monitoring and studies actions are also important in ensuring the state remains in compliance with the NNDP and in keeping the IMP current.

10.7.1 Data and Tracking of Water Use Activities

Data from the five NRDs will be reported in a consistent format across the basin and from year to year to simplify the process of compiling data for the annual

review and the Robust Review. A database will be developed to house this data. This database will facilitate the updating of model datasets.

Occasionally, actions for which permits are issued may not actually be implemented. For example, a well permit may be issued, but the well not actually drilled. Because of this, in order to maintain accurate records of actual land use, annual permit and land use data should be updated within the database at the end of the next calendar year to reflect which actions did and did not take place. This includes NeDNR sharing information on any surface water permits cancelled in the calendar year (including temporary permits that expired one year after they are issued). This will help in creating yearly land use datasets when it is time to conduct the Robust Review. Ideally, the permit data should reflect an annual snapshot of changes in land use for that year. This will help update annual land use datasets for the models which will be used for the Robust Review.

A. NRD Tracking

The CPNRD will be responsible for annually tracking the following activities within the District:

1. Certification of groundwater uses and any changes to these certifications

2. Approved transfers, including all of the information provided with the application and used in the approval of the transfer, the location of the land area or well that is being transferred, and the location of the land area or well that will replace the original; including water brank transactions

3. Relevant flow meter data collected

4. Any water well construction permits issued

5. Any other permits issued by the CPNRD

6. Any conditions associated with any permits issued

7. Information gathered through the municipal and non-municipal industrial accounting process

8. Any variances issued, including the purpose, the location, any required offset, the length of time for which the variance is applicable, and the reasoning behind approval of the variance

9. Any retirements of irrigated acres or other activities by the CPNRD for the purpose of returning to a fully appropriated condition

10. Offsets provided for depletions resulting from increased consumptive use related to the above listed items
    a. This includes reporting on offsets and mitigation activities for the purpose of addressing post-1997 depletions and for the purpose of sustaining previous increment progress and reaching a fully appropriated condition. Such activities to be reported include canal diversions for the purpose of groundwater recharge, operation of stream augmentation projects, and irrigated acre retirements.

11. Summary of available conservation plans of municipalities and industries within the basin including strategies that could be applied to other municipalities in the basin (at annual meeting)

B. Department Tracking

The Department will be responsible for annually tracking the following activities within the District:

1. Any surface water permits issued

2. Any dam safety permits issued

3. Any groundwater permits issued

4. The associated offsets for any new permits issued

5. Any retirements of irrigated acres or other activities by the Department for the purpose of returning to a fully appropriated condition

As new data would show a need for further analysis and to the extent that District meter data or other methods of estimation are not available to determine the consumptive use of water due to livestock, human water use, sandpits and reservoirs less than fifteen (15) acre-feet, the Department will be responsible for tracking and reporting on the following activities within the District in the current increment:

(i) National Agricultural Statistics Service livestock data

(ii) US Census Bureau population data

(iii) Inventory of sandpits

(iv) Inventory of reservoirs of less than fifteen (15) acre-feet

(v) Offsets provided for depletions resulting from increased consumptive use related to the above listed items

10.7.2 Reporting

A. An annual review of the progress toward achieving the goals and objectives of the ten (10) year increment will include annual reporting by the Department and the CPNRD of the information being tracked as described above.

B. Data will be analyzed to assess the collective amount, timing, and locations of both the depletions to streamflows resulting from new or expanded uses and of all mitigation actions. This will involve a simple analysis of impacts to streamflows resulting from permitted changes, which will not require model runs. These analyses will be done using the agreed upon methods and tools. Methods and tools used will be available to the stakeholders and the public. This information will be shared between the CPNRD and the Department, presented at the basin-wide annual meeting. The data collected will then be trimmed to the relevant Platte River Recovery Implementation Program area, analyzed, and used for required annual and periodic reporting necessary for Nebraska's compliance with the Nebraska New Depletion Plan.

C. The reports from the CPNRD and the Department should include information on the location, amount, and timing of the depletions caused by each permitted new or expanded water use, as well as the associated offset and the location, amount and timing of the offset's accretions to the river. The depletions and/or the accretions should be reported for each year throughout the ten (10) year increment.

