



Lower Platte River Basin-Wide Management Plan Coalition Board Meeting

October 17, 2016



Agenda

- I. Meeting Called to Order - Chair
- II. Notice of Open Meetings Act Posting
- III. Proofs of Publication of Meeting Notice
- IV. Introductions
- V. Meeting Objective: Review of Draft Plan Activities and Recommendations
- VI. Path forward for implementation
- VII. Update on scope and schedule
- VIII. Other
- IX. Public Comment
- X. Adjourn



V. Planning Activities and Recommendations

Membership

NDNR, NARD, and 7 member NRDs:

- Lower Loup NRD (Lead party for Coalition; contracting member on behalf of Coalition)
- Lower Platte North NRD
- Lower Platte South NRD
- Lower Elkhorn NRD
- Papio-Missouri River NRD
- Upper Loup NRD
- Upper Elkhorn NRD



NRD
Upper Loup
Natural Resources District



Lower Elkhorn
Natural Resources District

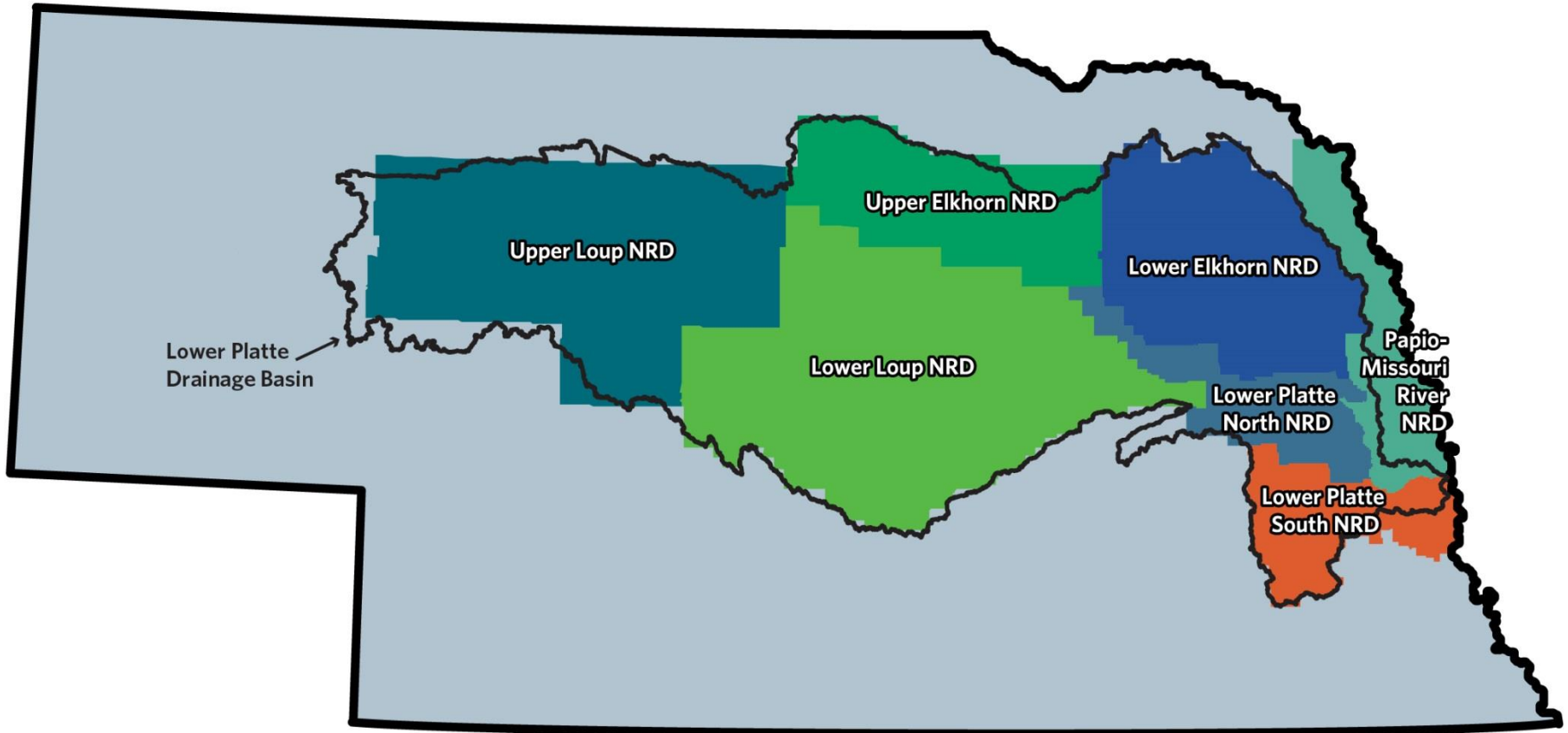


Lower Platte North
