

Platte Valley Water Partnership

Pioneering a Collaborative and Sustainable Water Future



ParkerWater
& SANITATION DISTRICT



Joe Frank
General Manager
LSPWCD

South Platte River Water Update

January 12th, 2022

Riverview Event Center

Brush, CO



Municipal and Industrial Demands Continue to Increase!

Figure 3. Baseline and 2050 Projected Population and Municipal Demands

SOUTH PLATTE

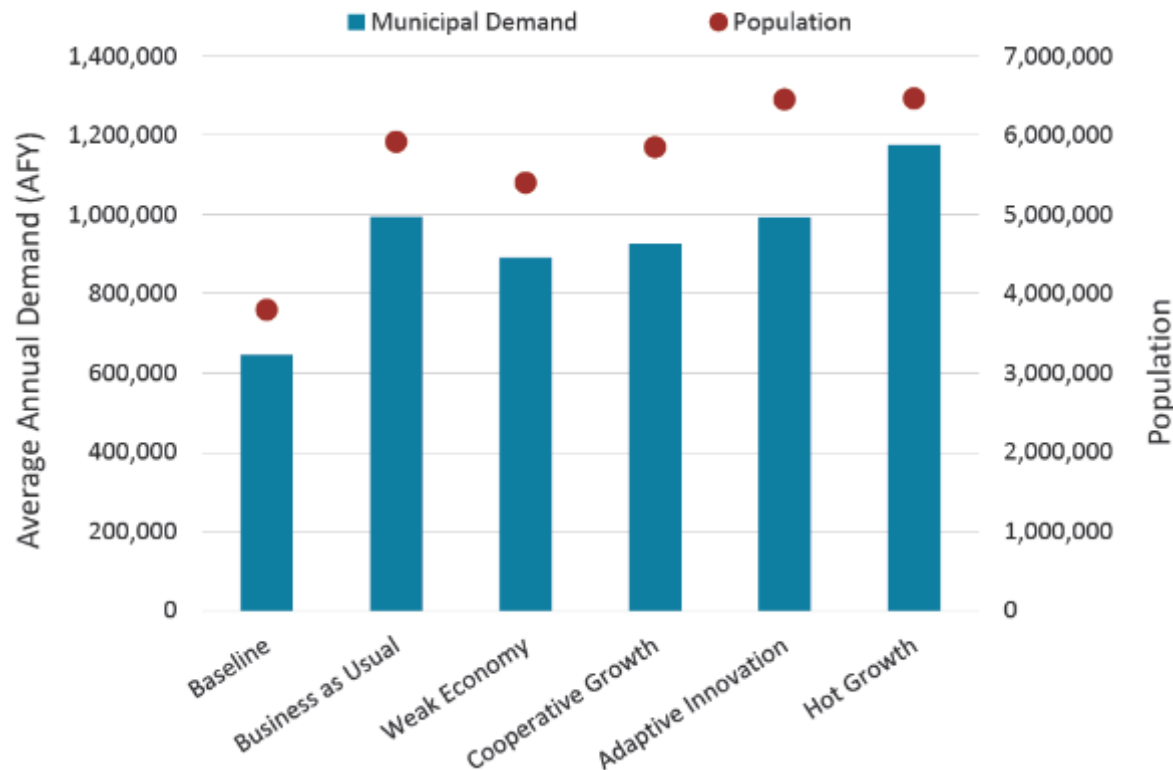
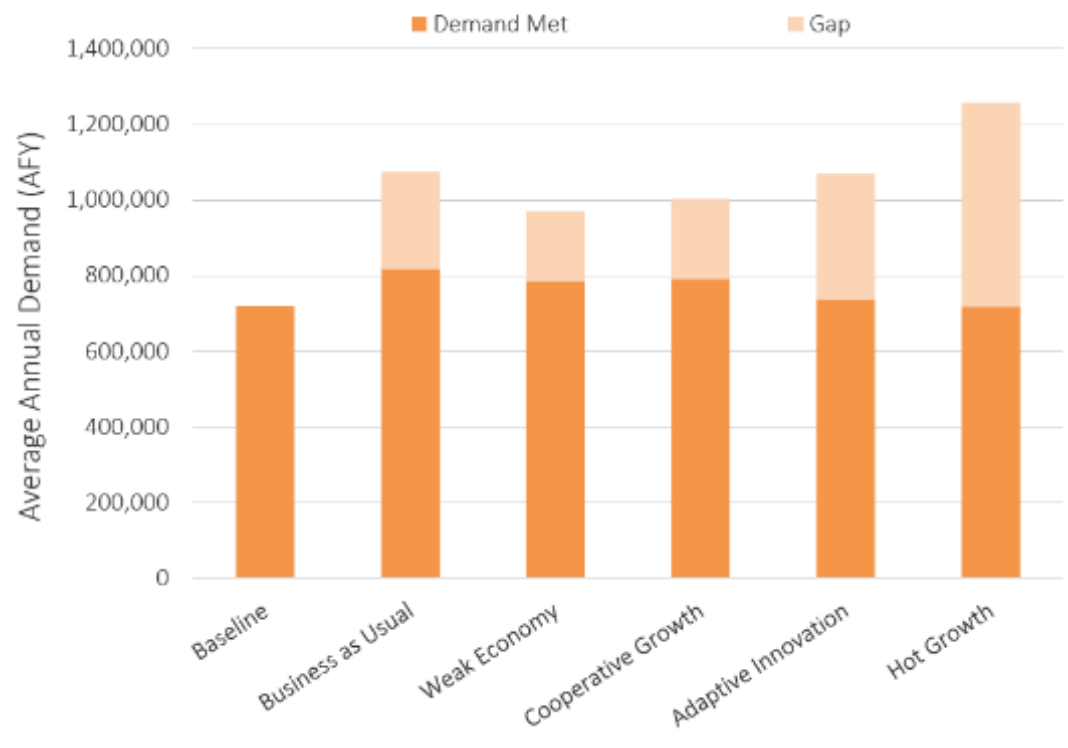


Figure 4. Baseline and 2050 Projected Maximum Annual M&I Demand Met and Gaps

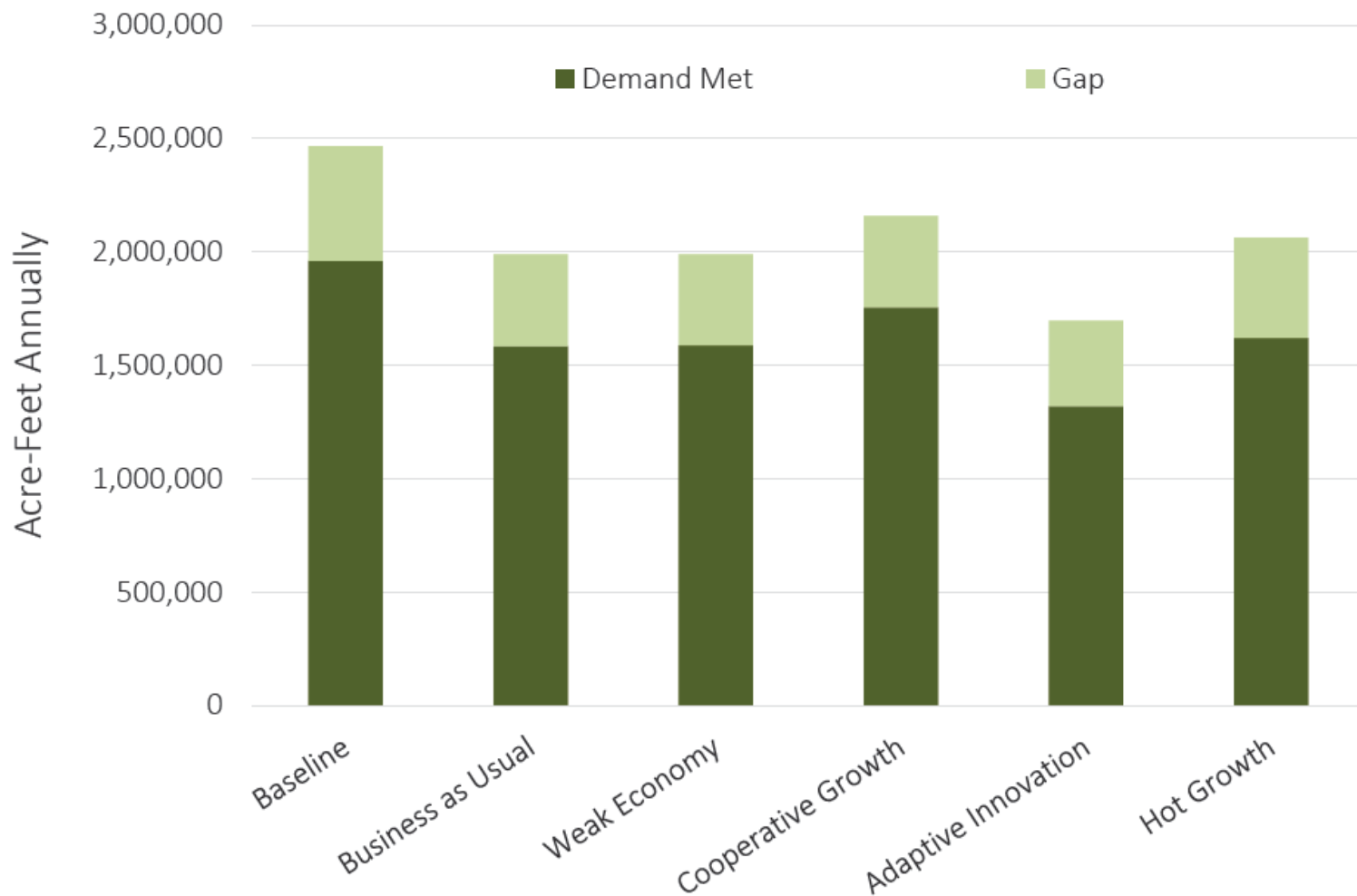
SOUTH PLATTE



Significant Agricultural Shortages Exist.