D. These reports should be made available at least four (4) weeks prior to each basin-wide annual meeting. The format of the reports will be standardized as agreed to by the Department and the Upper Platte Basin NRDs.

E. The reported information will be used as appropriate in the evaluation process as described below.

F. Data from the Department and CPNRD annual reports will be used to prepare reports to the Governance Committee of the PRRIP on status and activities related to the NNDP. The Department will generate these reports and will coordinate with the CPNRD to ensure the accuracy of data within any final report.

10.7.3 Evaluation: Measuring the Success of Meeting the Goals and Objectives of this IMP

10.7.3.1 Measuring the success of this IMP in addressing streamflow depletions due to new uses begun subsequent to July 1, 1997 and maintaining previous increment progress (Goal 1 Objectives 1.1 and 1.2; Goal 2 Objectives 2.1 – 2.4).

A. Annual Review

In order to meet the requirements of *Neb. Rev. Stat.* § 46-715(5)(d)(ii), the data contained in the annual reports submitted by the CPNRD and the Department will be reviewed and analyzed annually to assess the progress toward achieving the goals and objectives of Chapter 9 of this IMP for the current ten (10) year increment. The annual review will consider both the near-term and long-term effects of any permitted new consumptive uses. A 50-year stream depletion curve, based on the COHYST 2010 stream depletion analysis, may be used to assess the impacts of any new uses contained within the annual reports to show the long-term potential impacts of annual changes. The results of the Annual Review will be shared at the Annual Basin-Wide Meeting.

B. Robust Review

In addition to the annual review, a more robust review of the progress being made toward achieving the goals and objectives of Chapter 9 of this IMP for the first ten (10) year increment will be carried out periodically. This study will be developed to meet the requirements of reporting for the NNDP as well as *Neb. Rev. Stat.* § 46-715(5)(d)(iii) to determine whether the measures adopted in this IMP are sufficient to offset depletions due to post-July 1, 1997, water uses and sustain progress toward a fully appropriated level of water use (Robust Review). A robust review will be conducted in 2023 and 2027. The purpose of these robust reviews will be to address the indicator and triggers outlined in section 10.6.2 of this IMP, which helps measure progress toward reaching the targets from Chapter 9.

The process for the review is described below. The previous Robust Review will also serve as guidance for conducting the next one. The general method for conducting the Robust Review will be as follows:

1. The groundwater models used for this process will be calibrated to streamflows/baseflows and groundwater levels in the area with the ability to assess the impacts on a

monthly basis. The groundwater models will be updated periodically to simulate the management practices that have been implemented to date. The evaluation period of these models will be 50 years into the future.

2. The following groundwater model runs will be conducted to measure the success toward reaching Objective 1.2:

   i. The 1997 Development Level Run. A model run that simulates holding the number of irrigated acres and crop types or mix in 1997 constant through the current date and the fifty-year projection period. Unless better data is available, to estimate 1997 levels of consumptive use, it will assume the full crop irrigation requirement for the crop types or mix. The run will be conducted using climate data through the current date and will include a fifty-year projection using an agreed to climate pattern.

   ii. The Historical Run. A model run that simulates the actual annual changes of the irrigated acres, excess flow recharge events, retirements, allocation effects, augmentation projects, and other water management regulations or projects throughout the evaluation period starting in 1997 through the current date and the fifty-year projection period. The fifty-year projection period will repeat an agreed to land use, regulation, or project dataset. The model will use available flow meter data or, in the absence of flow meter data, assume the full crop irrigation requirement was met at all times. The run will be conducted using data through the current date and will include a fifty-year projection using an agreed to climate pattern.

   iii. Difference between the 1997 Development Level Run and the Historical Run. The simulated output from each model run will be compared to determine the difference in the baseflow that has resulted from post-1997 development. Effects on streamflows from allocations and landuse changes are reflected in this comparison because both meter data and landuse changes are used to determine groundwater pumping for the two Runs

   iv. Other Management Actions Analyses not Covered by the Models. If other management actions are taken to offset streamflow depletions due to new uses begun subsequent to July 1, 1997, accretions resulting from those retirements will be determined using agreed upon

methodologies. This would include conjunctive management activities that are not otherwise captured in the models.

