On Farm Water Budget

Presented by Allan Wylie

Date July 7-8, 2009

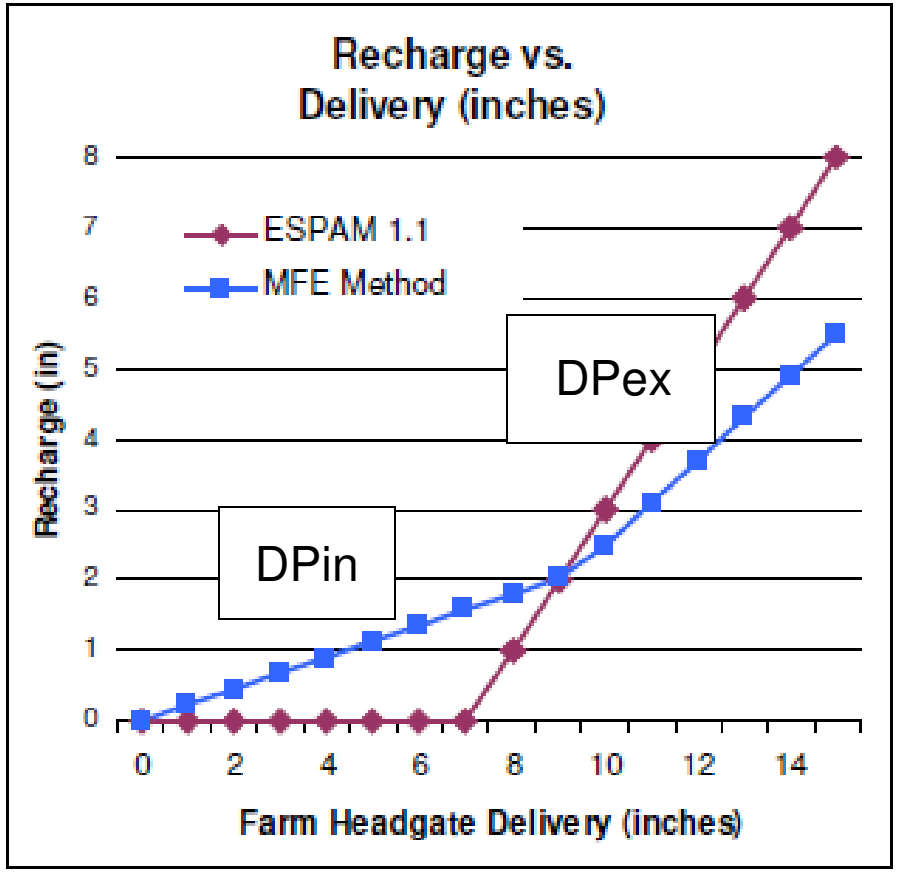
On Farm Water Budget

- Evaluate Sullivan/Schroder On Farm module
  - Conferred with Bryce, Willem, and Greg to develop strategy
  - All errors are likely mine

On Farm Water Budget

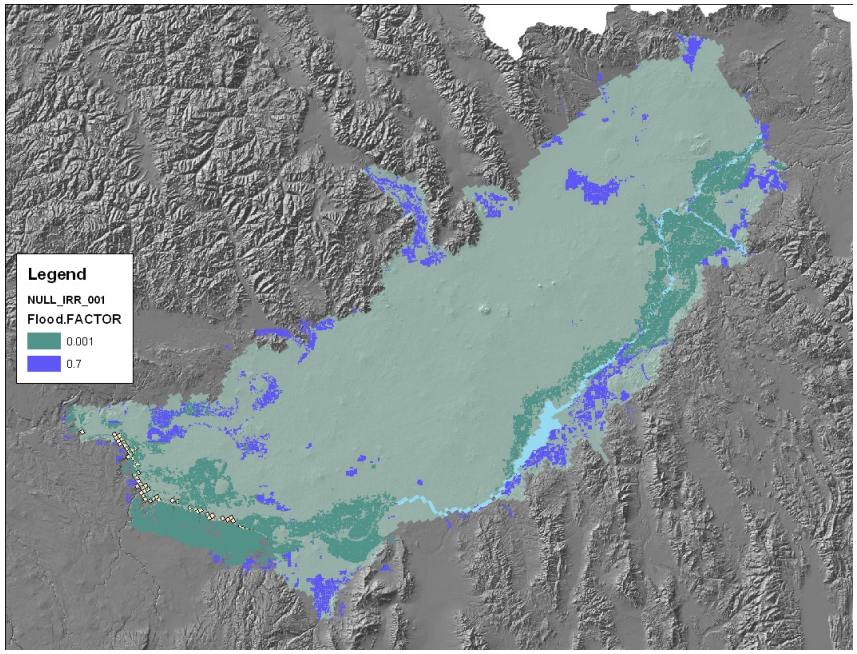
- 4 parameters per entity
  - Flood efficiency (EffGR)
    - 0.001 – 0.70
  - Sprinkler efficiency (EffSP)
    - 0.35 – 0.85
  - Deep percolation of excess water (DPex)
  - Deep percolation of infiltrating water (DPin)
- 41 SW irrigation entities
- 164 adjustable parameters