Natural Resources District



Lower Platte South
Natural Resources District



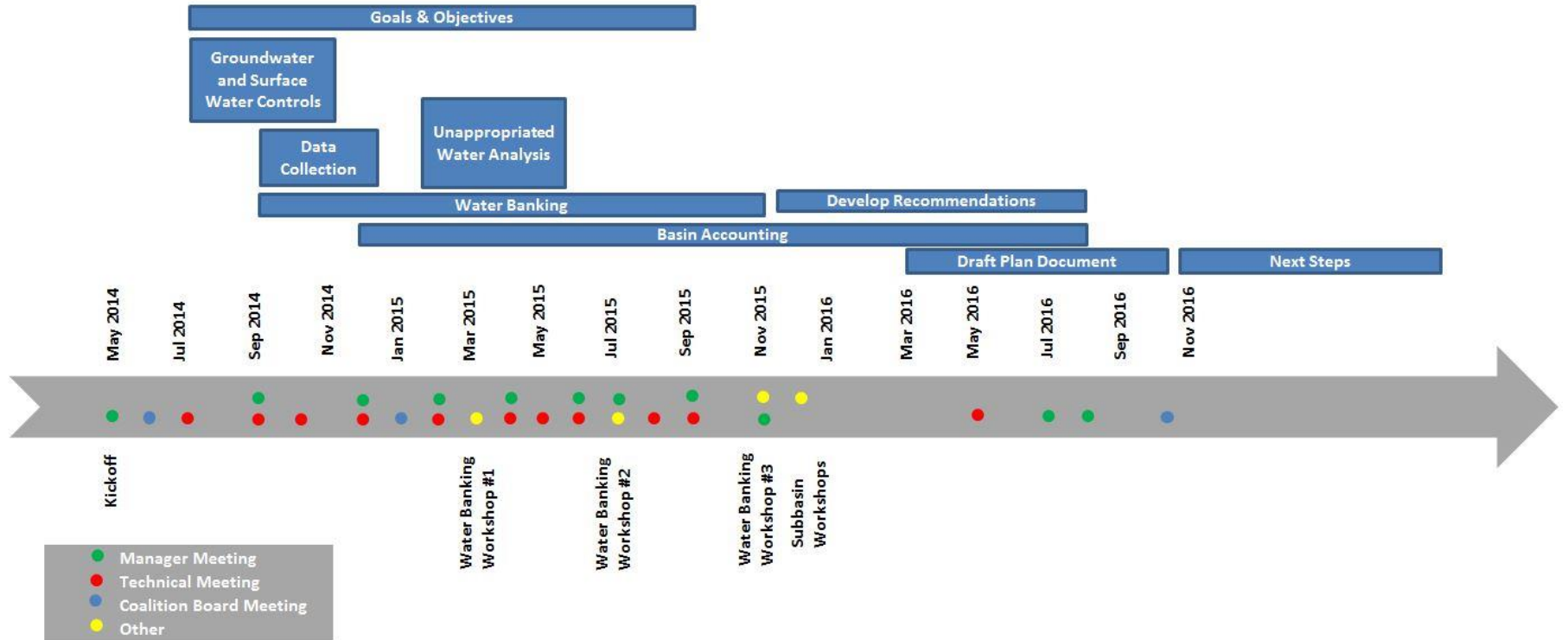


Purpose of Project/Plan Goals

- Develop and maintain a **water supply and use inventory** based on the best available data and analysis.
- Collectively develop a water management plan for the Lower Platte Basin that **maintains a balance between current and future water supplies and demands.**
- Develop and implement water use policies and practices that contribute to the **protection of existing surface and groundwater uses while allowing for future water development.**

Basin-wide plan intent is to inform and provide consistency for the individual NRD Integrated Management Plans (IMPs)

Project Activity Timeline



Components of Plan

- 1) Purpose and Scope
- 2) Background/Basin Description
- 3) Goals and Objectives
- 4) Plan Components and Action Items
- 5) Plan Review and Monitoring

