RECLAMATION

Managing Water in the West

Henrys Fork Basin Study Workgroup Meeting 2/14/2012

In Cooperation with:

Idaho Water Resource Board

and

Henrys Fork Watershed Council

U.S. Department of the Interior

Bureau of Reclamation

Modeling Analysis
Teton Valley Irrigated Region

Dr. Van Kirk's model

- Jennifer Johnson P.E.
- John Rocha

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Conservation Alternatives

- Recharge w/ Existing Canals
- Canal Automation
- On-Farm Conservation Practices
- Piping and Lining
- Demand Reduction

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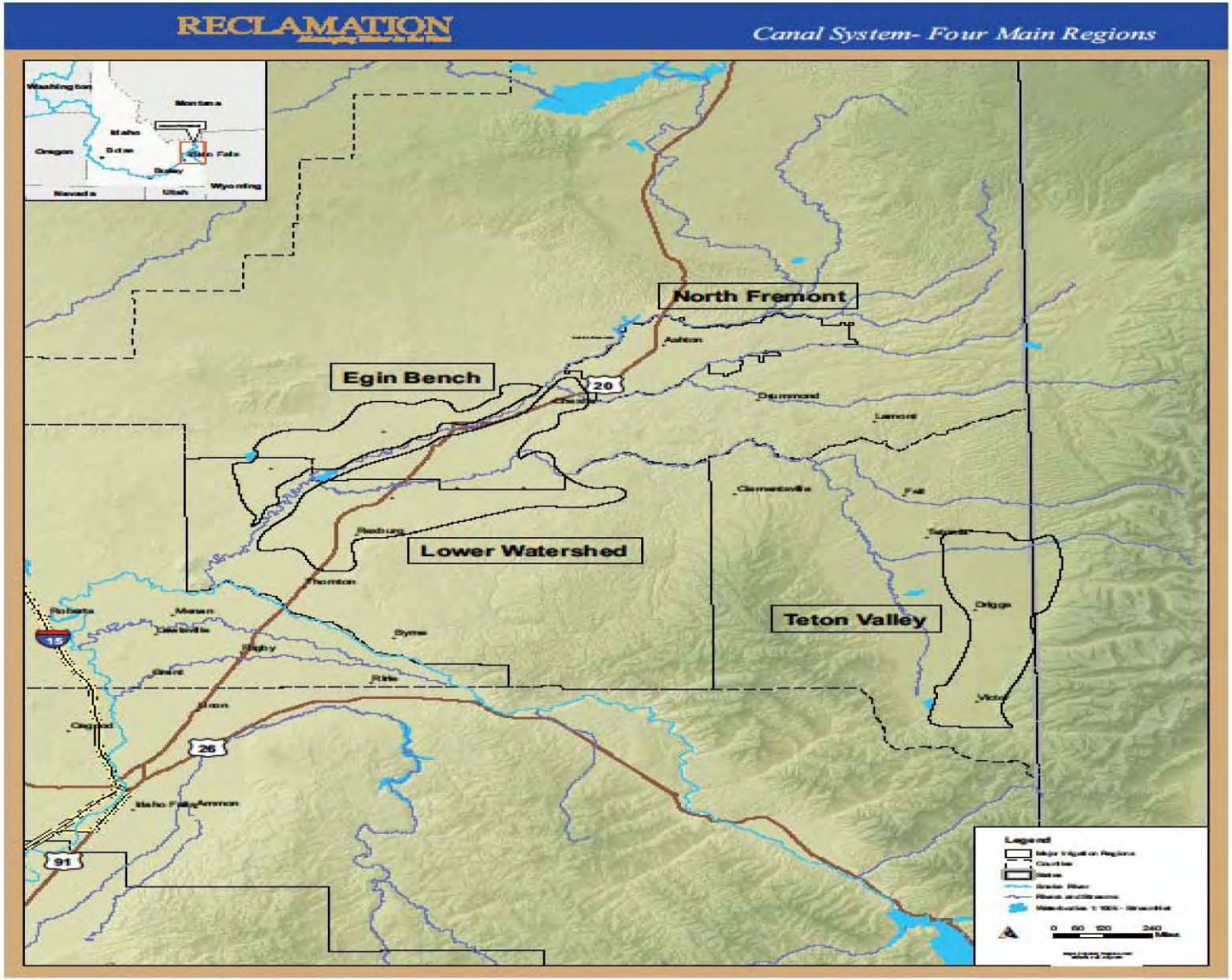