v. Evaluation Results. For Objective 1.2 to be considered achieved, the results of combining the difference between the 1997 Development Level Run and the Historical Run with the addition of management action accretions not covered by the models must be greater than or equal to zero.

$$(F_h - F_d) + (S_a) = D_{net}$$

Where:
F_h =Simulated streamflow/baseflow from the Historical Run
F_d =Simulated streamflow/baseflow from the 1997 Development Level Run
S_a =Other Surface Water Accretions
D_{net} =Net Depletions
***Note: In equation above, streamflow/baseflow is positive

3. An additional groundwater model run will be conducted to measure total depletions. This will be the Pre-Development Run. The Pre-Development Run will compare the Historical Model Run with a simulation of no groundwater development to determine the total depletions associated with all ground water only land use development. The run will be conducted using climate data through the current date and will include a fifty-year projection using the historical Run's agreed to climate pattern.

i. Total Depletions Evaluation.

$$(F_h - F_p) = D_t$$

Where:
F_h =Simulated streamflow/baseflow from the Historical Run
F_p =Simulated streamflow/baseflow from the 1997 Development Level Run
D_t =Total Depletions
***Note: In equation above, streamflow/baseflow is positive

4. If integrated models are used to assess impacts to the total streamflow, the methods to be used will be developed jointly between NeDNR and the NRDs to properly design and constrain those analyses so that the results can be used to assess progress toward the goals and objectives of the plan.

5. Municipal, Industrial, Domestic and Livestock use will be evaluated as part of the Robust Review.

   (ii) Data will continue to be collected on the water use of municipalities and industries within the basin.

   - Gather information on total pumping, consumptive use, and timing of any return flows and collect data on water use efficiency and conservation methods being employed.

10.7.3.2 Measure the success of reaching a fully appropriated condition (Goal 1 Objectives 1.3 and 1.4).

A technical analysis to support and evaluate effectiveness of plan and adequacy in sustaining progress toward a fully appropriated level of water use must be conducted. Because a fully appropriated condition is not currently determined, the Department and the CPNRD will work on outlining the process that will measure the success of reaching the fully appropriated condition once that condition has been determined. The Department and CPNRD will continue to refine the methodology used to determine the difference between the current and fully appropriated levels of development in each NRD.

The evaluation of the difference between current and fully appropriated levels of development is tied to Statute and the current rules of the NeDNR for declaring a basin fully appropriated. Statute requires that this evaluation will:

A. take into account cyclical supply, including drought;

B. identify the portion of the overall difference that is due to conservation measures;

C. identify the portion of the overall difference that is due to water use initiated prior to July 1, 1997; and

D. identify the portion of the overall difference that is due to water use initiated or expanded on or after July 1, 1997.

The current NeDNR rules for determining fully appropriated status includes evaluation of the most junior appropriator's access to water, adjustments for lag effect of groundwater depletions and accretions on water supplies, and consideration of instream flows, among other guidance for conducting the analysis. The rules also provide flexibility for NeDNR to "….utilize a standard of interference appropriate for the use, taking into account the purpose for which the appropriation was granted…."[18] for uses which are not defined in the rule. These include storage and hydropower appropriations, which are significant appropriators in the Upper Platte River Basin. NeDNR and the NRDs have and will continue to work with impacted water users on the process for determining the difference between the current and fully appropriated condition of the basin. The assessment of total depletions is one approach to assist in identifying what a fully appropriated condition may be. The INSIGHT analysis of supplies and demands is another possible approach to help identify this.

10.7.3.3 Measure the success of maintaining a fully appropriated condition (Goal 1 Objective 1.5).

A. Current Fully Appropriated Area
Monitor and analyze uses in the fully appropriated area to determine the change in stream depletions due to such uses.

B. Current Overappropriated Area
Because a fully appropriated condition is not currently determined, the Department and the CPNRD will work on outlining the process that will measure the success of maintaining a fully appropriated condition once that condition has been determined.