Supporting Appendices

- Existing Surface Water and Groundwater controls
- Evaluation of Insight Methodology
- Existing Data and Data Collection
- Conjunctive Management Opportunities
- Water Banking Systems
- Facilitation and Coordination

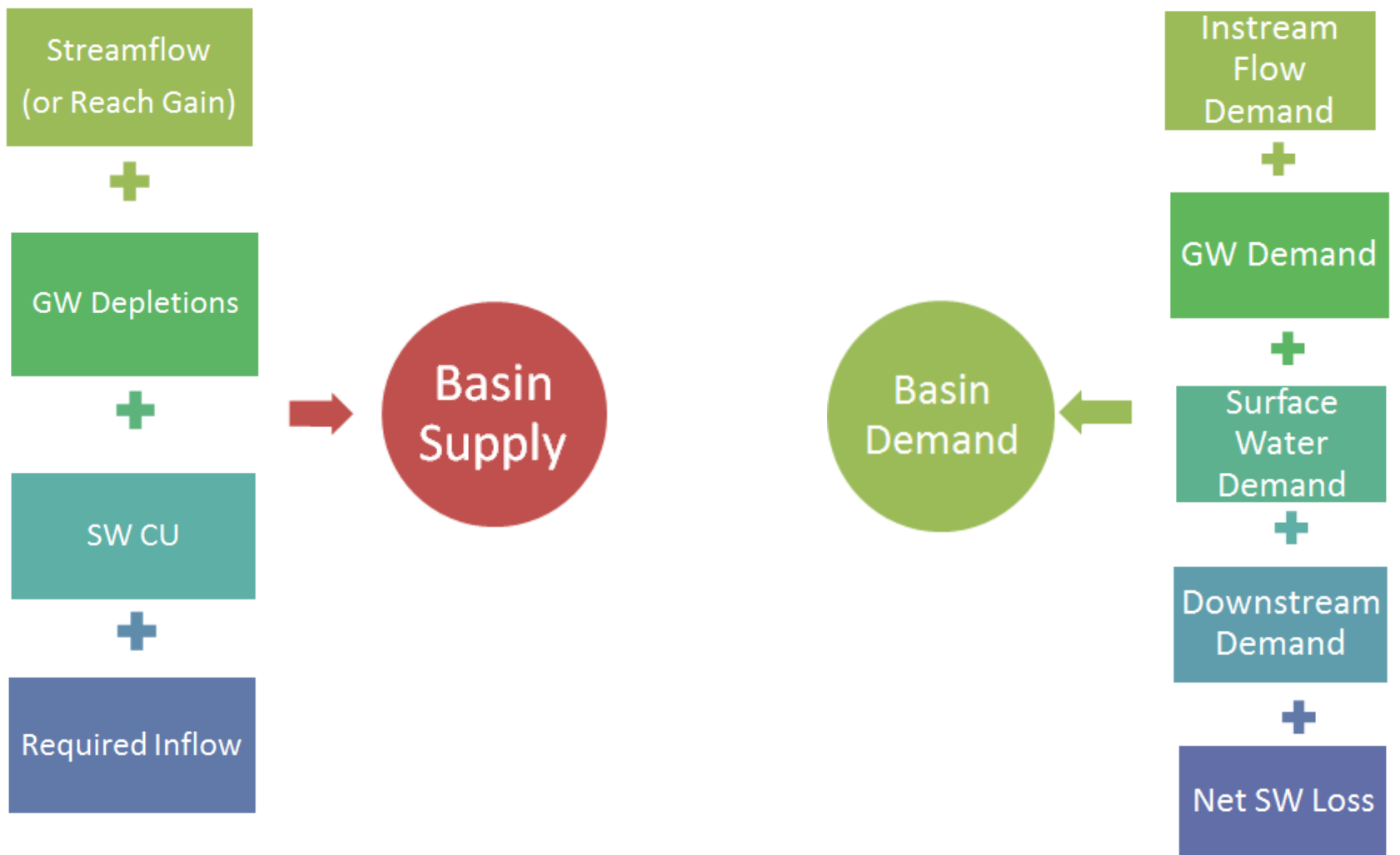
Project Activities Summary

- 1) Develop Goals, Objectives & Action Items
- 2) Catalog existing data and data collection activities
- 3) Document Existing Surface and Groundwater Controls
- 4) Evaluate DNR INSIGHT methodology & use to develop basin accounting
- 5) Identify potential conjunctive management opportunities within the basin
- 6) Summarize existing water banking systems and applicability to Lower Platte Basin
- 7) Technical Committee, Management Committee, and Coalition Board facilitation