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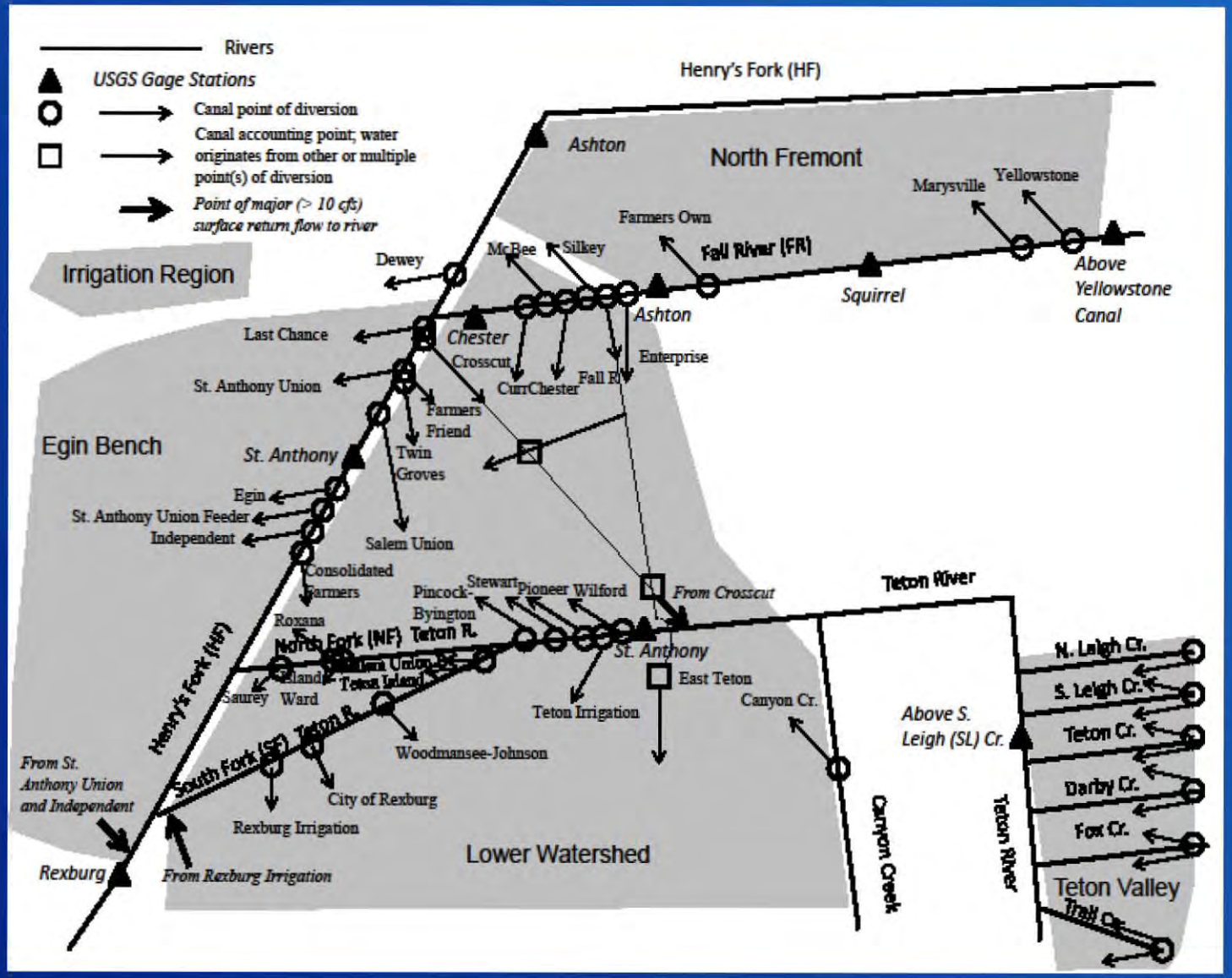

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Diversion Data

Date	Trail	Fox	Darby	Teton	Sleigh	Nleigh	Spring	Badger	Total
1-Oct	13.42	3.68	6.36	11.11	4.65	4.13	4.69	3.64	51.68
2-Oct	10.62	3.56	5.89	11.04	4.44	3.80	4.81	3.68	47.84
3-Oct	10.42	3.65	5.87	11.25	4.51	3.79	4.62	3.70	47.80
4-Oct	10.76	3.90	6.30	12.19	4.86	4.05	4.65	4.02	50.74