10.7.3.4 Evaluating the need for a subsequent increment (Goal 3 Objectives 1.1 – 1.5).

A. The Department and the CPNRD will carry out the studies and the technical analysis as specified in *Neb. Rev. Stat*. § 46-715(5)(d)(iii) to determine whether or not a subsequent ten (10) year increment is necessary. This will include a process to test the validity of the conclusions and information upon which this IMP is based, as required by *Neb. Rev. Stat.* § 46-715(2)(e).

[18] Title 457, Chapter 24, Section 001.01B of the Nebraska Administrative Code, dated June 27, 2008.

B. Within the current ten (10) year increment, the Department and the CPNRD will continue to refine the estimation methodology used to calculate the difference between the current and fully appropriated levels of development in accordance with *Neb. Rev. Stat.* § 46-715(5)(c). Fully appropriated levels of development will be determined through the following process:

1. Determine the changes in recharge from surface water diversions and the impacts of those changes on streamflow using readily available data.

2. Determine the changes in groundwater irrigation, municipal, industrial, domestic, livestock and other uses and the streamflow depletions caused by those changes using readily available data.

3. Determine the effects of conservation measures on streamflows.

4. Determine the timing and location of the net changes in streamflow.

5. Determine when streamflow changes impact existing users, taking into account the effects of cyclical supply (e.g. drought).

6. If significant changes in either the timing or location of streamflow have impacted existing users, the CPNRD and the Department will work collaboratively with affected parties to determine subsequent ten (10) year increment goals. These goals will include consideration of the socioeconomic benefits derived from the various uses impacted by such changes in streamflow.

7. The Department and the CPNRD will review other data and/or methodologies relevant or significant to the process.

C. The process described above in this section will focus on uses initiated prior to July 1, 1997, and their impacts on hydrologically connected streamflows. All uses initiated subsequent to July 1, 1997, will be evaluated.

10.8 Current Increment Studies

10.8.1 Current Increment Priority Studies

The Basin-Wide Plan calls for several studies and collection of information within the basin. Those studies and information are also critical to the successful implementation of this IMP. The studies include:

A. Collect data on commingled acres to identify, quantify, and proportion the source and quantity of water used on acres irrigated with both surface water and groundwater. Gather data on water use on such lands (both why and when irrigators use surface water or groundwater).

B. Conduct a study that identifies water users that are affected during cyclical variations in water supply. This hydrologic element analysis will be conducted by NeDNR and the NRDs by evaluating data such as stream gage and diversion records, and well hydrograph data. Focused surveys of, as well as meetings with basin water users can be used to build on stakeholder input gathered throughout the planning process. Once impacted water users who are hydrologically affected by water supply variability are identified, economic impacts can be estimated.

C. NeDNR and the NRDs will collaborate with impacted water users and other entities to gather relevant economic data. Potential partners include economists and other subject matter experts familiar with the economic drivers of the basin who can help identify data needs and formulate the tools and methodologies for assessing economic impacts. The tools and methodologies will be used to not only evaluate impacts of supply variability, but also evaluate human-made depletion impacts, management actions, regulatory actions, and potential projects or other activities considered during implementation that may affect water availability.

D. Study economic impacts of drought, which will be a component of the drought plan.

E. Study potential for developing markets and transfer protocols for annual surface water and groundwater supplies.

F. Study management options of storage water (both surface water reservoirs and aquifer storage; and existing and potential new storage) to provide flexibility and increase resiliency of water supplies.

10.8.2 Current Increment Potential Studies

There are many other factors that have the ability to impact streamflows. It is important to investigate these things to assess their potential effectiveness in achieving the goals and objectives of this IMP and identify new potential management actions. Pursuit of these studies will be contingent upon budget and staff resources.

The following potential studies have been identified by the Department and the CPNRD:

- crop rotation
- vegetation management
- irrigation scheduling
- a survey of the type and location of irrigation systems throughout CPNRD
- tillage practices
- other best management practices
- conjunctive management – continue to investigate effects of projects within the NRD and look for new opportunities
- water budget analysis
- invasive species
- conservation measures – continue to investigate the effects of the implementation of these measures and their level of use within the NRD

10.9 Review of and Modifications to the IMP

10.9.1 IMP Revisions

During implementation of the IMPs, NeDNR and the NRDs will monitor IMP actions consistent with the analyses and methods contained in the basin-wide plan and amend the IMP if activities are determined by the parties to not be capable of meeting goals. If NeDNR and an Upper Platte River Basin NRD determine that management actions have not provided the offsets required to meet the goals of the Upper Platte River Basin-Wide Plan, they will agree to increase offset activities to the extent possible and revise the individual district IMP if necessary. These revisions may include additional controls to meet goals of the plan.