Deep Percolation Parameters



- For both flood and sprinkler irrigation
  - Deep percolation of excess water (DPex)
  - Deep percolation of infiltrating water (DPin)

On Farm Water Budget



- DPin = DPex = 0.3
- Readinp
  - Standard error = 7.765
- OnFarm
  - Standard error = 13.15

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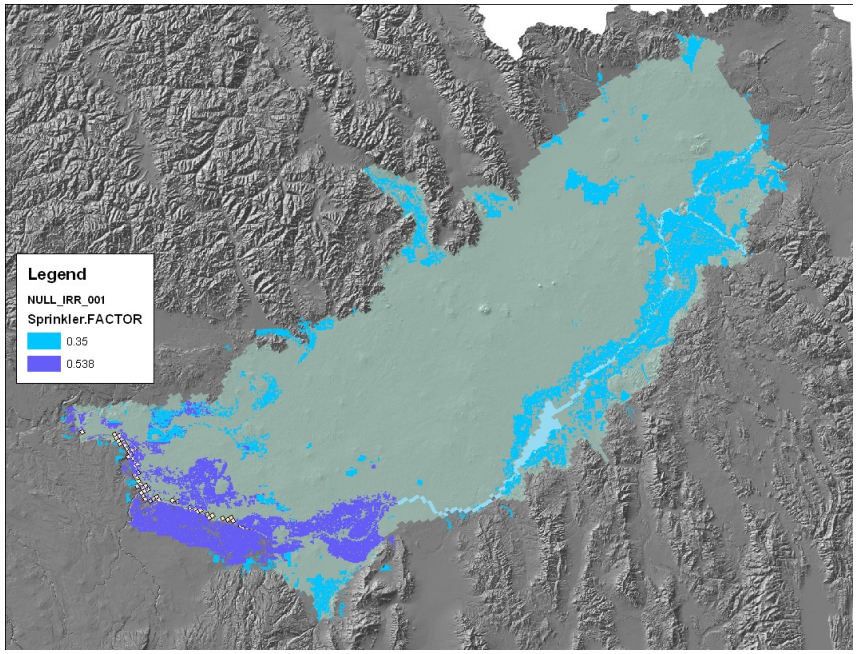

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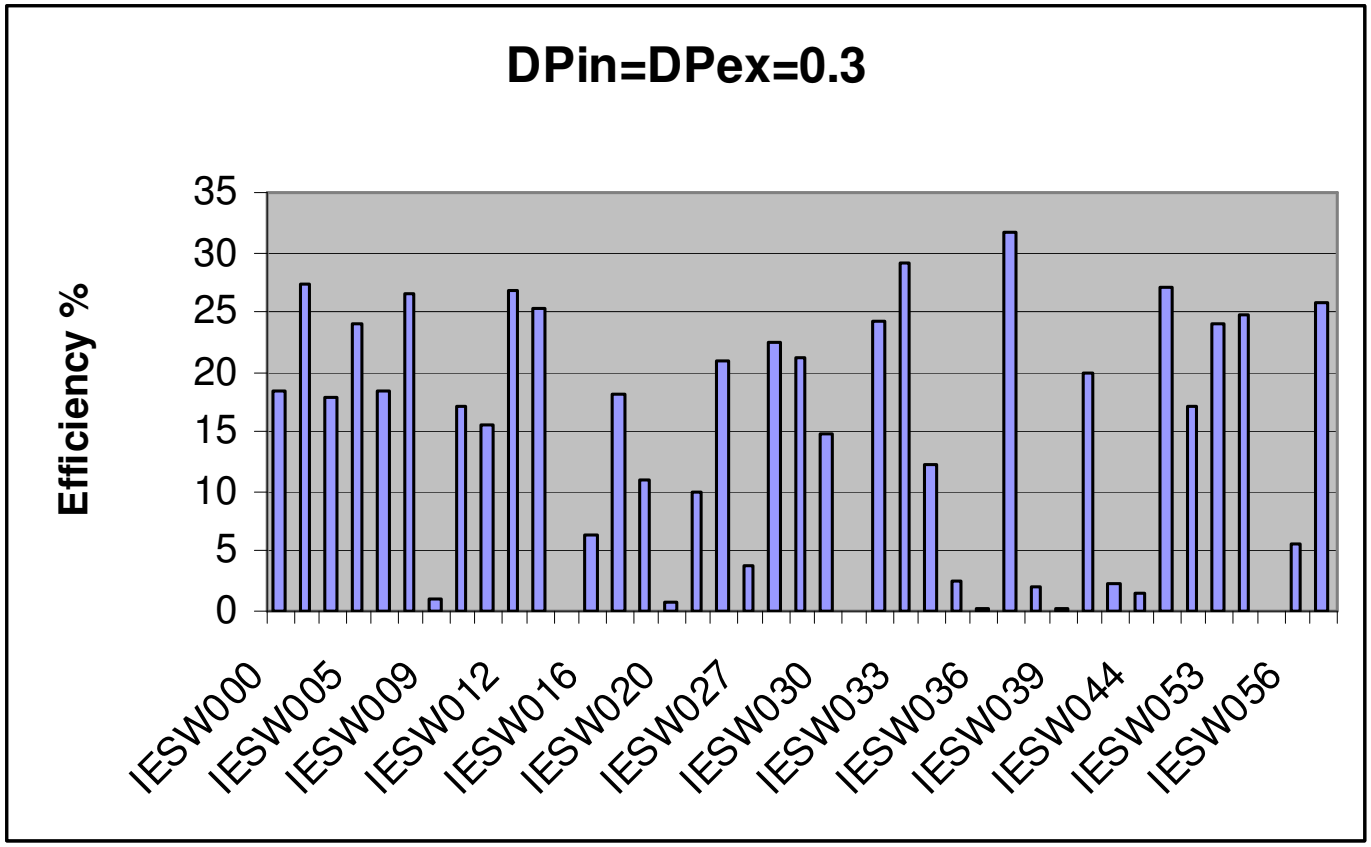
Surface water irrigation/system efficiency