Average Annual Diversion Teton Valley @ 92,000 ac-ft

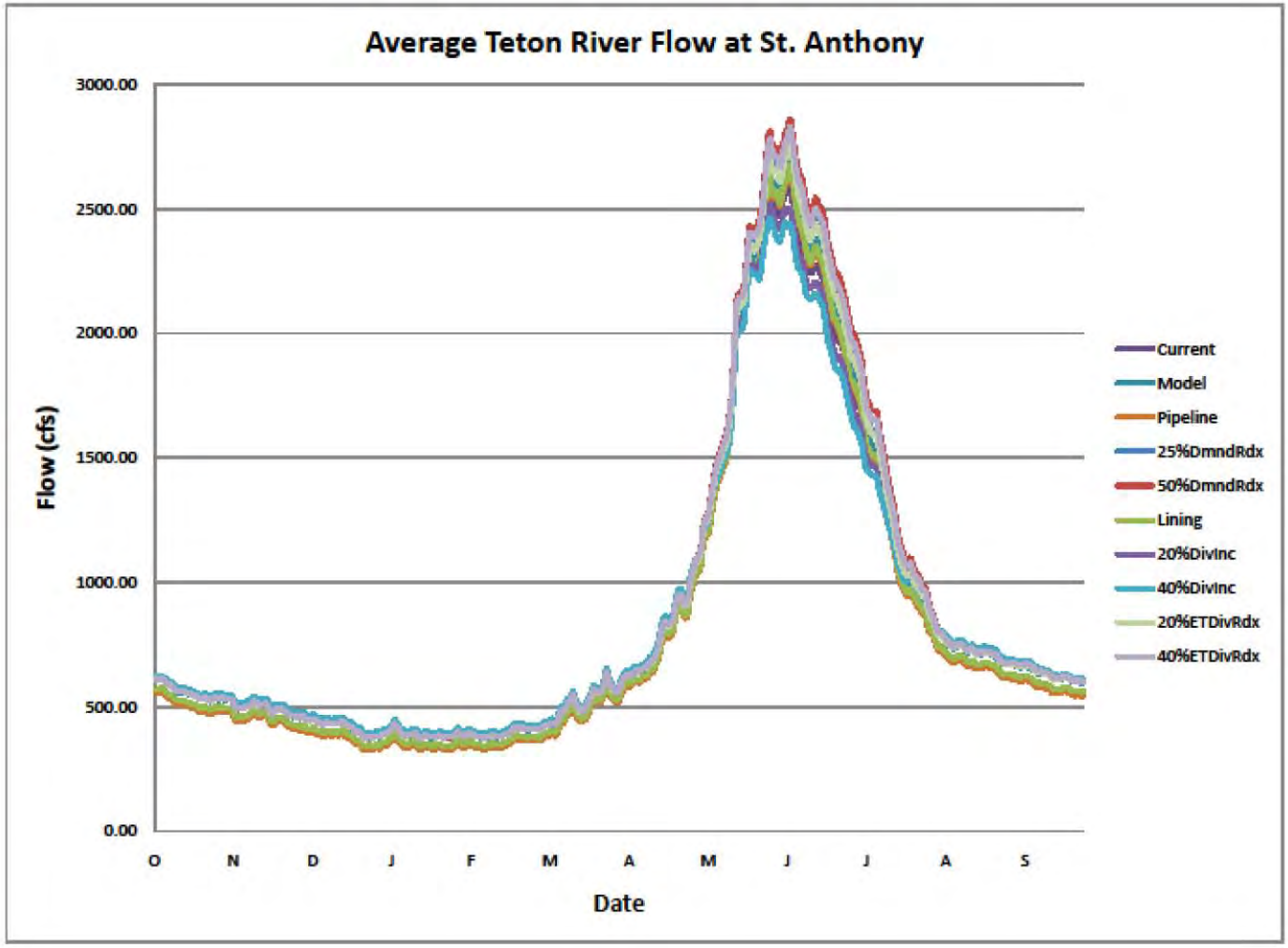
Key Points

- Diversions are average daily diversions for 30 years

- “Current” condition is not average over 30 years

- Examples shown have all diversion points changed

- Sample run once model is set up is 20 minutes



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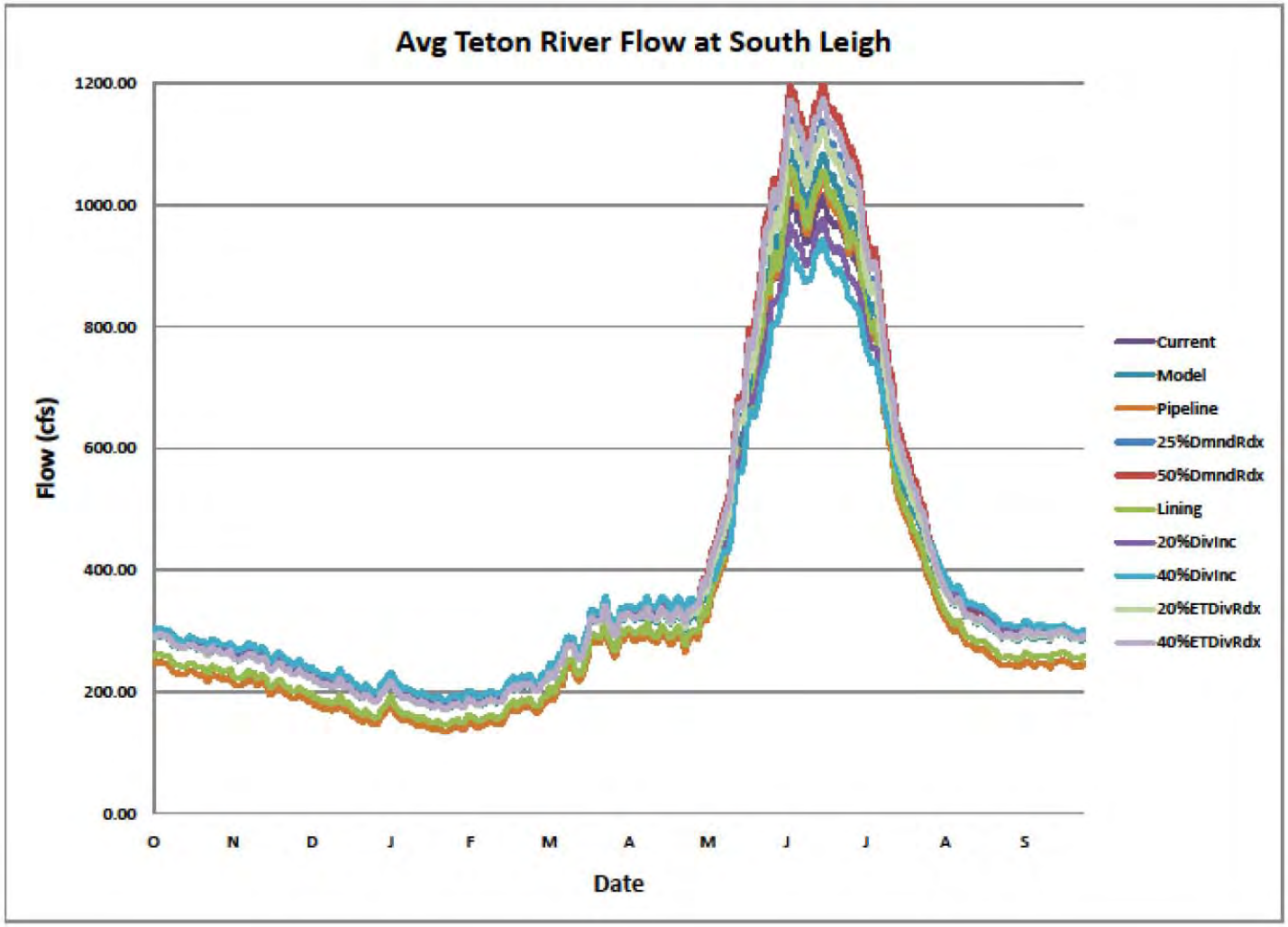