A. The CPNRD and the Department will jointly determine whether amendments to this IMP are necessary. Any proposed modifications will be discussed at the annual basin-wide meeting. Situations that may prompt revision or modification of this IMP are described below.

1. The CPNRD and the Department may amend this IMP after the annual review of progress toward achieving the goals and objectives of Chapter 9 of this IMP.
2. If published results of the Robust Review indicate annual depletion values different than those in the Goal 1 Tables, revisions may be necessary.
3. DNR and any Upper Platte Basin NRD may amend an IMP as more data and information become available, as provided in *Neb. Rev. Stat.* § 46-715(5)(d)(ii).

As new depletion information is developed and considered, the values presented in the Goal 1 Tables may be updated and the IMP revised via a public hearing.

B. If the Basin-Wide Plan is revised and therefore this IMP needs to be revised for consistency, this IMP will be revised in accordance with *Neb. Rev. Stat*. § 46-715(5).

C. Discussion of the above items will occur at the annual basin-wide meeting and determined if modification is needed. An advisory or stakeholder group may be convened, at the discretion of the affected NRD(s) and DNR. If the Platte River Basin NRD(s) and DNR agree on revisions to an IMP after the annual meeting, then a hearing will be held to solicit formal comment. The IMPs for each of the five Upper Platte Basin NRDs shall be provided to all other NRDs in the overappropriated basin for comment before revisions are approved.

10.9.2 Basin-Wide Plan Disputes

A. If a dispute is presented at the annual meeting as described in the Basin Wide Plan, the Upper Platte Basin NRDs and the Department will determine whether or not the dispute has hydrologic impact. If it is determined that the dispute does have hydrologic impact, then the Upper Platte Basin NRDs and the Department will determine whether the dispute pertains to all of the Upper Platte Basin NRDs or just to individual NRD(s).

B. If the dispute pertains to all of the Upper Platte Basin NRDs, an investigation will be conducted by the Upper Platte Basin NRDs and the Department to determine what management actions will address the dispute(s) in the Basin-Wide Plan and/or the IMPs. If the management action pertains to this IMP, it will be revised accordingly.

C. If the dispute is not a basin-wide issue, but pertains to the CPNRD, the Department, the CPNRD and any other affected Platte River Basin NRD(s), working with the affected water user(s), shall develop management solutions as appropriate to address the issue(s).

D. Disputes related to the implementation of the IMP will also be discussed.

10.9.3 Additional Ten (10) Year Increment

Based on the results of the technical analyses described in Section 10.7.3, the CPNRD and the Department will evaluate the need for a subsequent increment. This includes determining whether post-July 1, 1997 depletions have been offset and the progress made toward achieving or maintaining a fully appropriated condition.

If it is determined from this technical analysis that a subsequent ten (10) year increment is needed to meet the goals and objectives of this IMP, then pursuant to *Neb. Rev. Stat.* § 46-715(5)(d)(iv), the goals and objectives for the subsequent ten (10) year increment will be developed using the consultative and collaborative process described in *Neb. Rev. Stat*. § 46-715(5)(b). The subsequent ten (10) year increment shall be completed, adopted, and take effect not more than ten (10) years after adoption of this IMP.

NeDNR and the individual NRDs will engage stakeholders in a collaborative process in the development of goals and objectives for subsequent increments of the individual IMPs if necessary. The need for subsequent increments will be determined through the Robust Review process completed at the end of the current increment and described in Section 10.7.3.1.B. Should a subsequent increment be necessary, the planning process will be initiated by NeDNR and each NRD developing a public participation plan that outlines the stakeholder engagement process for the NRD's IMP, including identification of participants/parties, definition of roles, decision making protocols, planning processes, and timelines. This public participation plan serves as a reference guide for participants as well as the general public throughout the planning process. This effort is analogous to the basin-wide collaborative process described in the basin-wide plan, but focused on the individual NRD stakeholder collaboration. The public participation plan developed for the current increment basin-wide plan development is included in Appendix C for reference.