Figure 6. Baseline and 2050 Projected Average Annual Agricultural Diversion Demand, Demand Met, and Gaps

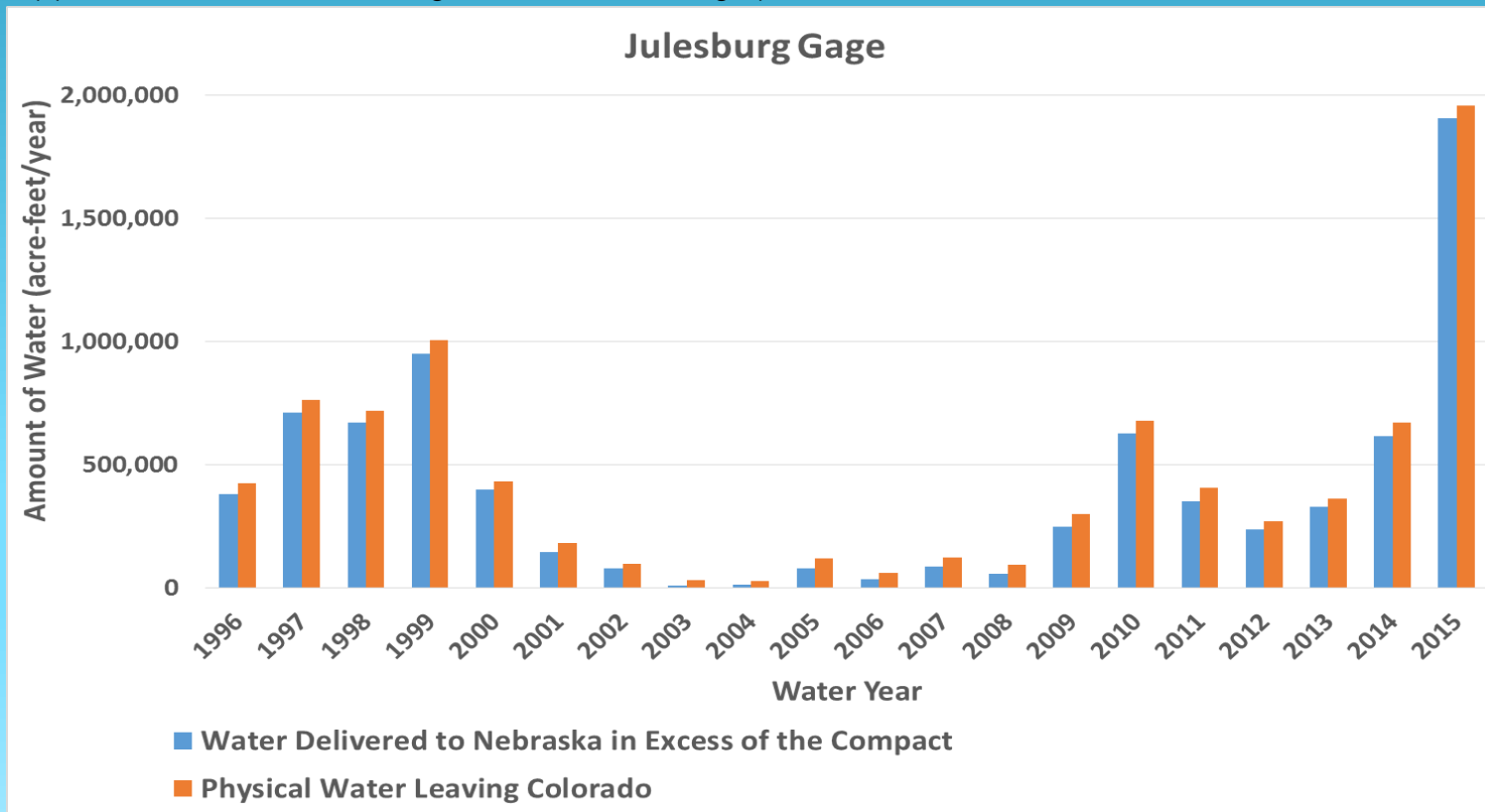
SOUTH PLATTE

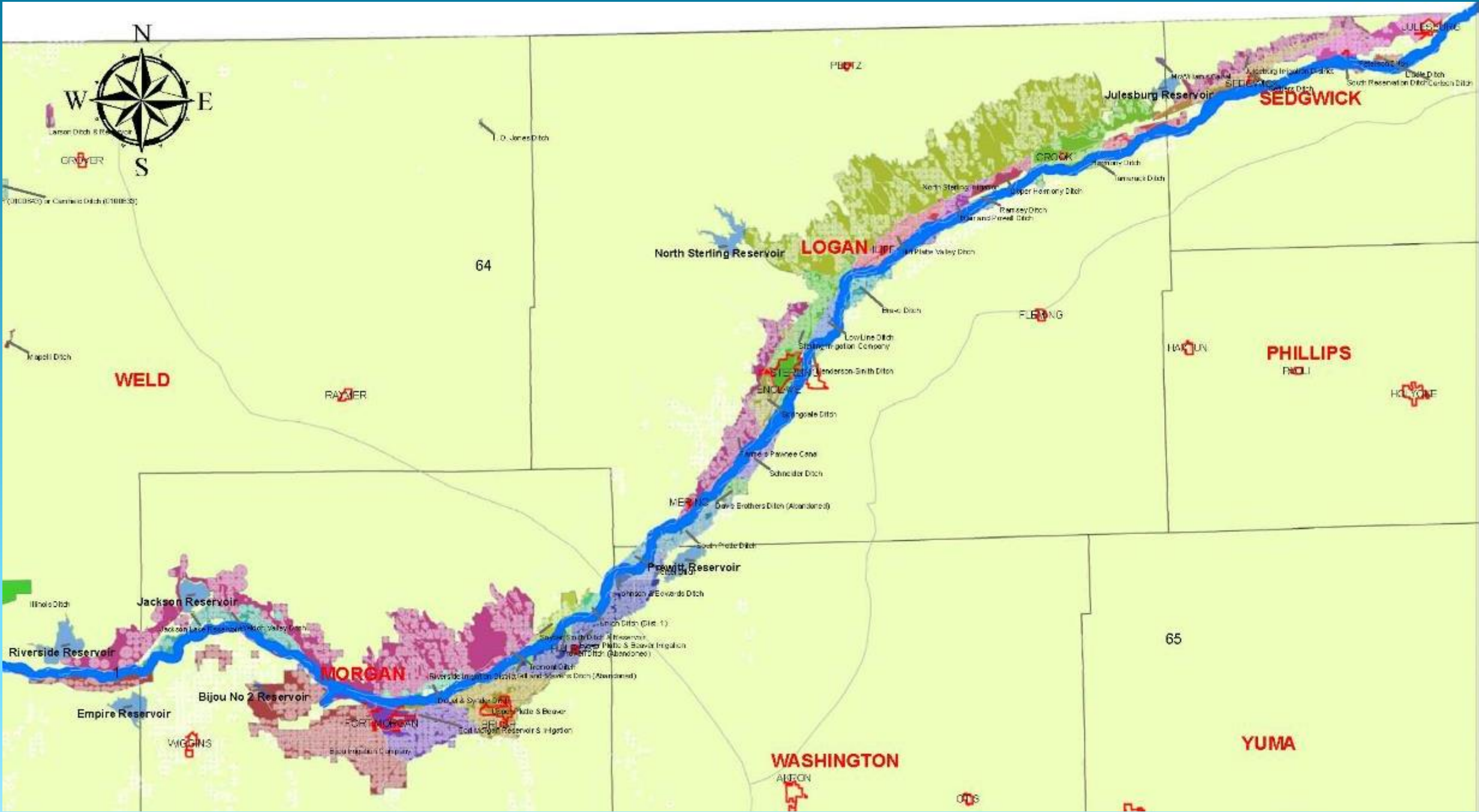


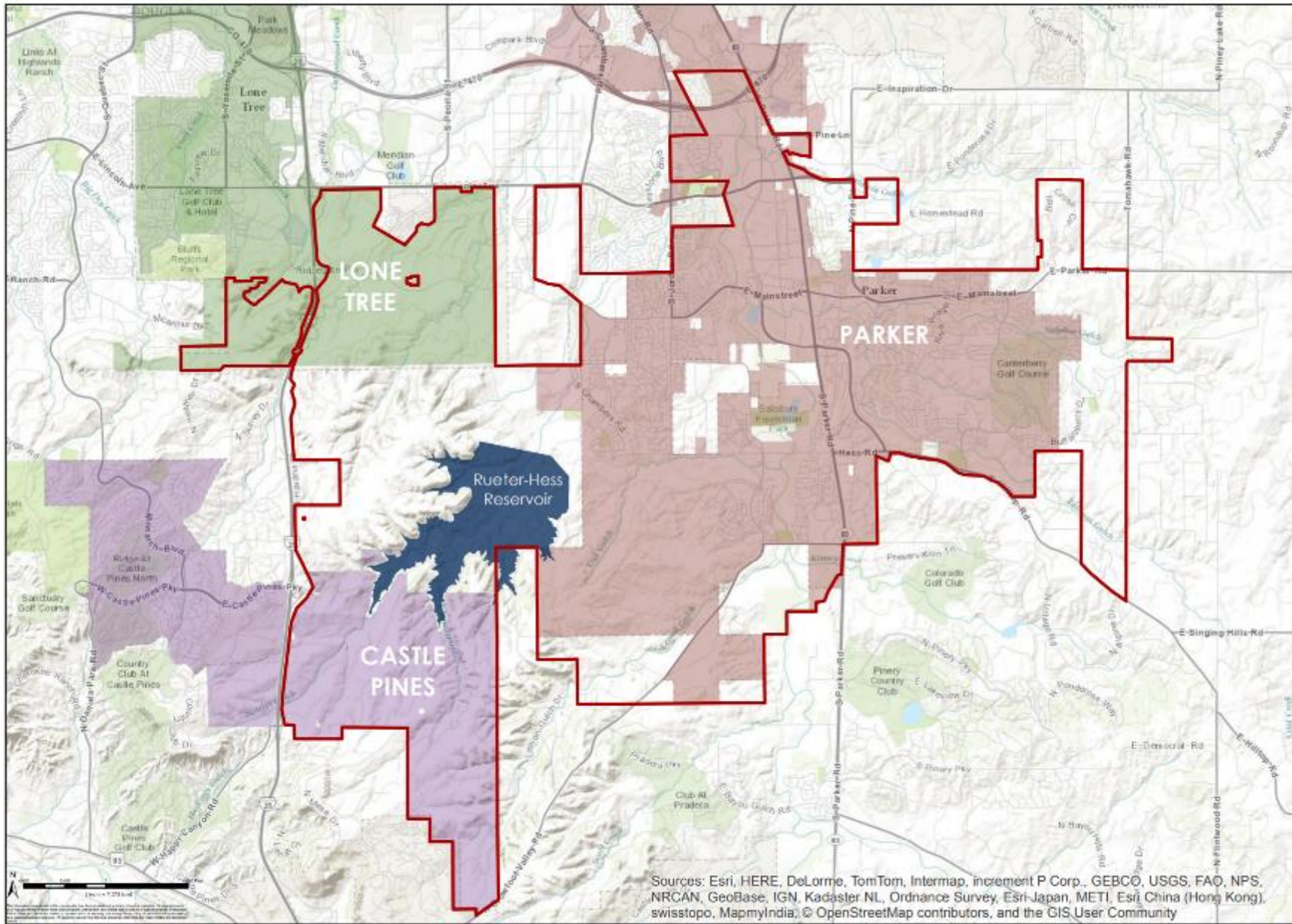
Statistic	Physical Water Leaving Colorado (Julesburg Gage)	Water Delivered to Nebraska in Excess of the Compact ⁽¹⁾⁽²⁾
Annual Median (ac-ft/yr)	331,000	293,000
Annual Average (ac-ft/yr)	436,000	397,000
Minimum Year (ac-ft/yr)	29,000	10,000
Maximum Year (ac-ft/yr)	1,957,000	1,904,000
Total for 20-yr Period 1996-2015 (ac-ft)	8,728,000	7,939,000

(1) Storable flow Julesburg gage

(2) Future environmental flow obligations could reduce legally available water.