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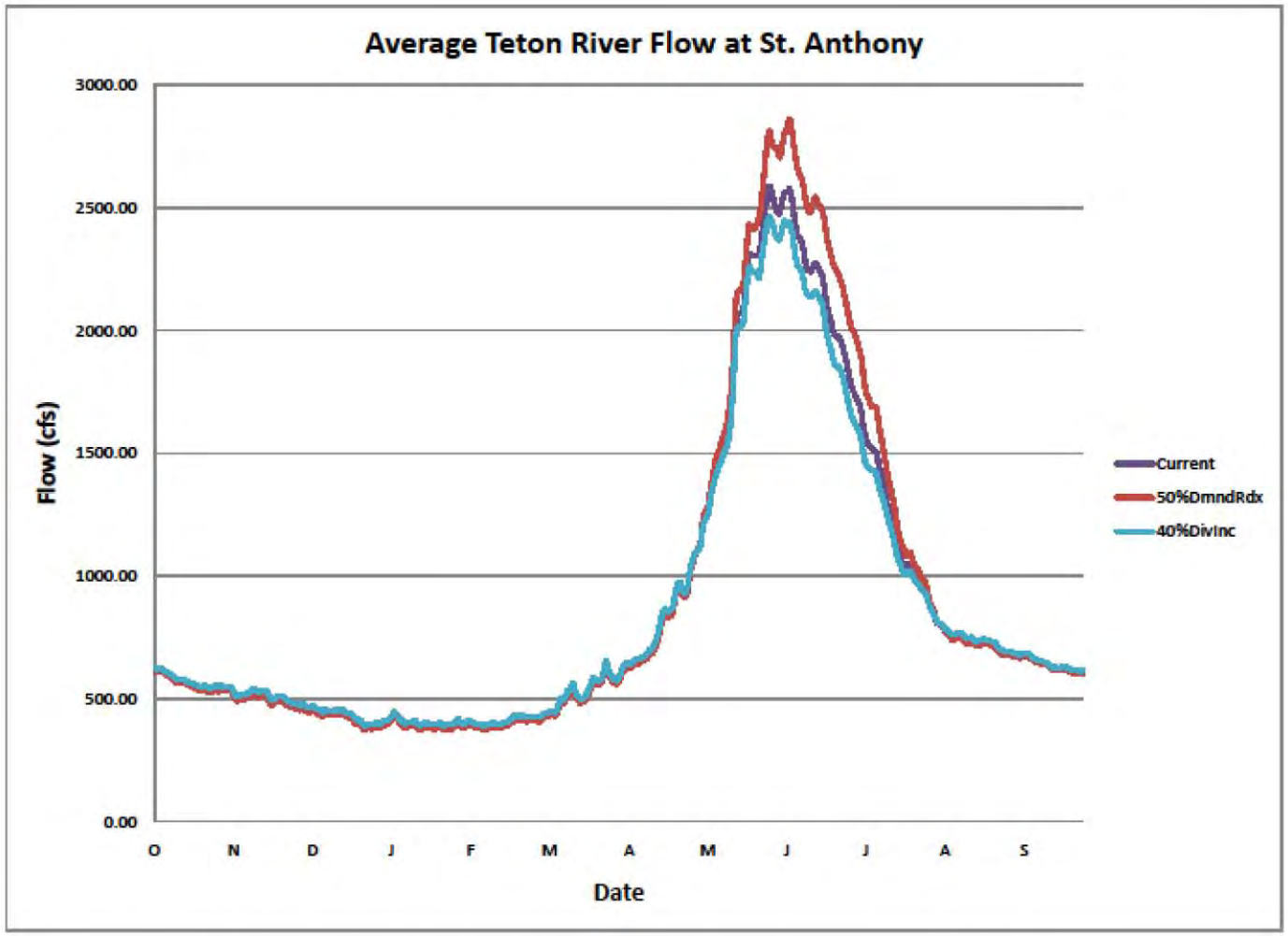
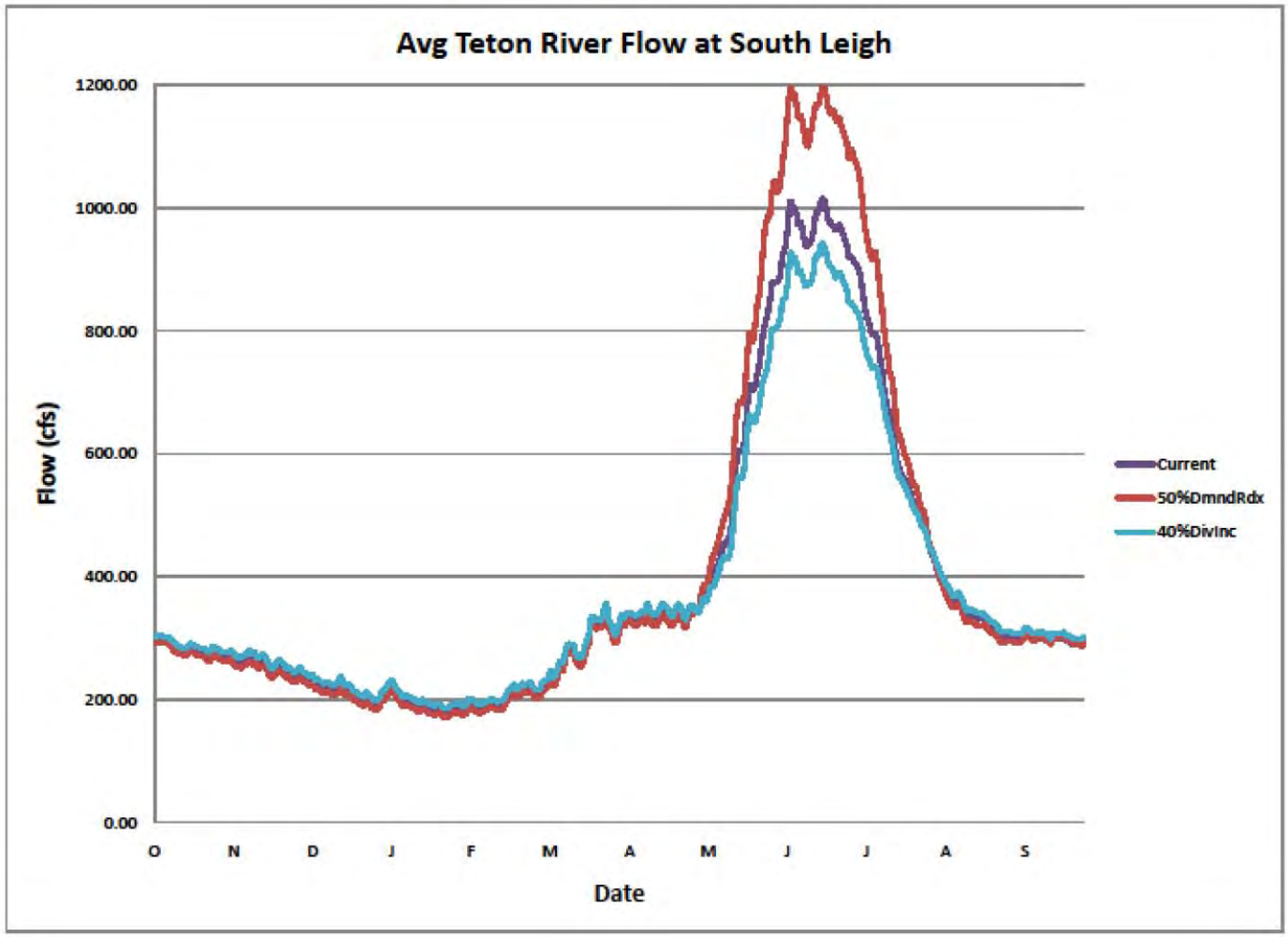