APPENDIX C

Stakeholder Advisory Committee Process, Members, and Meeting Dates

Public Involvement

Public involvement during the Central Platte Natural Resources District's Second Increment Integrated Management Plan development process was designed to encompass broad stakeholder values, interests, future needs and priorities, and raise awareness to encourage broad community support for water quantity management within the District and Basin.

The Stakeholder Advisory Committee was formed through local solicitations and nominations. The District and the Department sent out letters to 53 individuals who were nominated as potential members of the Advisory Committee through District contacts. Ten interested individuals contacted the District and were appointed to the Stakeholder Advisory Committee. The 10-member Stakeholder Advisory Committee included diverse representation from agriculture, irrigation districts, well drillers, public power producers, industry/business, environmental groups, and municipalities.

Meeting Topics

The main plan development consisted of stakeholder meetings which were open to the public. During stakeholder meetings numerous concepts and topics were discussed, but certain topics were repeatedly discussed by stakeholders across meetings that led to Plan goals, objectives, and action items. To the extent possible, these ideas have been grouped and are listed below in alphabetical order.

- Continue to enhance groundwater modeling
- Economic viability of the CPNRD
- Education
- Effects to stream-flow from on-farm efficiency
- Equitability among users
- Keeping current progress made
- Keeping allocations separate
- Upstream and downstream partnerships
- Water sustainability

APPENDIX C
Members of the Stakeholder Advisory Committee

At the end of plan development, the Stakeholder Advisory Committee had 10 members, whose names and affiliations are listed below.

Name	Affiliation
Mike Drain	CNPPID
Anton (Tony) Jelinek	City of Kearney
Randy Zach (Primary)	NPPD
Jeff Shafer (Secondary)	NPPD
Jay Richeson	Gothenburg City Council
Tim Luchsinger	City of Grand Island
Mark Haskins	Hall County Farm Bureau
Ivan Klein	Buffalo County Board of Commissioners
J Buddenberg	Thirty Mile Irrigation District
Kurt Kline	Irrigator

In addition to the Stakeholder Advisory Committee meetings, NeDNR and the CPNRD held coordination meetings to plan stakeholder meetings. Meeting dates are listed below.

Stakeholder Advisory Committee Meetings	Coordination Meetings
	March 13, 2018
	April 3, 2018
	June 5, 2018
	July 20, 2018
	August 7, 2018
August 14, 2018	
	August 23, 2018
	September 4, 2018
September 18, 2018	
	October 17, 2018
	October 30, 2018
	November 1, 2018
November 13, 2018	
	December 21, 2018
	January 3, 2019
	January 22, 2019
	February 13, 2019
February 26, 2019	

Attachment D - Affidavit

MC

Lines 70 Times 1 Amount $ 31.90

AFFIDAVIT OF PUBLICATION

The State of Nebraska }
The County of Buffalo } ss:

Shon Barenklau, being first duly sworn, says that he is Publisher of The KEARNEY HUB, a daily newspaper printed in whole and published in its entirety at its office maintained in Kearney, in said county and of general circulation therein and been published for more than 52 weeks in said county prior to the first publication of the annexed notice and has a bona fide circulation of more than 300 copies, and that the notice, a true copy of which is hereto annexed, was published in said paper as follows:

the first publication being on the 15 day of Feb., 2019,
and subsequent publication(s) on the

PAID FEB 28 2019
Ck 54452

_____ day of _____, 2019
_____ day of _____, 2019
_____ day of _____, 2019
_____ day of _____, 2019
_____ day of _____, 2019

Subscribed in my presence and sworn to before me this

18 day of February, 2019

GENERAL NOTARY - State of Nebraska
DOREEN LEMBURG
My Comm. Exp. November 21, 2019