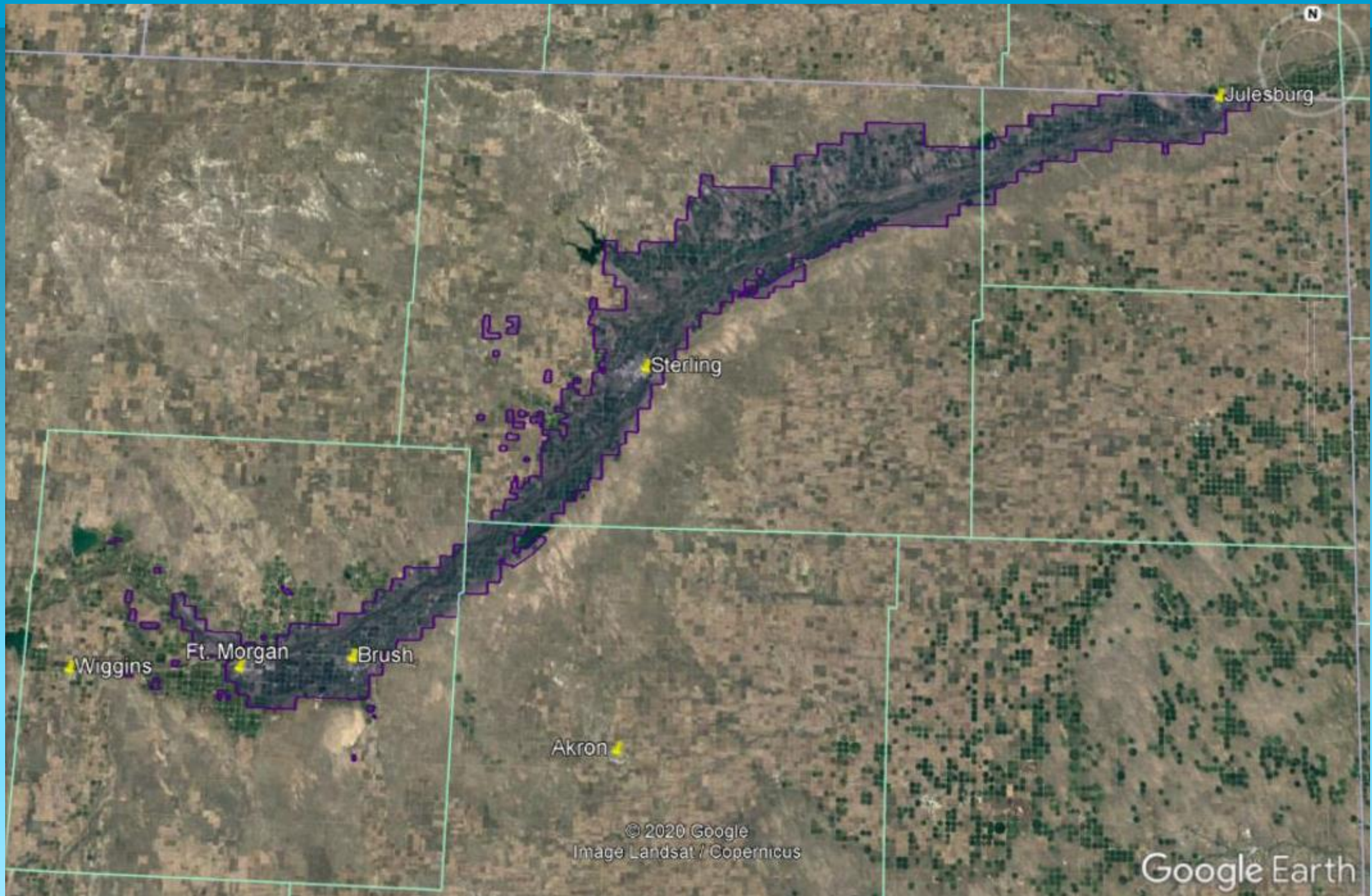






Parker Water and Sanitation District Service Area

2014



© 2020 Google
Image Landsat / Copernicus

Google Earth

Platte Valley Water Partnership

PROJECT GOALS



ParkerWater
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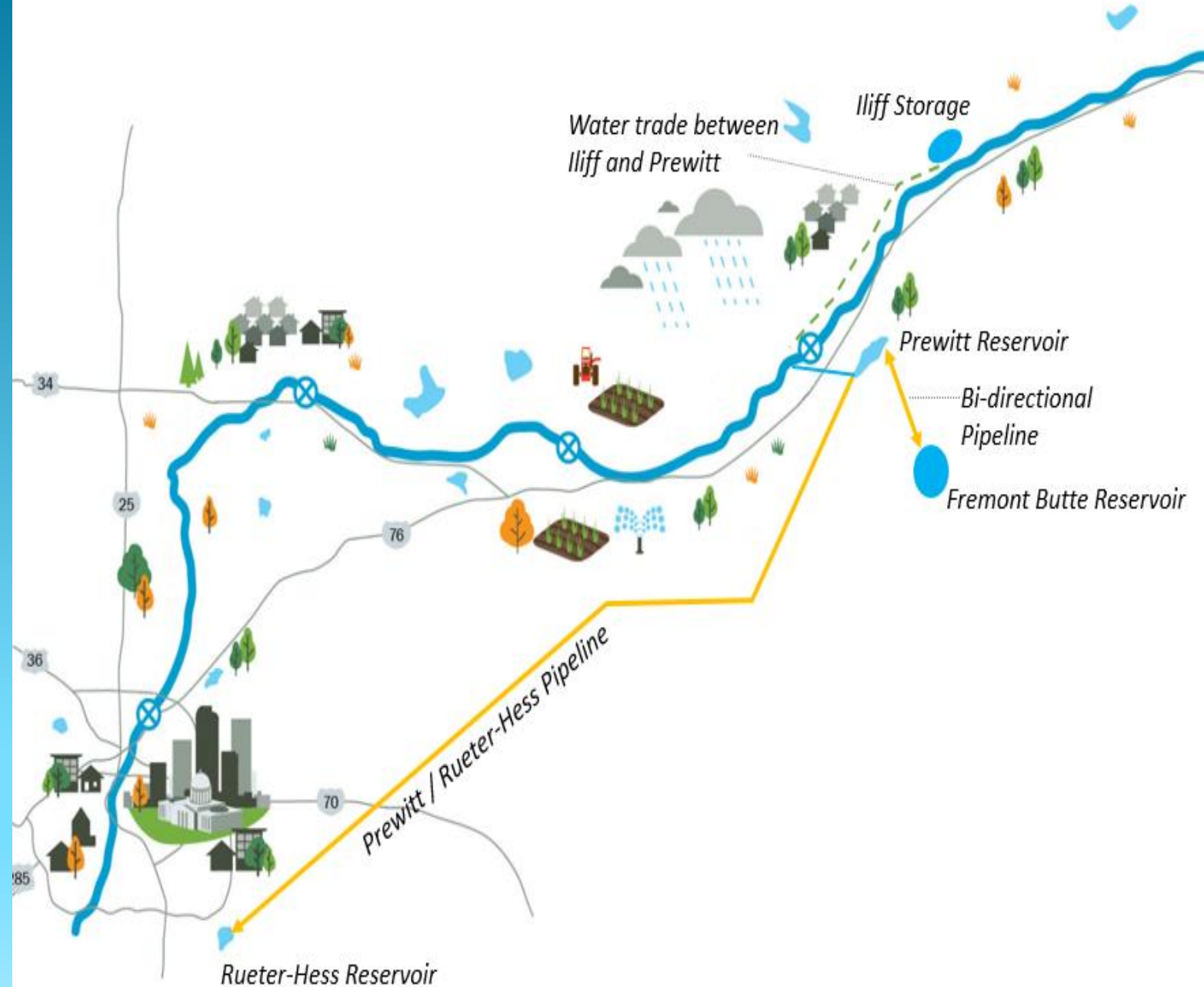
- **PWSD Supply Gap**
 - 75% Renewable by 2035
 - Demand shortage in 2035-2040
- **Avoids “Buy and Dry”**
 - Optimizes available water
 - Sets parameters for Municipal/ Agricultural partnership
- **LSPWCD Water Supply**
 - Addresses local needs
 - Develops critical habitat
- **Optimizes Existing Infrastructure (via agreement)**