Average Teton River Flow at St. Anthony
3000.00
2500.00
2000.00
1500.00
1000.00
500.00
0.00
Flow (cfs)
O
N
D
J
F
M
A
M
J
J
A
S
Date
Current
50%DmndRdx
40%DivInc



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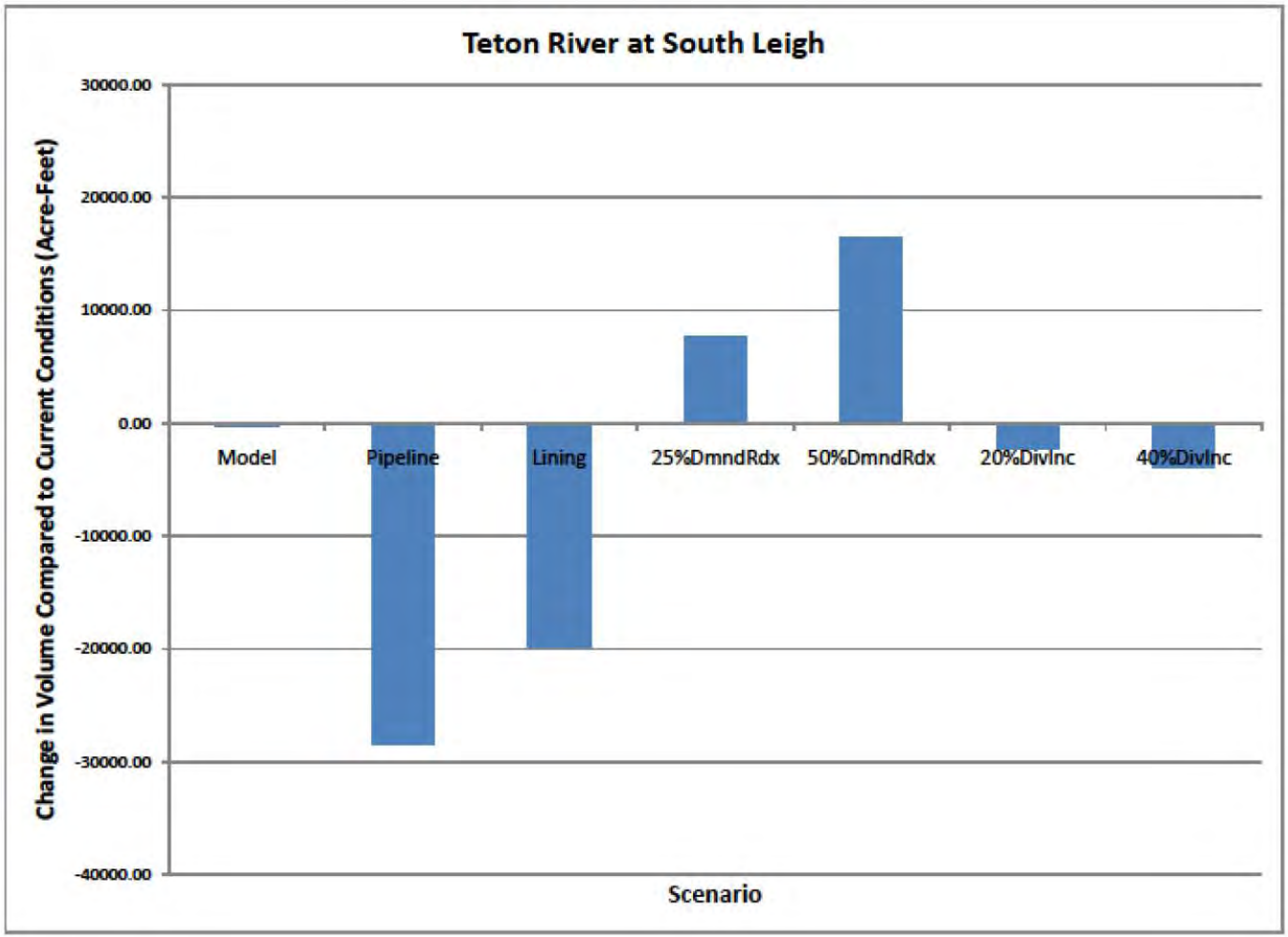