Project Activities - Basin-wide Accounting

Accounting is fundamental to each of the Plan's three goals

- Accounting methodology needs:
 - Essential to quantifying supplies and uses in the basin (GOAL 1)
 - Provide consistent basis for NRD/DNR management across basin (GOAL 1)
 - Tie to INSIGHT basin accounting for consistency (GOAL 1)
 - Quantify current and future supplies and uses (GOAL 2)
 - Facilitates transfer/water banking activities (GOAL 2)
 - Tool for monitoring/planning (GOAL 3)
 - Framework to inform individual NRD IMPs (GOAL 3)



Project Activities - Conjunctive Management

Enhancing Overall Water Supply and Reliability

- Sargent Canal Linear Recharge Project
- Sherman Storage Reallocation & Farwell Canal Recharge Project
- Skull Creek Reservoir
- Battle Creek Reservoir
- Dwight-Valparaiso-Brainard Special Management Area Recharge Project
- Augmentation Project

Project Activities - Water Banking

- Review of statutory authorities and current banks in operation in Nebraska and western US.
- Described components and guidelines of water banking framework.
- Application to banking activities between member NRDs or within an individual NRD.
- Examples of approaches to increase the availability/reliability (with respect to time and/or locations of water use)
- One potential tool (of many) in manager's toolbox to have available to meet future uses

Plan Recommendations

Goal 1: Develop and maintain a water supply and use inventory based on the best available data and analysis

- Utilize the INSIGHT methodologies for consistency in basin water supply and use accounting.
- Using the INSIGHT methodologies, new uses (depletions and consumptive use) will be tracked and reported by Coalition members.
- Utilize best available tools and information for estimating uses
- Collaborate on consistent reporting methodologies to be used by Coalition members.

Plan Recommendations (continued)

Goal 2: Implement a water management plan for the Lower Platte Basin that maintains a balance between current and future water supplies and demands

- Allowable new uses within the Basin will be determined based on maintaining a balance between uses and supplies utilizing methodologies agreed upon and accepted by Coalition members.
- Collaborate with Coalition members and potential partners on water supply enhancements.
- Continue discussions on water banking framework for the Lower Platte River Basin.

Plan Recommendations (continued)

Goal 2: Implement a water management plan for the Lower Platte Basin that maintains a balance between current and future water supplies and demands (continued)

- For the first 5-year increment of the Plan:
 - Allowable new uses will be limited to 10% of the 25-year average annual basin-wide excess during the peak season.
 - Allowable new uses apportioned to Elkhorn, Loup, and Lower Platte River sub-basins based on sub-basins' contribution to flows at Louisville gage.
 - Allowable cumulative development accounting based on peak season depletions.
 - Compute and track the full consumptive use of new uses

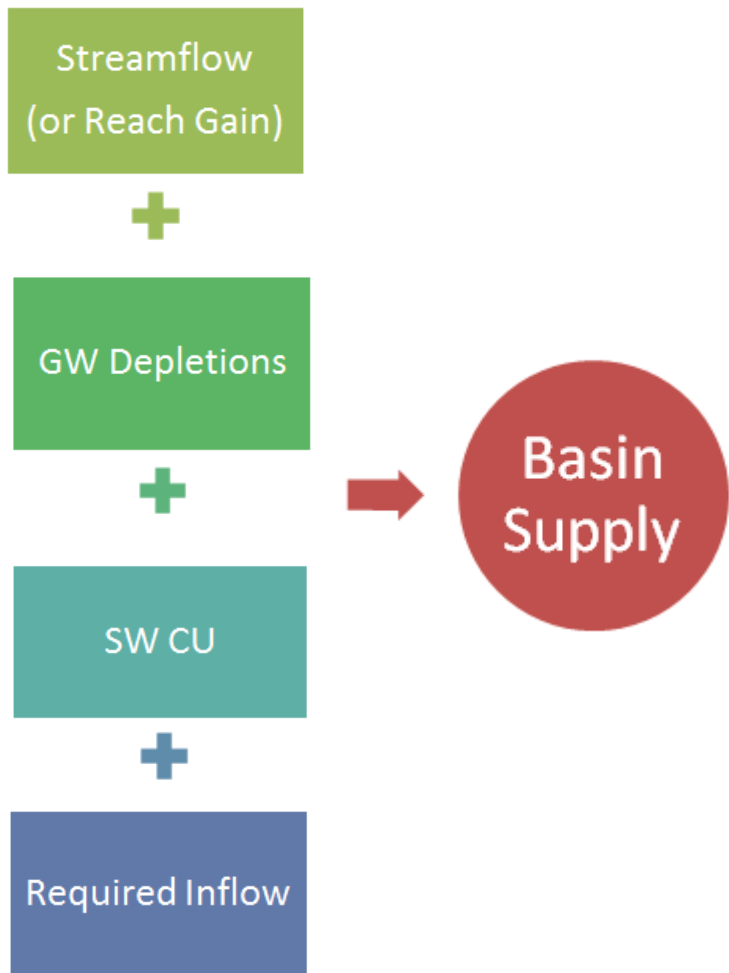
Plan Recommendations (continued)