Pioneering a Collaborative and Sustainable Water Future

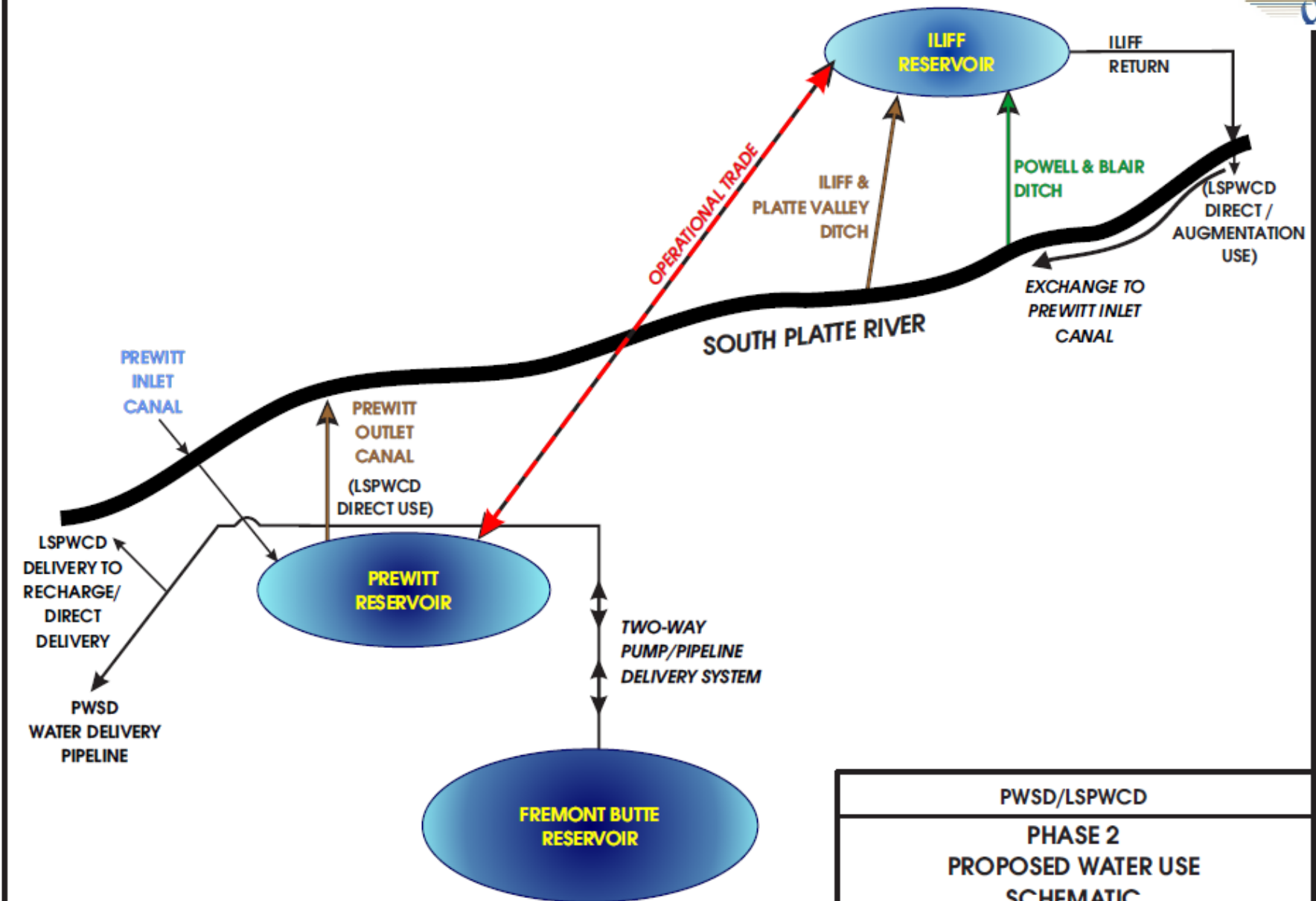
PROJECT OVERVIEW

- Iliff Reservoir – 6,500 ac-ft
- Prewitt Reservoir – 6,500 ac-ft forebay utilizing existing infrastructure
- **Trade** between Iliff and Prewitt Reservoirs.
- **Fremont Butte Reservoir** – 72,000 ac-ft, up to 250 cfs pumped and piped from Prewitt Reservoir (Phase II).



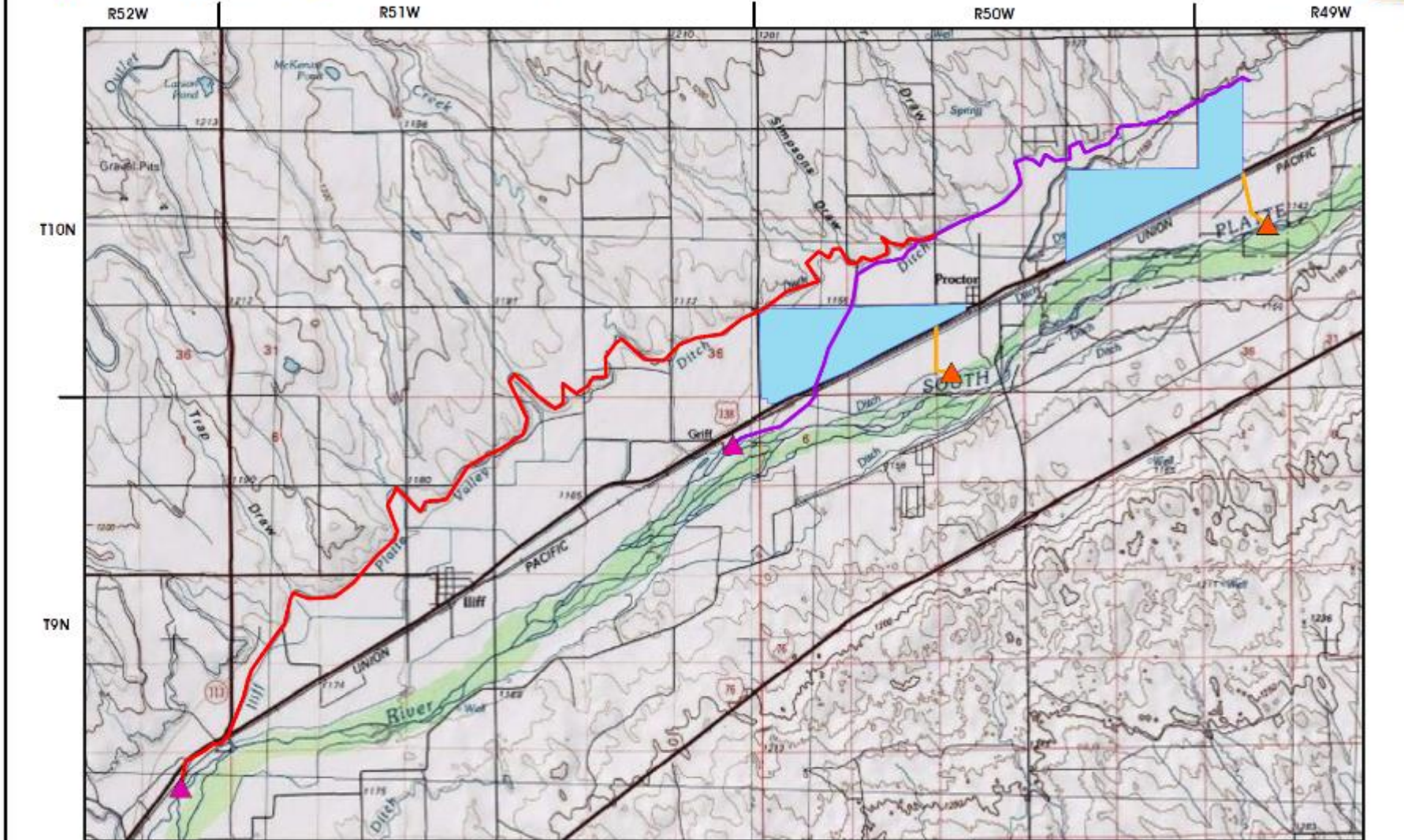
19CW3253 Overview:

- Joint application between LSPWCD and Parker WSD, 50% undivided interest for each.
- 2019 Water right:
 - Iliff or Bravo Reservoir – 6500 ac-ft , up to 200 cfs
 - Prewitt Reservoir – 6,500 ac-ft forebay, up to 1,000 cfs
 - Fremont Reservoir – 72,000 ac-ft, up to 250 cfs pumped from Prewitt (Phase II)
 - Iliff and Prewitt Reservoir operational water trade.
- Beneficial Uses include: **irrigation, augmentation, municipal**, domestic, commercial, industrial, recreational, environmental, etc.
- Beneficiaries:
 - Parker WSD – municipal use
 - Northeast Colorado water users – irrigation and well augmentation
 - Wildlife habitat
- No Buy and Dry!



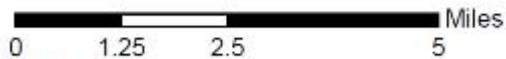
PWSD/LSPWCD
**PHASE 2
 PROPOSED WATER USE
 SCHEMATIC**

File Name: Phase 2 Schematic.cdr	Date: 08/24/2020
Project No.: 1489-20	Drawn By: VAL Fig. No.: 9