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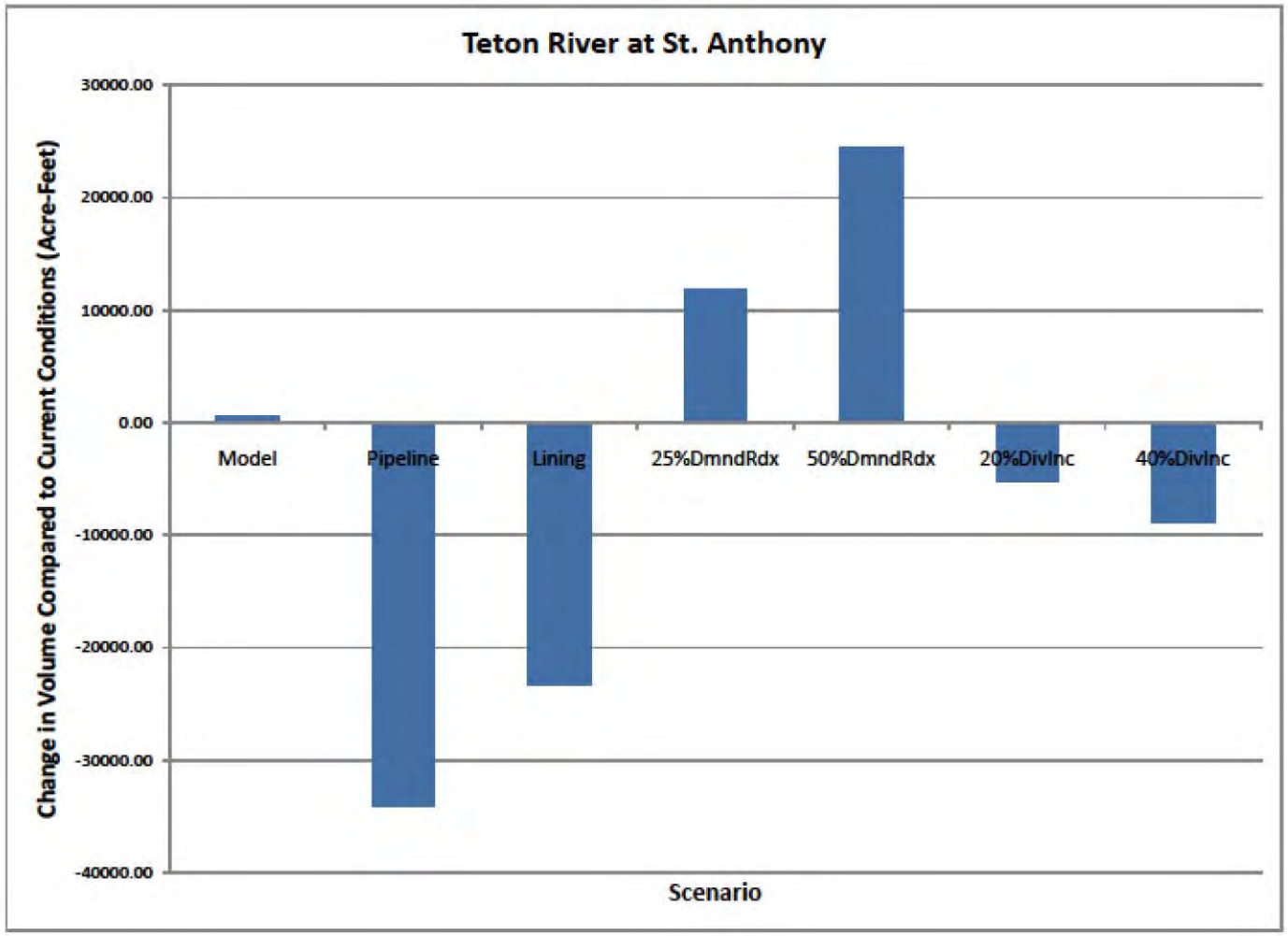

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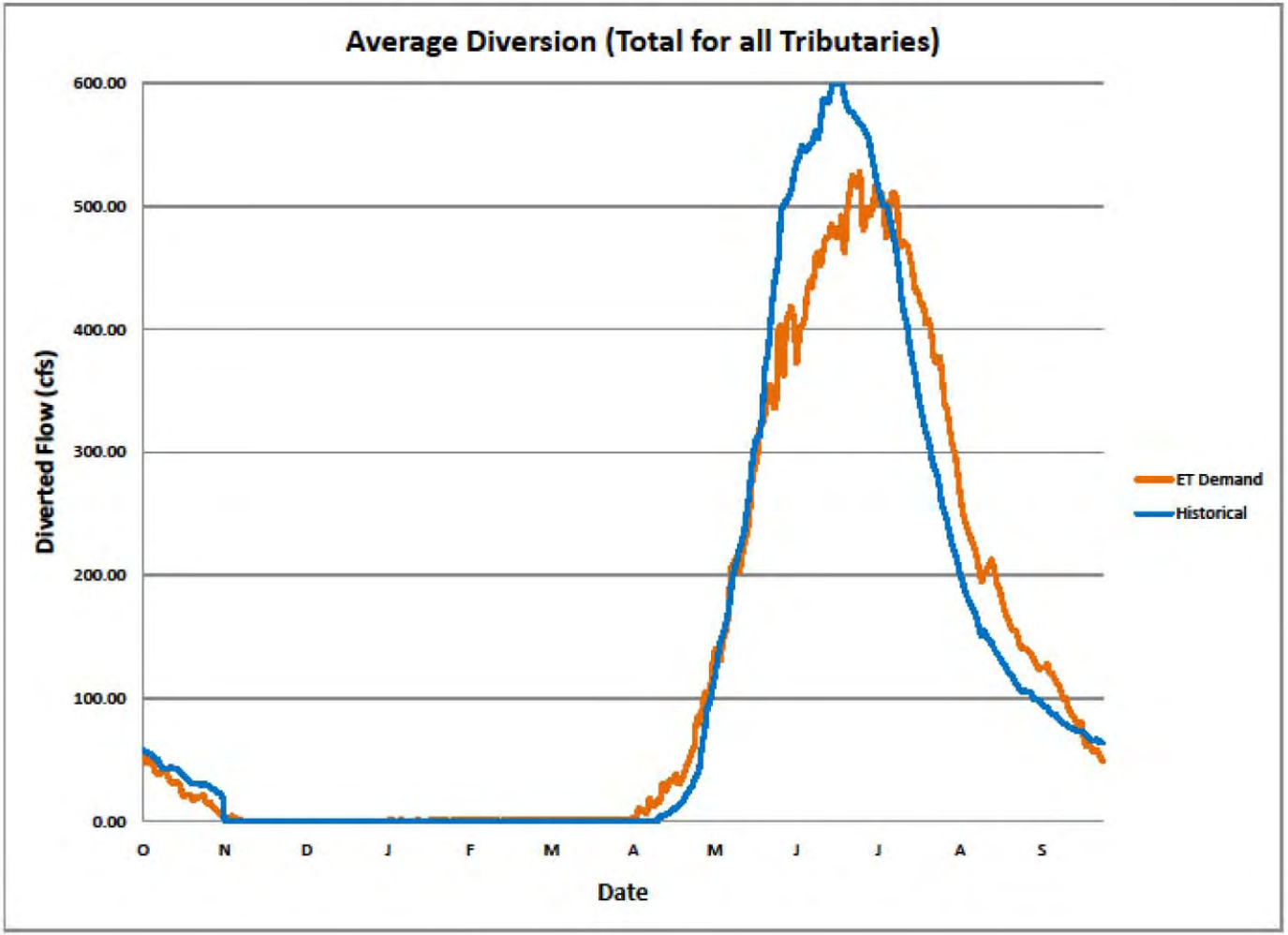