Doreen Lemburg
Notary Public

NOTICE
OF STAKEHOLDER MEETING
MEETING RELATED TO THE CENTRAL PLATTE NATURAL RESOURCES DISTRICT AND THE NEBRASKA DEPARTMENT OF NATURAL RESOURCES' INTEGRATED MANAGEMENT PLAN

The Department of Natural Resources (Department) and Central Platte Natural Resources District (CPNRD), are preparing an update to the integrated management plan (IMP) for CPNRD. Notice is hereby provided that a public meeting of the IMP's Stakeholder Advisory Committee will be held at 1:00 p.m. (CST) on Tuesday, February 26, 2019, at the Holiday Inn in Kearney, NE (110 S. 2nd Avenue). A public comment period will be provided. An agenda for the meeting will be available for public inspection during normal business hours at the offices of CPNRD and the Department, and at the following website: www.dnr.nebraska.gov. Please refer to the websites and phone numbers listed below for further information.

The current IMP for CPNRD was developed following the determination in 2004 by the Department that the entire District was fully appropriated and a portion of the District was overappropriated. CPNRD's initial first increment IMP was adopted in 2009 and is effective through fall of 2019, at which time a second increment IMP must be drafted and ready for adoption. According to *Nebraska Revised Statute* §46-715, the IMP will be developed in consultation and collaboration with District stake-

ML

`AFFADAVIT OF PUBLICATION

State of Nebraska)
) ss
County of Dawson)

Kelly Ninas being duly sworn, deposes and says that he is the employee of the Tri-City Tribune, a weekly newspaper of general circulation in Dawson County, Nebraska, and that said Tri-City Tribune is a legal newspaper in conformity with the law, and that the notice hereto attached has been published in the Tri-City Tribune one consecutive time beginning on the 14th day of February, 2019 and ending on the 14th day of February, 2019.

Subscribed in my presence, sworn to before me on 14th day of Febraury, 2019.

Notary Public

GENERAL NOTARY - State of Nebraska
TERI HANSON
My Comm. Exp. June 2, 2022

Publisher Fees: $35.49

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Ck 54477

NOTICE OF STAKEHOLDER MEETING

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The current IMP for CPNRD was developed following the determination in 2004 by the Department that the entire District was fully appropriated and a portion of the District was overappropriated. CPNRD's initial first increment IMP was adopted in 2009 and is effective through fall of 2019, at which time a second increment IMP must be drafted and ready for adoption. According to Nebraska Revised Statute §46-715, the IMP will be developed in consultation and collaboration with District stakeholders and include: clear goals and objectives with a purpose of sustaining a balance between water uses and supplies; a map of the area subject to the IMP; at least one groundwater control and one surface water control; and a monitoring plan.

Individuals with disabilities may request auxiliary aids and services necessary for participation by contacting the Nebraska Department of Natural Resources by 5:00 p.m. (CST), February 20th, 2019, at 402-471-1112.

CPNRD: http://www.cpnrd.org or phone (308) 385-6282, 215 Kaufman Avenue, Grand Island, NE 68803.

Department: http://www.dnr.nebraska.gov or phone (402) 471-2363, 301 Centennial Mall South, 4th Floor, Lincoln, NE 68508.

1tFebruary14(69) ZNEZ

Attachment E - Attendance

CPNRD/NeDNR Integrated Management Plan - Stakeholder Advisory Committee Meeting

Tuesday, February 26, 2019 1:00 – 4:00 p.m. Holiday Inn, 110 S 2nd Ave. Kearney, NE

NAME	REPRESENTATION
Jessie Strom	NeDNR
Jen Schellpeper	NeDNR
Sarah Nevison	NeDNR
Philip Paitz	NeDNR
Andy Pedley	NeDNR
Ivan Klein	Buffalo County
Mike Drain	CNPPID
Jeff Shafer	NPPD
Randy Zach	NPPD
Mark Haskins	Hall Co. Farm Bureau
Tim Luchsinger	GIUD
J Buddenhagen	Thirty Mile
[illegible]	City of Kearney
JAY RICHESON	GOTHENBURG
Lyndon Vogt	CPNRD
Stephanie White	HDR
JESSE MONTEN	CNRD
Marcia Lee	CNRD
Jon Mohr	JEO
Jesse Bradley	NeDNR
Isabella Peterson	HDR