Goal 3: Develop and implement water use policies and practices that contribute to the protection of existing surface and groundwater uses while allowing for future water development.

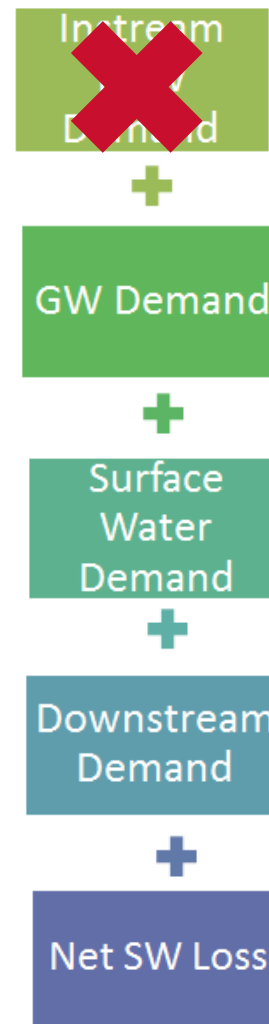
- Implement plan through Inter-Local Cooperation Agreement (ILCA) among Coalition members and subsequent incorporation into individual IMPs and/or NRD rules and regulations.
- Conduct annual meeting to discuss activities, provide annual summary, and coordination activities amongst NRDs, DNR, and stakeholders.
- Keep plan current - update following the first 5-yr increment, coincident with INSIGHT database update on supplies to be performed by DNR.

Recommendation for allowable new uses

- Basis: Responsibly allow and manage new uses while protecting existing uses
- Approach:
 - Quantify existing basin supplies, uses, and the balance between the two
 - Based on available excesses, set target for first increment new uses