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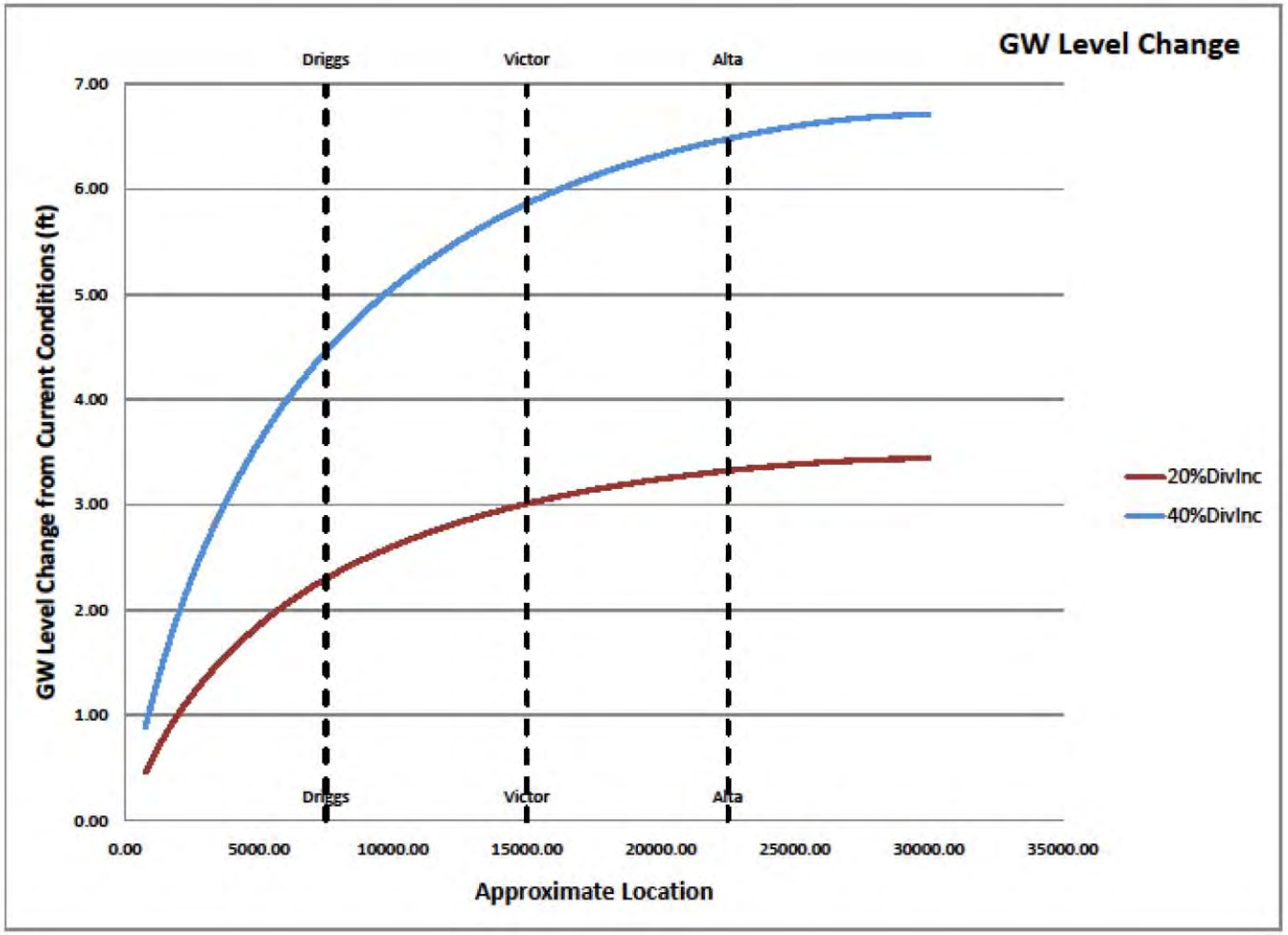
Alternative 10- Recharge Using Existing Irrigation Canals

Requirement: By increasing the amount of water diverted at each canal, recharge using existing canal infrastructure will be evaluated.

Scenario Run: Historical diversions were used for this scenario. The diversions were increased 20% for the model run ’20%DivInc’ and 40% for ‘40%DivInc’. Diversions are limited by the available water in each stream or canal capacity.

Model Results: Total annual volume at South Leigh and Saint Anthony were reduced. Flows decreased during the May 15 to July 15 period. Flows increased during the July 15 to May 15 period.