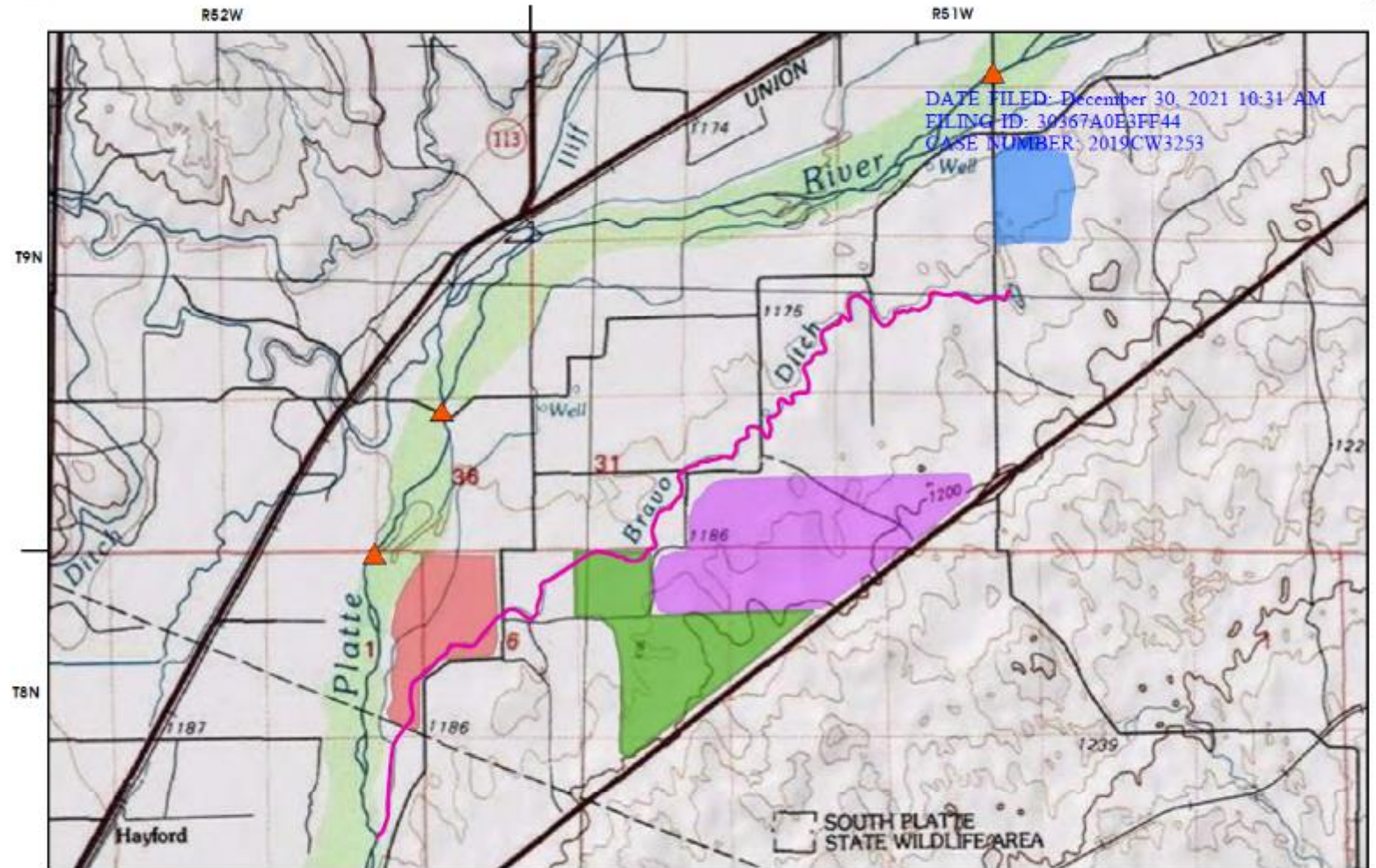
LEGEND

- ▲ Diversion Points
- Iliff & Patte Valley Ditch
- Powell & Blair Ditch
- Potential Locations For Iliff Reservoir
- ▲ Exchange From Point
- Discharge to South Platte River



Note: Exchange Reach shown on Exhibit G.

PWS D		
POTENTIAL ILIFF RESERVOIR LOCATIONS		
File Name: IliffRes.mxd	Date: 12/19/2019	
Project No.: 1460-19	Drawn By: AVE	Exhibit: A



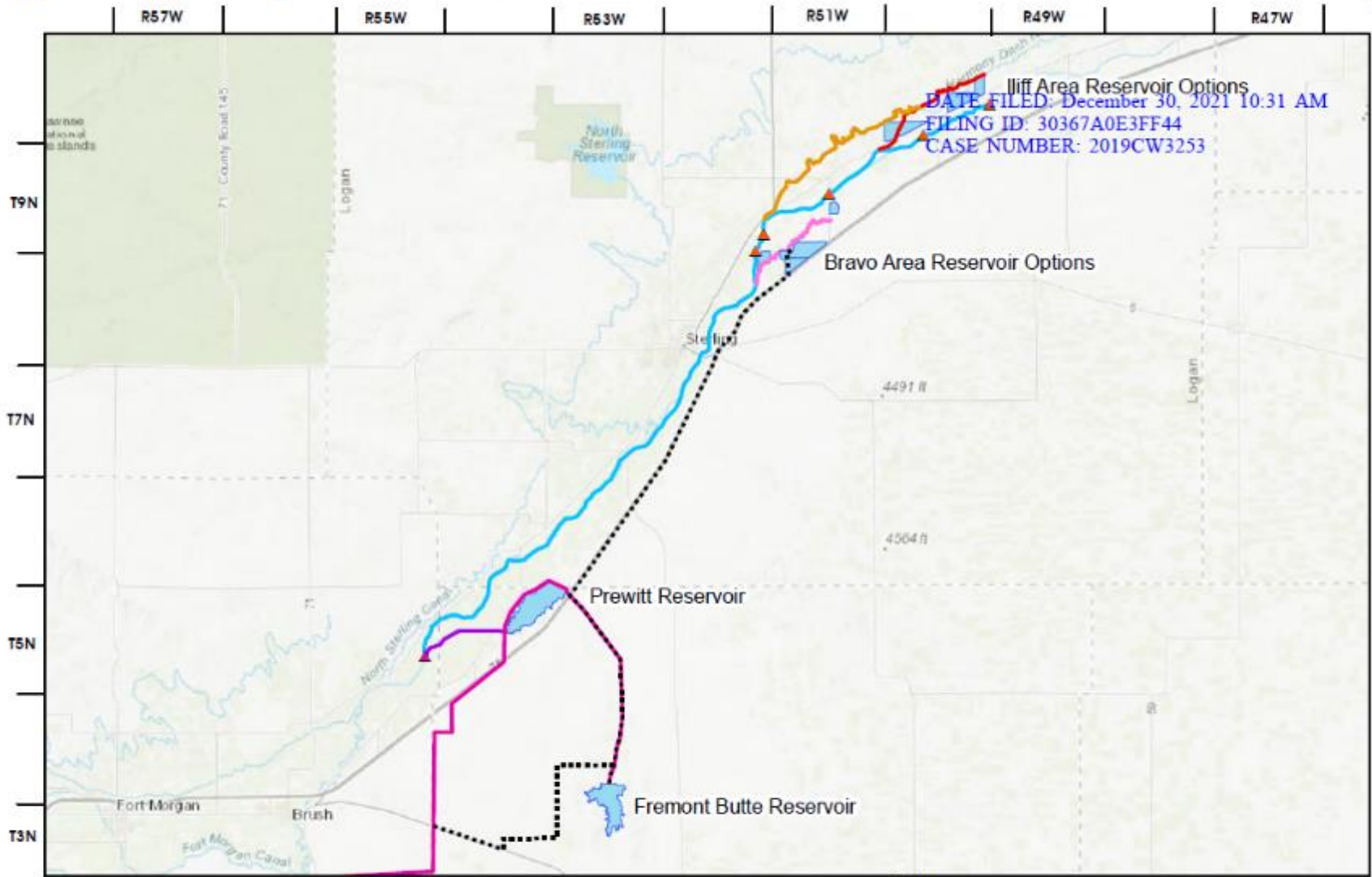
DATE FILED: December 30, 2021 10:31 AM
 FILING ID: 30367A0E3FF44
 CASE NUMBER: 2019CW3253

LEGEND

- Bravo Ditch
- Board Held Reservoir
- Veeman Reservoir
- Bravo Reservoir
- Talbott Reservoir
- ▲ Bravo Exchange From Points



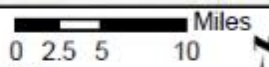
PWS/LSPWCD		
BRAVO DITCH AND POTENTIAL RESERVOIR SITES		
File Name: Fig2.mxd	Date: 12/29/2021	
Project No.: 1489-20	Drawn By: CMDF	Exhibit H



Iliff Area Reservoir Options
 DATE FILED: December 30, 2021 10:31 AM
 FILING ID: 30367A0E3FF44
 CASE NUMBER: 2019CW3253

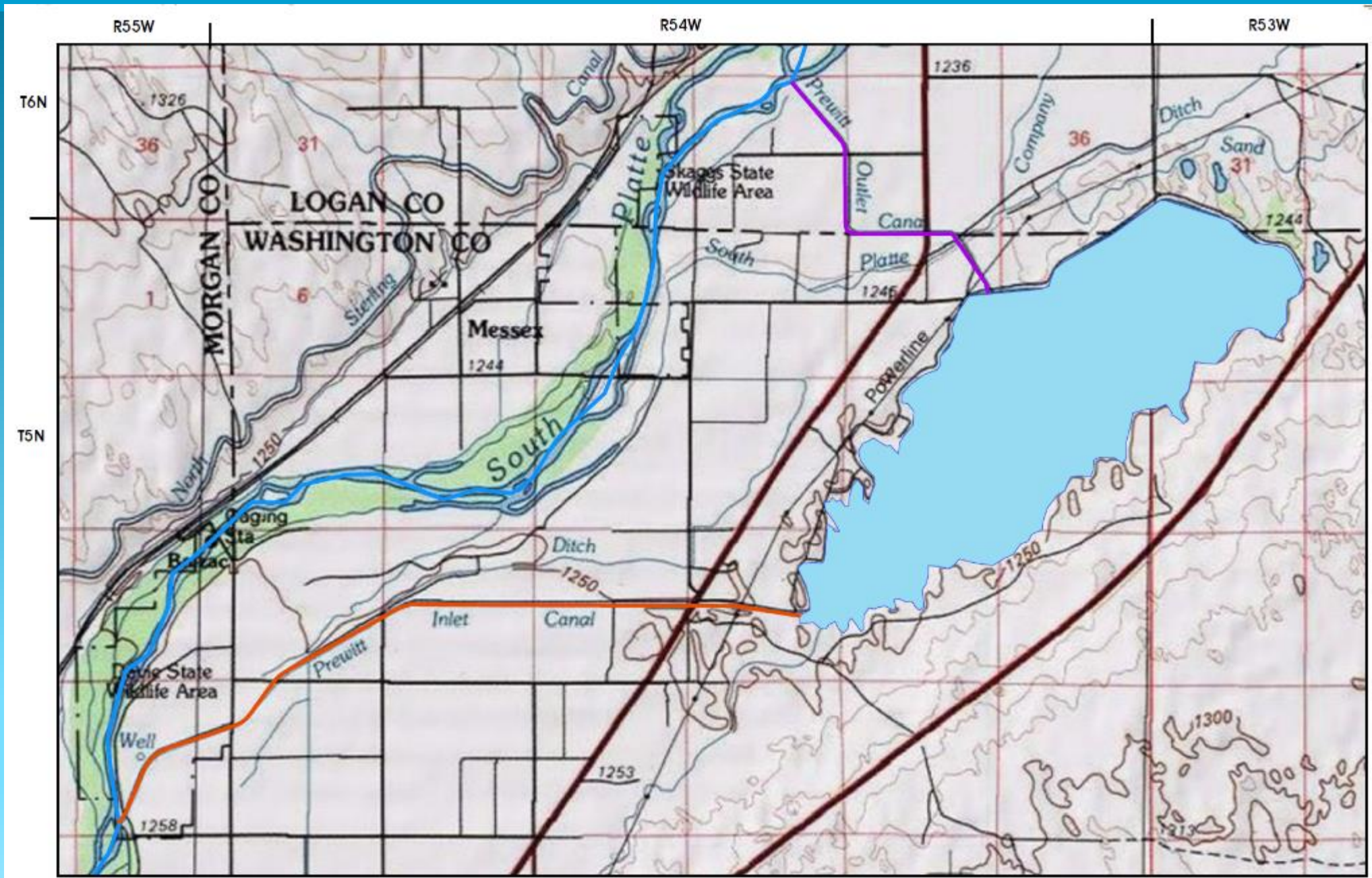
LEGEND

- ▲ Exchange To Point
- ▲ Exchange From Points
- Amended Application Pipelines
- Initial Application Pipelines
- Prewitt Inlet Canal
- Reservoirs
- Bravo Ditch
- Iliff & Patte Valley Ditch
- Powell & Blair Ditch
- Exchange Reach