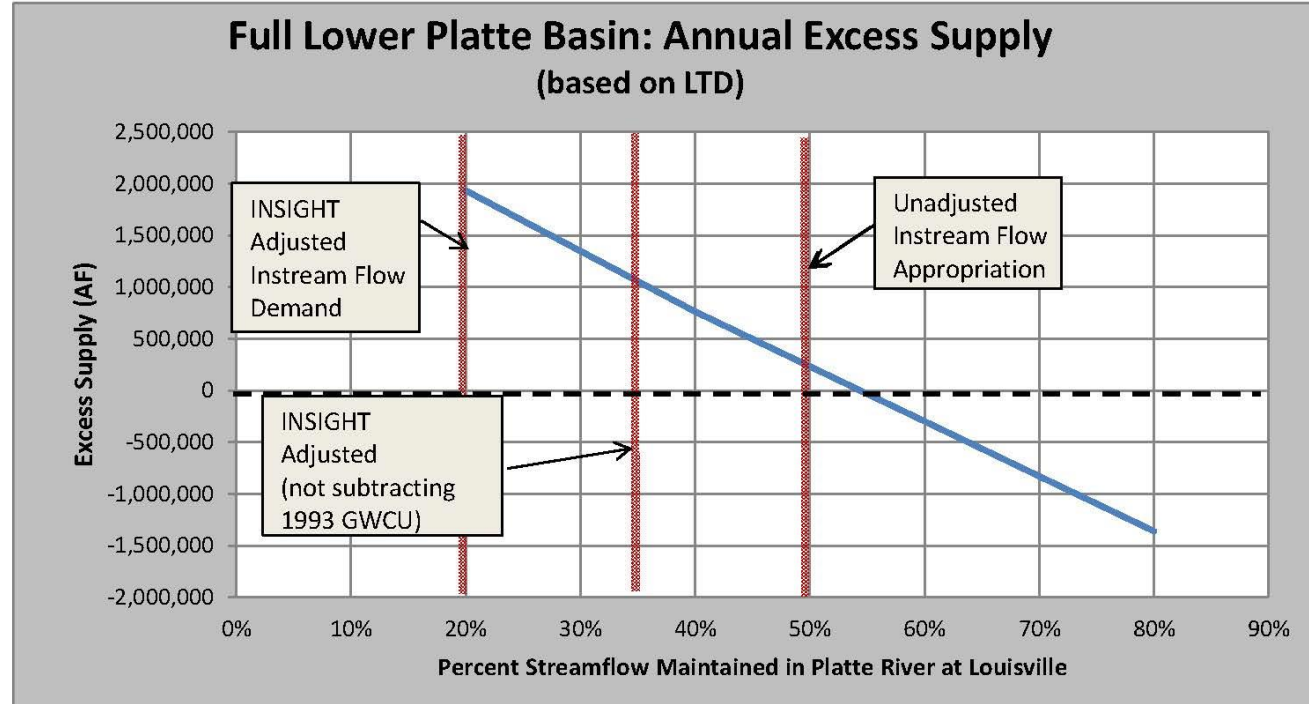


40%
Streamflow in
Platte River



Considerations

- 20%, 40%, 60%, 80% at LV
- Annual vs. NonPeak/Peak Seasons
- % of development for first increment
- How to divide excess between sub-basins

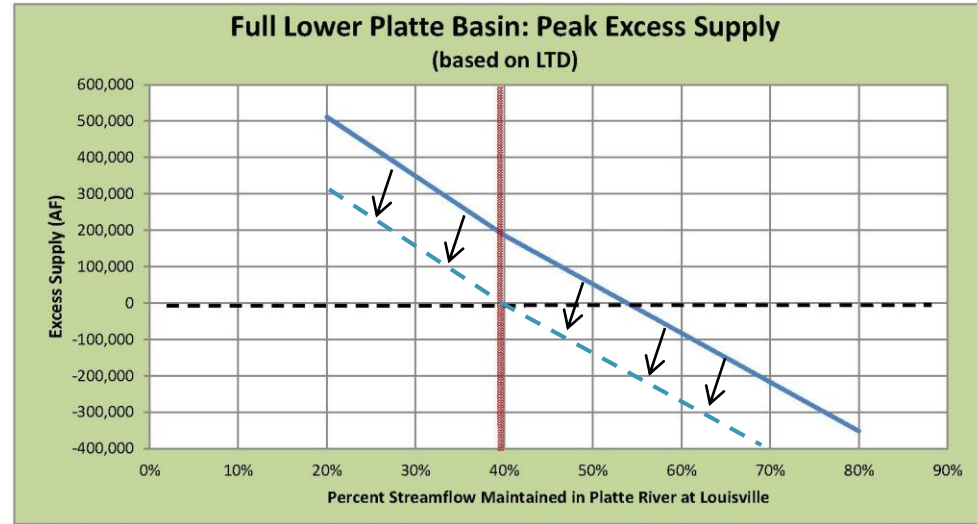


Recommendation

After considering various demand scenarios, the management committee recommends utilizing a demand scenario that would maintain 40% of the 25-year average streamflow at Louisville.

Considerations:

- Data is continuously changing and unknowns in climate variability
- Want to avoid overdevelopment of new uses that may require regulatory restrictions later
- Build a level of protection into the basin accounting this first increment. Therefore, a demand equivalent to 40% of the 25-year average streamflow at Louisville was applied.