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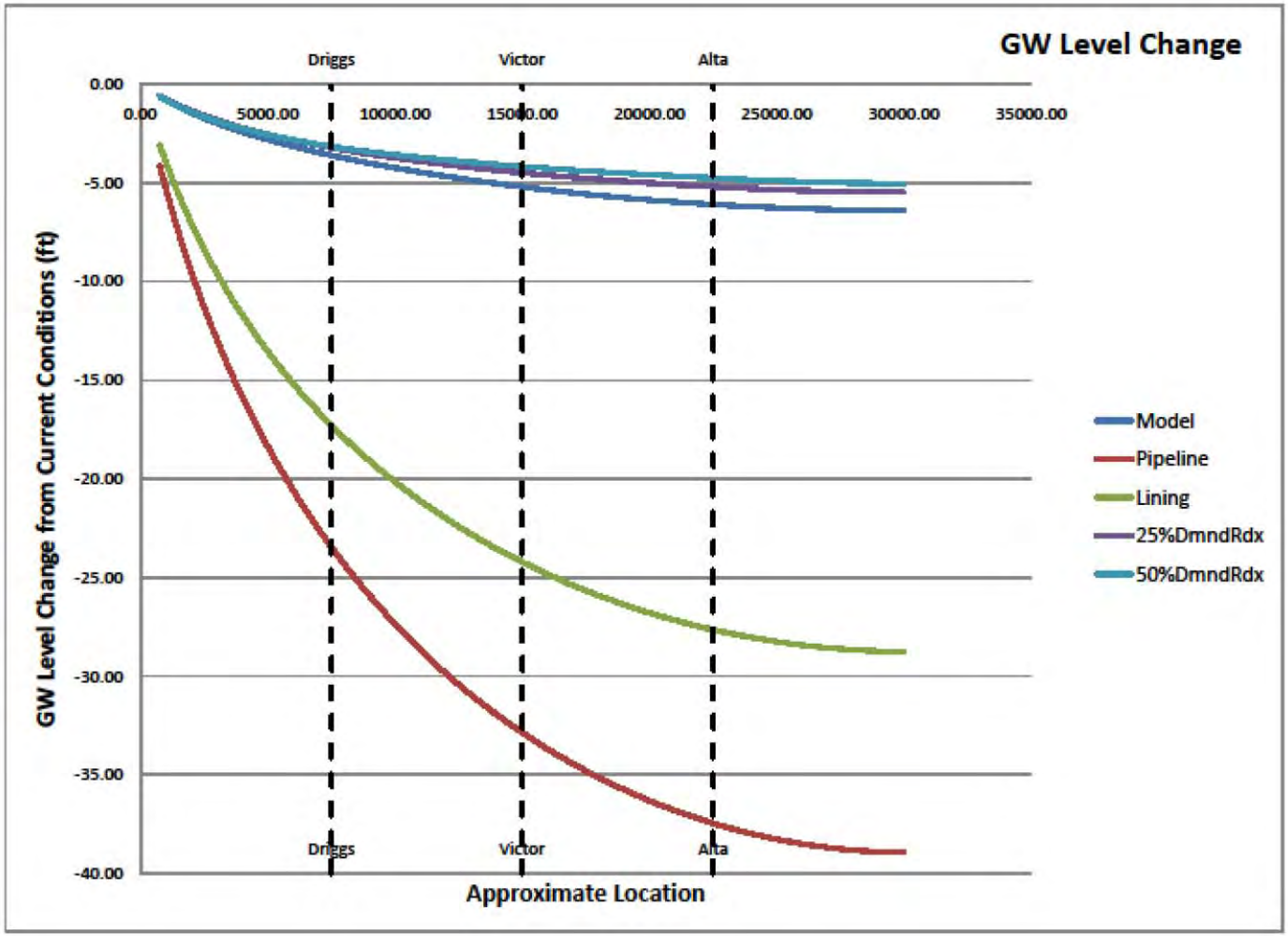

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Questions / Comments

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Status of Reconnaissance Evaluations

- CH2M HILL Alternatives
  - Surface Storage
  - Managed Recharge Alternatives
  - Municipal & Industrial Conservation
  - Market-based Alternative

Surface Storage Alternatives

- Elements completed since last update include:
  - Reviewed environmental impacts
  - Finalized water supply sources and routing options
  - Sized conveyance features
  - Evaluated Crosscut Canal expansion
  - Estimated quantities and costs

Surface Storage Alternatives - Next Steps

- Review ability to meet basin needs (connectivity and irrigation demand).
- Incorporate constraints discussion.
- Compile Technical Memos (TMs).

Managed Groundwater Recharge Alternatives

- Elements completed since last update include:
  - Reviewed data provided by IDWR and FMID for the Egin Lakes recharge program:
    - Delivery data from 2008 to 2011
    - Monitoring data from 2008 to 2010
  - Evaluated canal expansion requirements for Egin Lakes alternative
  - Established conveyance route and sizing for Lower Teton alternative
  - Estimated quantities and costs

Managed Recharge Alternatives - Next Steps

- Evaluate model results to determine ability to meet basin needs.
- Review environmental impacts.
- Incorporate constraints discussion.
- Compile TMs.

Municipal and Industrial Conservation Alternatives

- Elements completed since last update include:
  - Cities of Driggs, Victor, and Idaho Falls provided water and sewer data and/or reports.
  - Computed demands and established use trends.
  - Identified conservation options for reducing water consumption.
  - Draft TM (featuring Driggs, Victor, and Idaho Falls) nearing completion.

Municipal and Industrial Conservation Alternatives – Next Steps

- Determine ability of alternative to meet basin needs.
- Finalize data transfer from City of Rexburg and incorporate into TM.

Evaluate Existing and Potential Market-Based Mechanisms

Status:

- Since last update, preliminary Draft TM completed by WestWater.

Next Steps:

- CH2M HILL and Reclamation review and comment on Draft TM