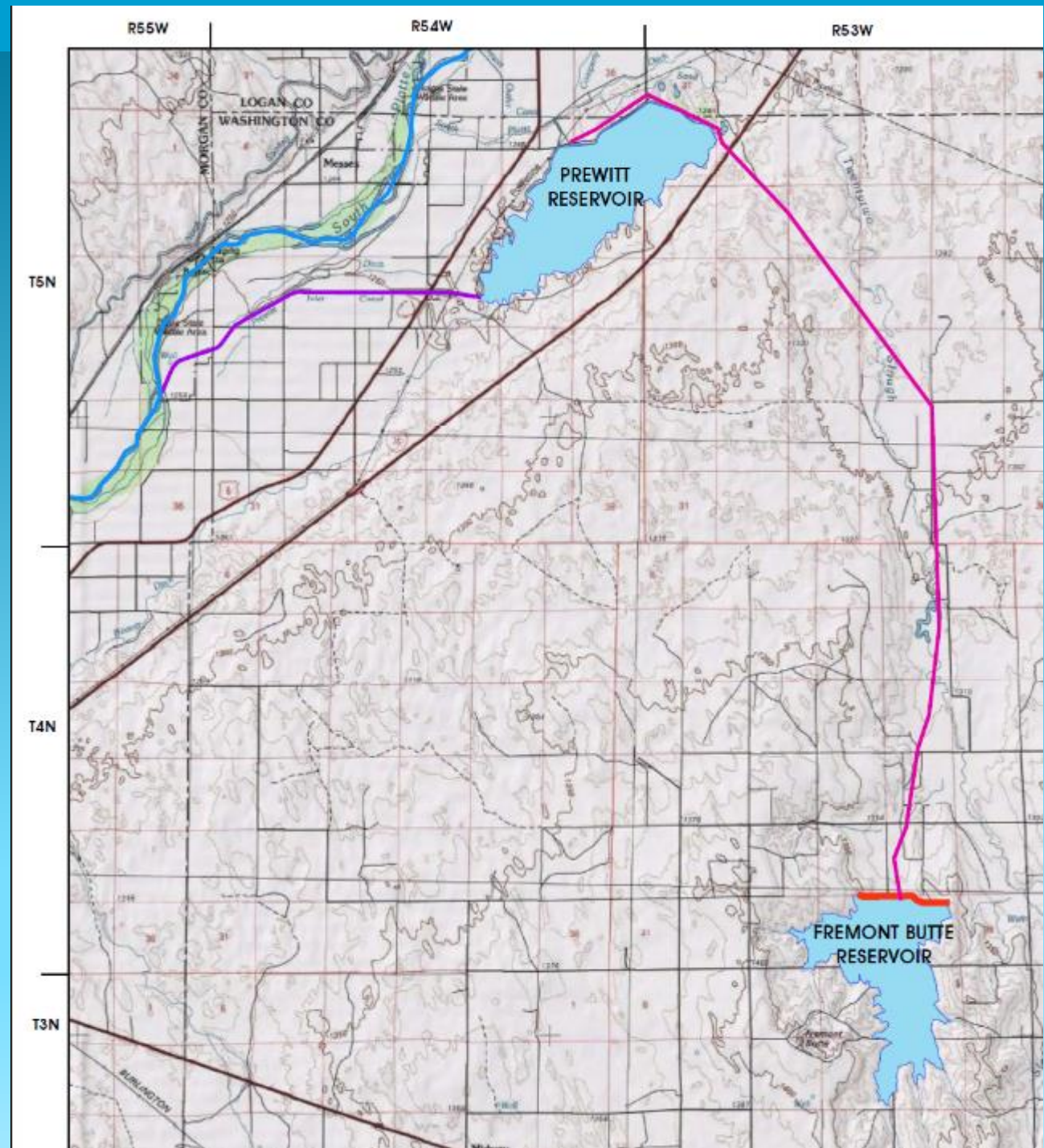


PWSD/LSPWCD	
SYSTEM MAP	
File Name: ExhibitA.mxd	Date: 12/20/2021
Project No.: 1489-20	Drawn By: CMDF Exhibit A