Recommendation for allowable new uses

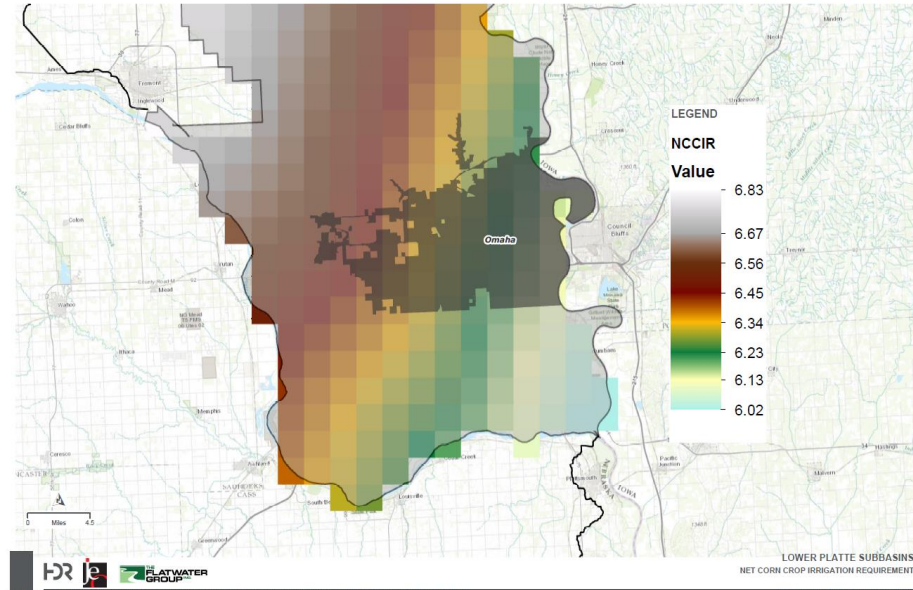
Basin	Average Peak Season Excess Supply (acre-feet)	First 5-year Increment Allowable Development (Peak Season) (acre-feet)
Full Lower Platte Basin	194,843	19,484
Loup Basin (44% BWS)	85,171*	8,517*
Elkhorn Basin (32% BWS)	61,960	6,196
Lower Platte Subbasins (23% BWS)	47,712	4,771

Notes:

- Use depletions for tracking against allowably new uses – consistent with current NRD management practices and priority ranking in evaluating new use applications
- Also track and report full consumptive use
- Further division within sub-basins to be determined by NRDs

What does the allowable use recommendation mean - Example

- Allowable depletion during the peak season
- Irrigated agriculture example: Let's assume the allowable first increment development of GW irrigated agriculture for P-MRNRD is 1,000 AF (of the subbasin total 4,771 from previous slide):
 - » Net Irrigation Requirement in P-MRNRD (see Figure) is approximately 6.5 inches = 0.55 ft
 - » Assume a stream depletion factor of 60% (60% of the groundwater pumped is from stream depletion) and 40% of that depletion occurs during the peak season
 - » Allowable new acres =
 $1,000 \text{ acre-feet} / (0.55 \text{ ft}) / (0.6) / (0.4) = 7,576 \text{ acres}$



**While example uses assumed general values, each application for new use would have site-specific net irrigation requirement, stream depletion factor, and peak season depletion % that would be used in the accounting of the use.*

Benefits of First Increment Allowable Development

- Provides a level of protection that existing uses are protected while allowing for responsible development of new uses.
- Provides a level of certainty and consistency in the basin accounting.
- Incrementally adding new uses to avoid “race to the bottom” and potential for management or regulatory actions later

Benefits of First Increment Allowable Development

- Provides a level of protection with regard to all basin supplies, including surface water, under DNR/NRD jurisdiction. Interlocal agreement and incorporation into the individual IMPs provides means to limit new uses in the basin.
- Provides the accounting basis and certainty for setting up any water transfers/banking activities between parties within the basin.
- Encourages cooperation between NRDs and DNR in managing the water resources of the basin.

Benefits of First Increment Allowable Development

- Adoption of allowable limits assures value of water from an accounting standpoint in transfers and banking (analogous to currency - printing more money depresses the value of the dollar). Also allows for carry-over or credit of any amount not developed.



VI. Path Forward

Implementation

- ILCA amongst Coalition Members adopting Plan's recommendations
- ILCA Content:
 - Members
 - Term of agreement
 - Period for review
 - Allowable development in first increment
 - Mechanism for 'banking' or carrying over allowable development
 - Other?
- ILCA/Agreements amongst sub-basin NRDs/DNR for allowable new uses

Implementation (continued)

- Today
 - Coalition Board approval of plan recommendations
 - Coalition Board direction to develop ILCA for individual NRD board/DNR approvals
- Over the next couple of months
 - Draft and final plan completion
 - Development of ILCA
 - Final Plan and presentation to each NRD at the time of boards' consideration of the ILCA
 - Plan implementation

Questions?