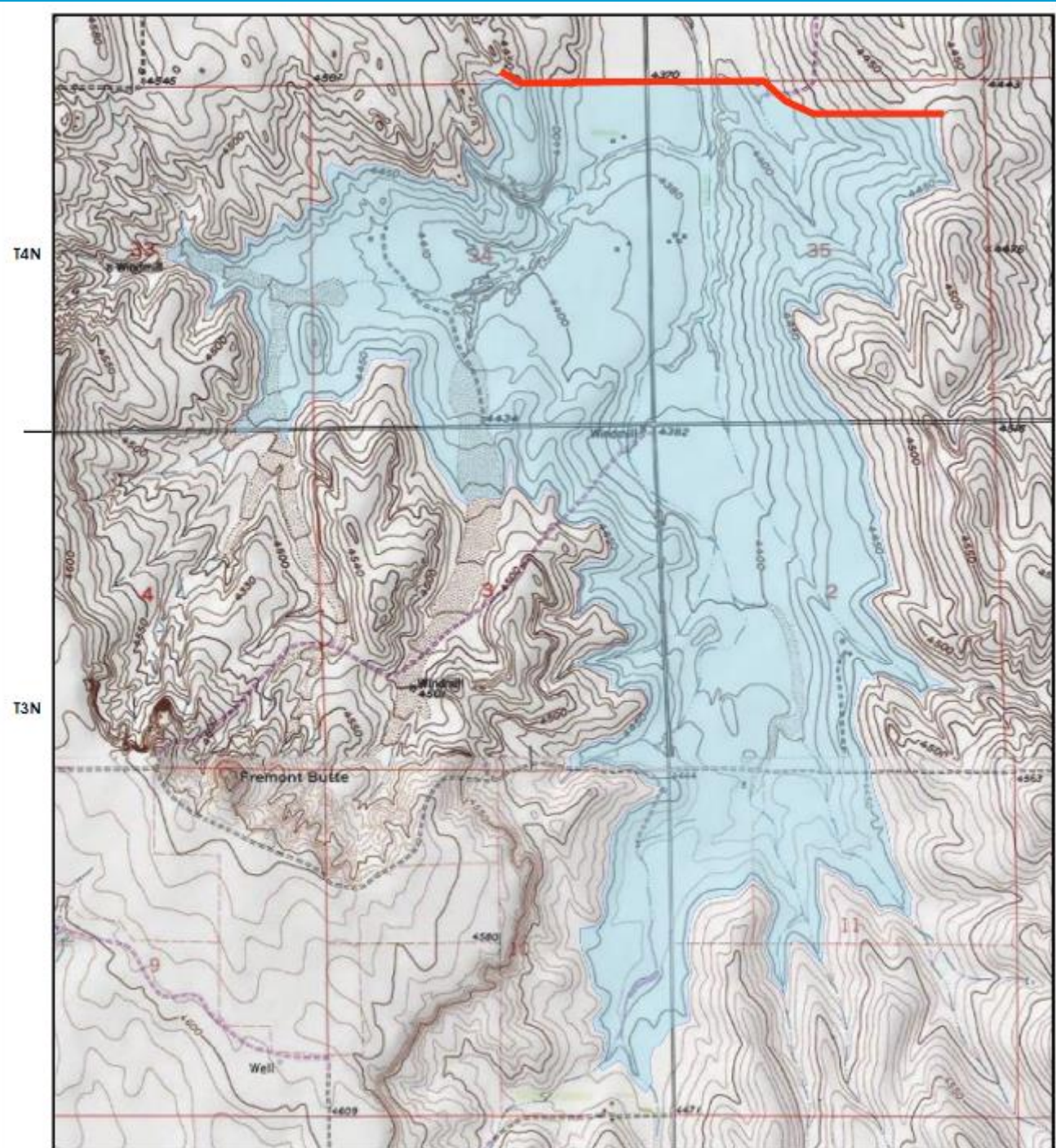
Prewitt Reservoir



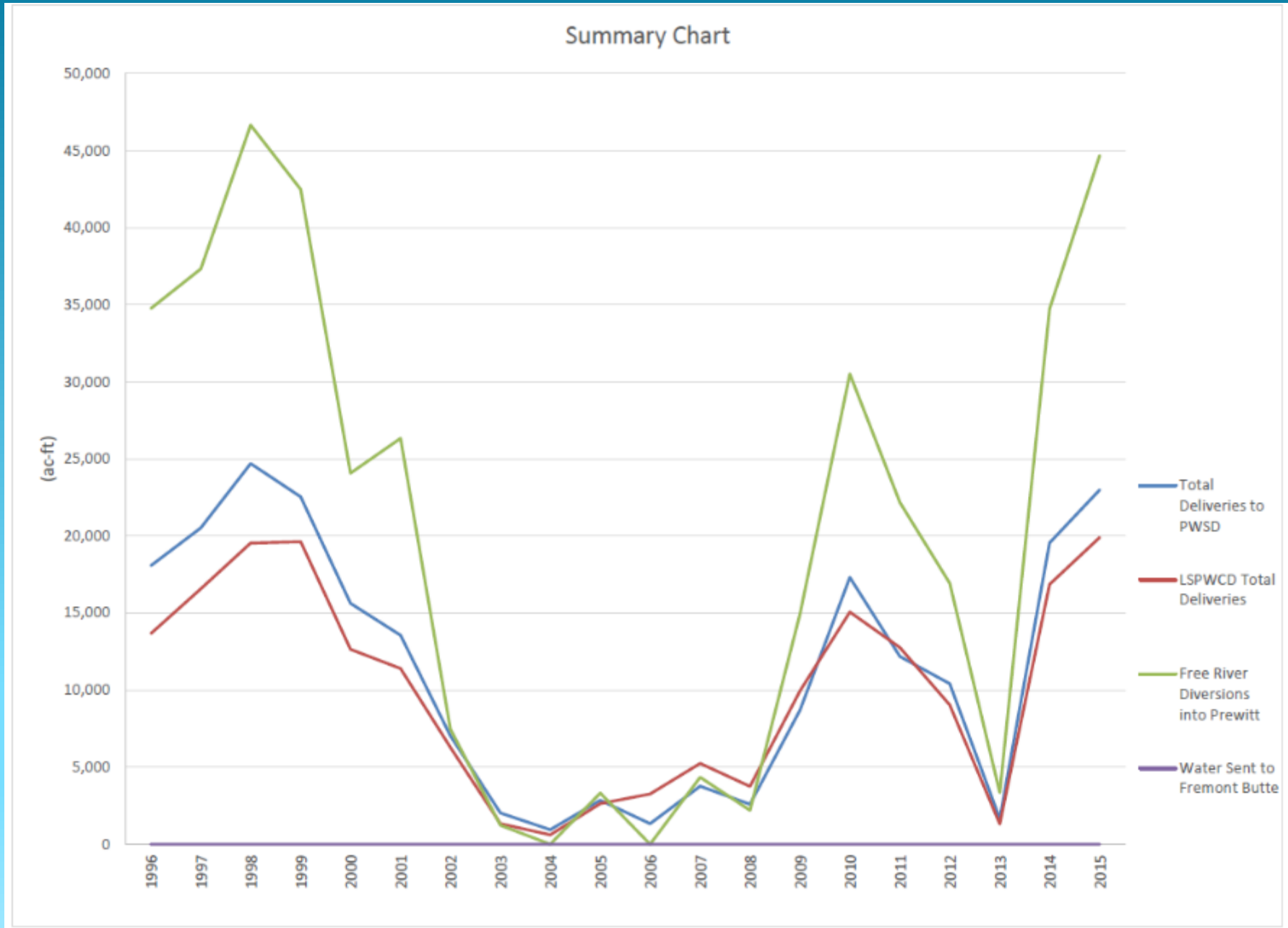
Prewitt and Fremont Butte Reservoirs



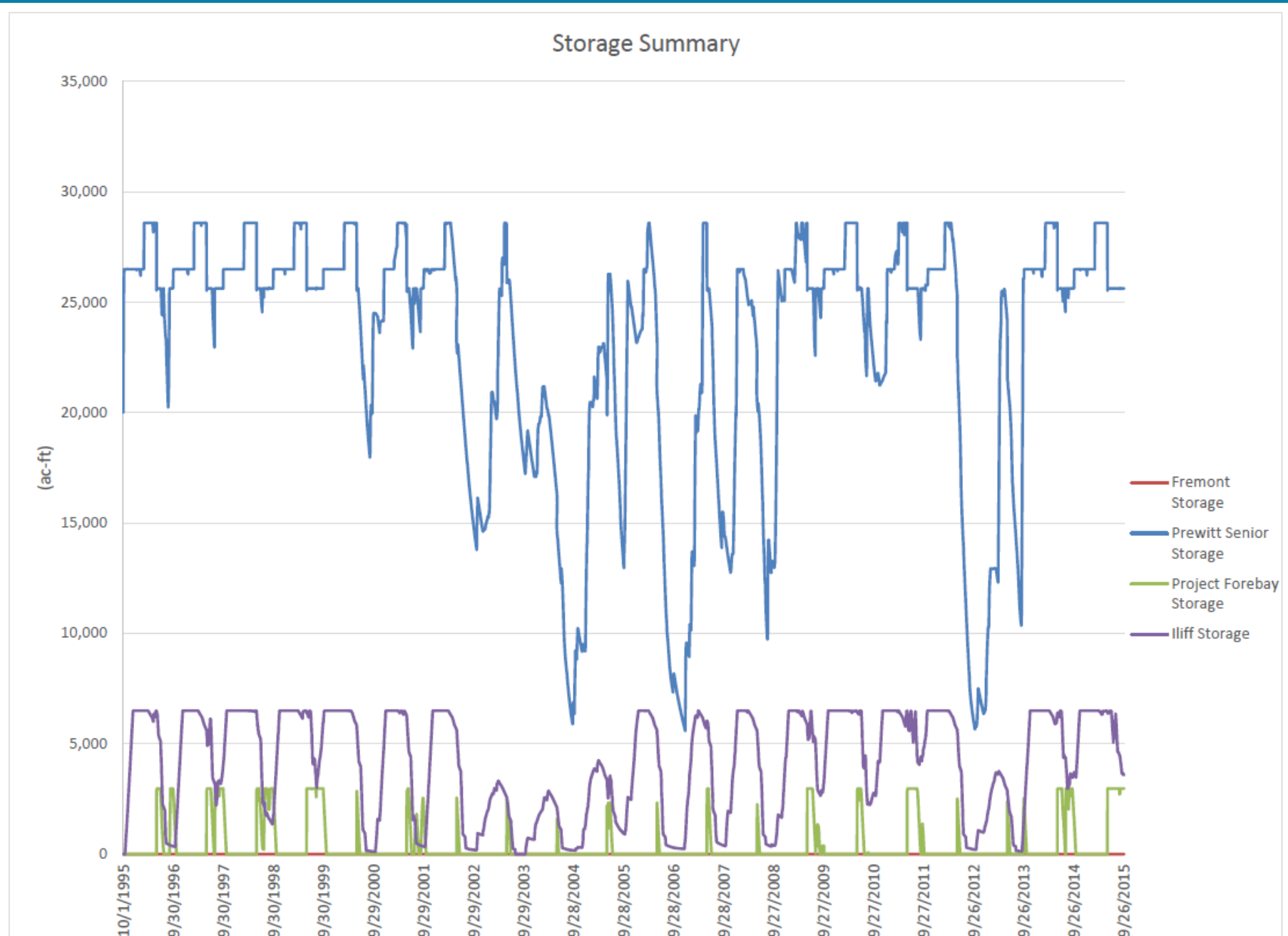
Proposed Fremont Butte Reservoir



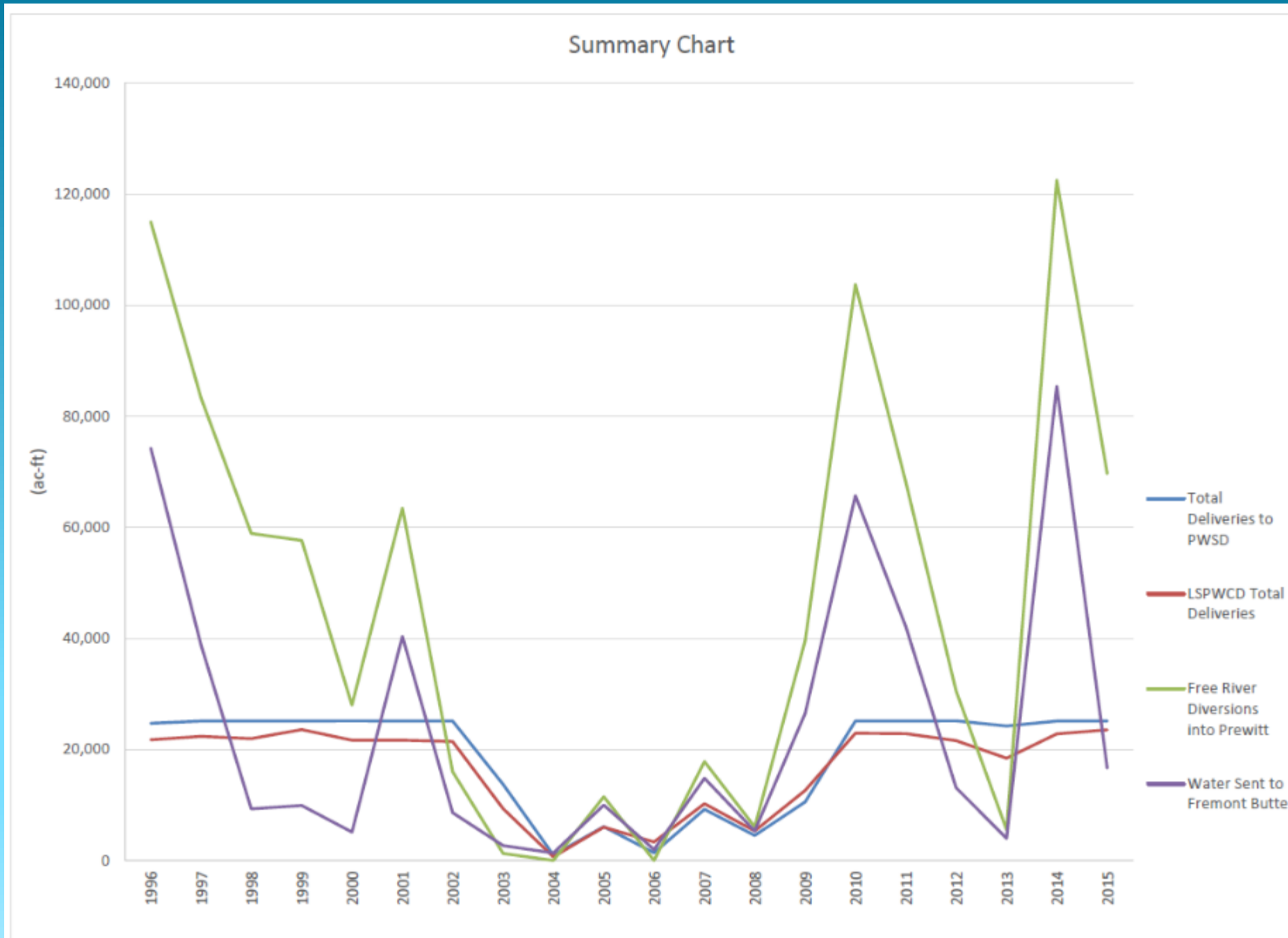
Phase 1



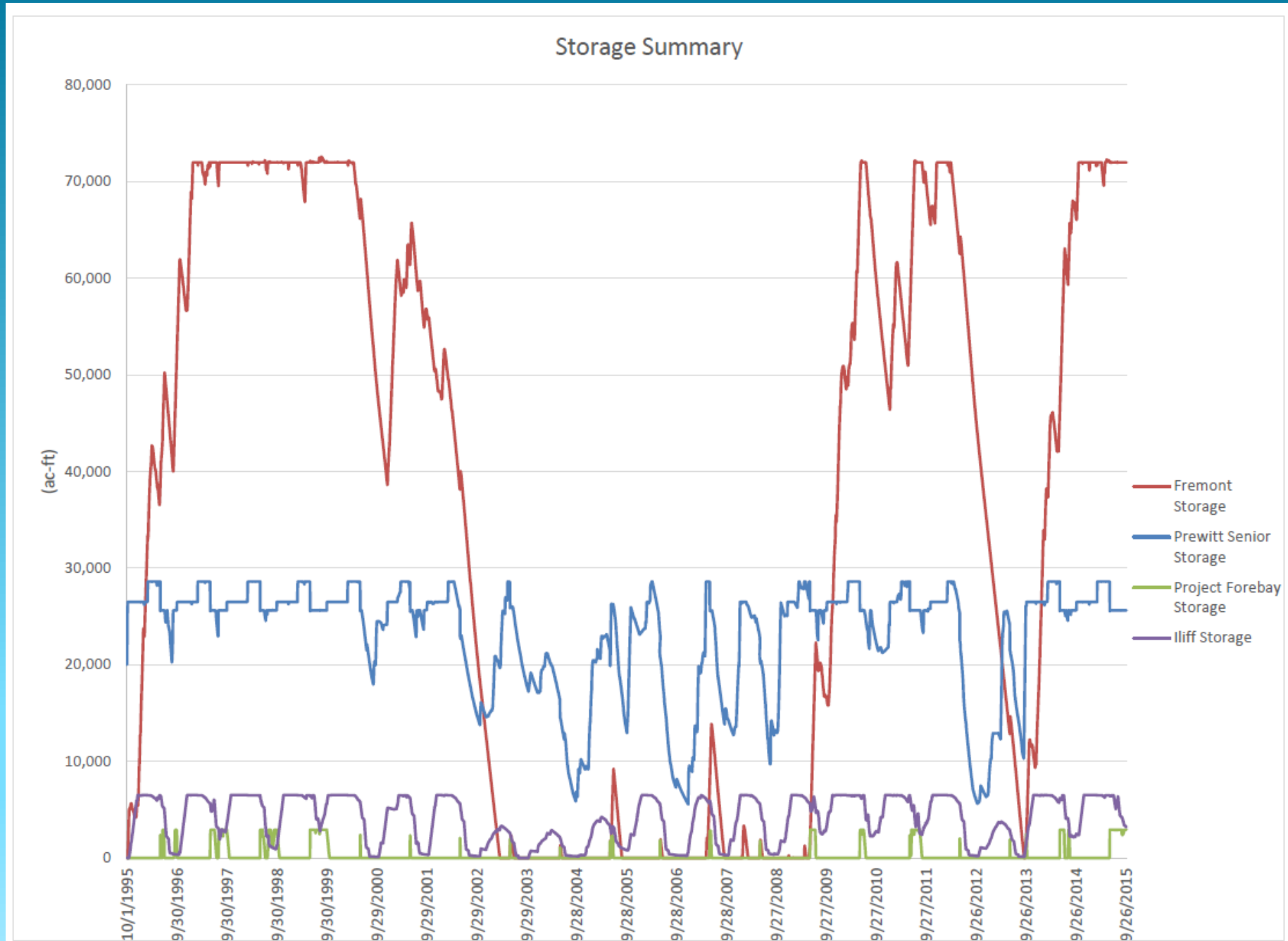
Phase 1

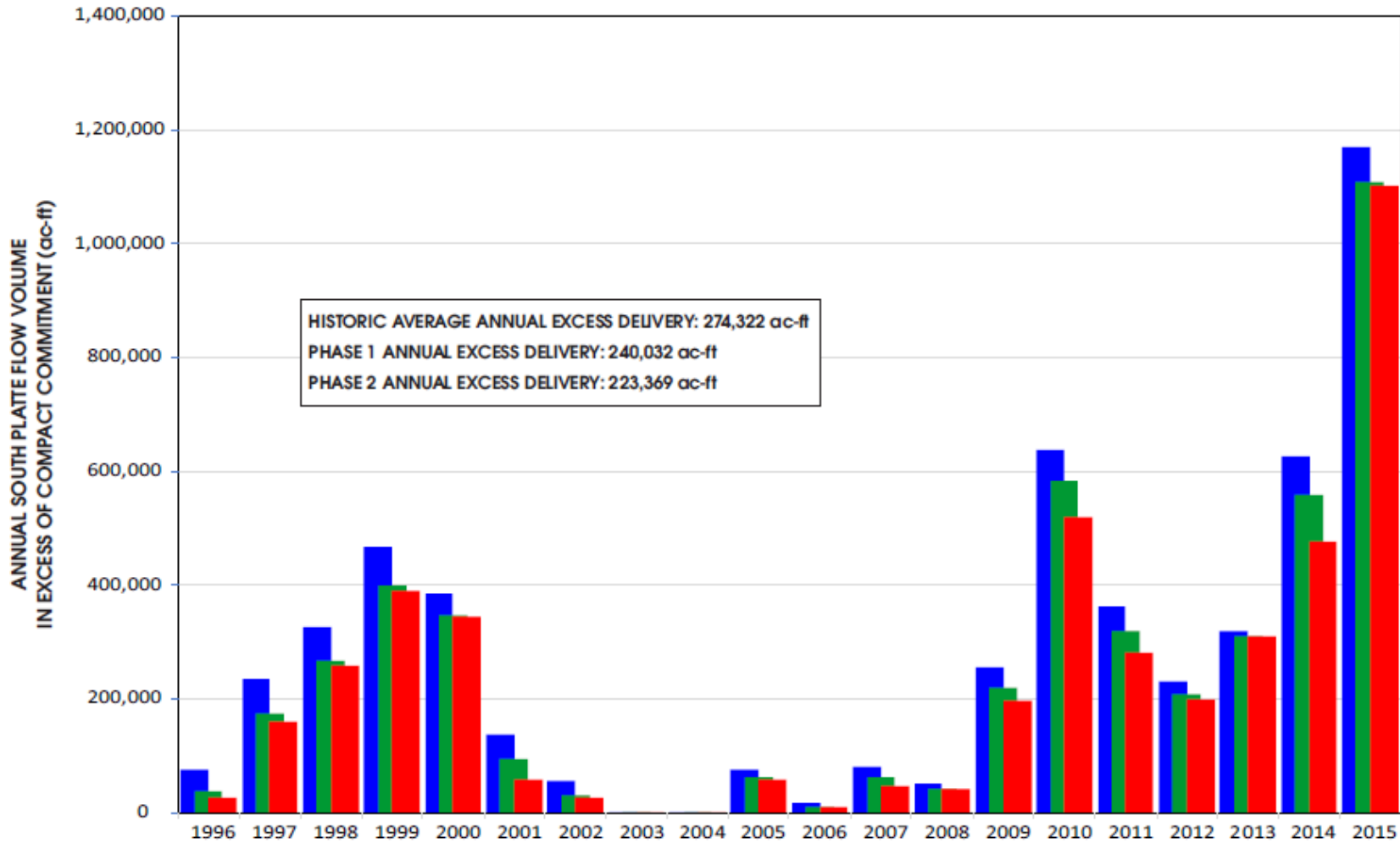


Phase 2



Phase 2





LEGEND

- HISTORIC STATELINE EXCESS FLOW
- PHASE 1 STATELINE EXCESS FLOW
- PHASE 2 STATELINE EXCESS FLOW

Note: Compact delivery commitment is 120 cfs for 199 days (April 1 - October 15, 47, 282 ac-ft)

PWSD/LSPWCD		
ESTIMATED PROJECT IMPACT ON ANNUAL EXCESS COMPACT FLOWS		
File Name: Est-Impact-CompactFlows.cdr	Date: 08/28/2020	
Project No.: 1489-20	Drawn By: VAL	Fig. No.: 22

Next Steps:

- Current
 - Water Rights Decree
 - Parker WSD – LSPWCD agreement
 - Prewitt Operating agreement
- Near Future
 - Local and Regional Outreach
 - Conveyance agreements
 - Fremont Butte landowners
- Planned
 - Permitting
 - Advanced design, costs, financing, etc.
 - Water delivery 2035+-



Questions?

South Platte River Compact



Signed by CO and NE in 1923



Signed by CO Governor Clarence J. Morley in 1925

Nature of return flows in the South Platte

“The flow was excessive in May and June and disappeared entirely during the summer. The river frequently became dry for months of each year to points as far west as the present city of Fort Morgan.” – **Prior to surface irrigation.**

“The flow of return and seepage waters coming back to the river from irrigation of Colorado lands, has resulted in a constant supply at the interstate line.” – **After surface irrigation development.**

“This flow is increasing and will soon be sufficient to care for the full demands of Nebraska as determined by the compact, while great quantities of water annually flow to waste across the interstate line, during the flood season and winter months.....”

“ The once “disappearing” flood stream has been converted into one of constant flow making possible the development in both states.”

Delph Carpenter, 1925 letter to CO Governor

South Platte River Compact

• Article 4 – South Platte River Apportionment

1. At all times between October 15th and April 1st, Colorado shall have the full and uninterrupted use and benefit of the waters of the river flowing within the boundaries of the state, except as otherwise provided by Article VI (Perkins Canal provisions).
2. Between April 1st and October 15th, Colorado shall not permit diversions from the Lower Section of the river, to supply Colorado appropriations having adjudicated dates of priority subsequent to June 14th, 1897, to an extent that will diminish the flow of the river at the Interstate Station, on any day, below a mean flow of 120 cubic feet of water per second of time.
3. Water deliveries are only for existing uses in Nebraska.
4. Flow at Interstate Station for Nebraska to supply existing rights prior to new uses.
5. 72 hour rule.
6. Reductions in diversions from the Lower Section shall not impair the rights of appropriators in Colorado to demand and receive equivalent amounts from other parts of the stream according to Colorado law.

South Platte River Compact

- **Article 4 – South Platte River Apportionment**
 - 7. Colorado has full use of excess flows from April 1st to October 15th while Nebraska can use additional excesses from April 1st to October 15th under the provisions of Article VI (Perkins Canal).**

South Platte River Compact

- Article 6 – Perkins Canal

1. Rights for Nebraska to construct, maintain and operate canal in CO.
2. Upper Section can use water from Oct 15th to April 1st, Lower Section has use of appropriated water perfected prior to December 17th, 1921 plus new future appropriations of 35,000 ac-ft. After such use by Colorado, Nebraska has right to divert up to 500 cfs in the Perkins Canal from October 15th to April 1st.
3. No vested right for Nebraska in Perkins Canal from April 1st to October 15th, but ability to divert excesses if available.
4. Shall not diminish superior claims in Nebraska.
5. No transfer of Colorado appropriations to Perkins Canal.
6. Rights by Nebraska and Colorado to regulate diversions for protection of rights in both states.