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- IESW002 Abdn Sprfld,
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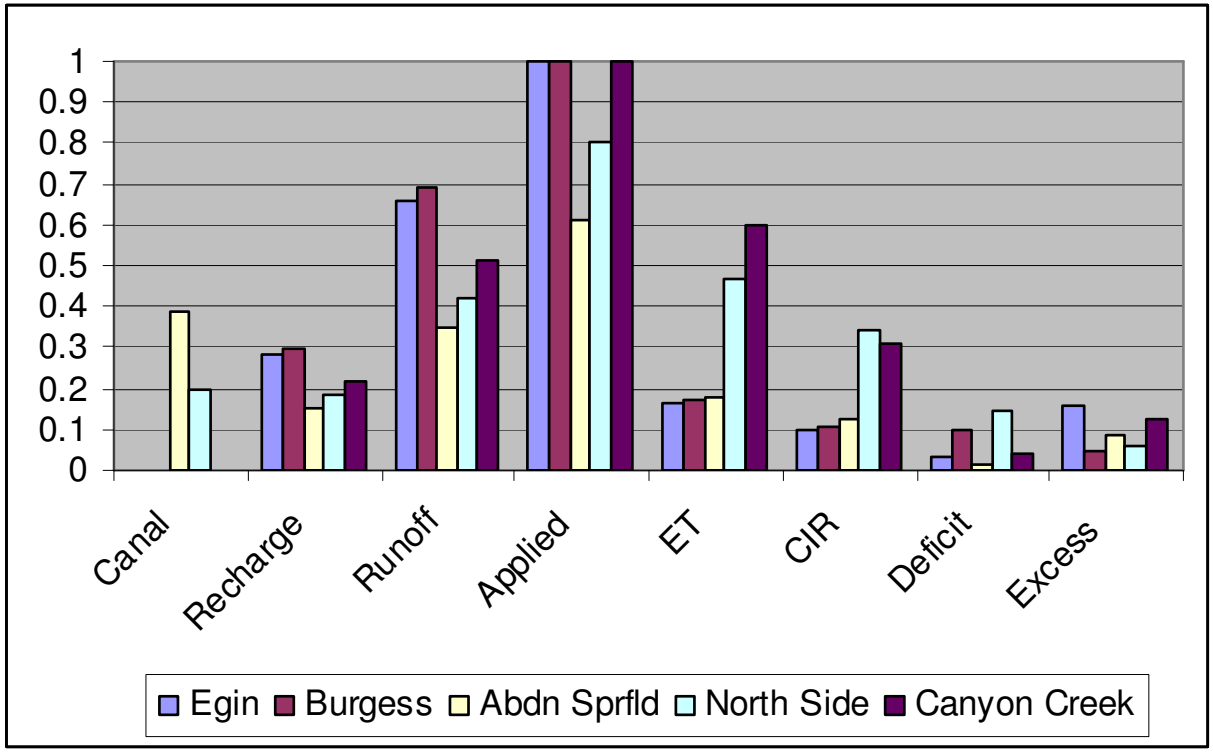
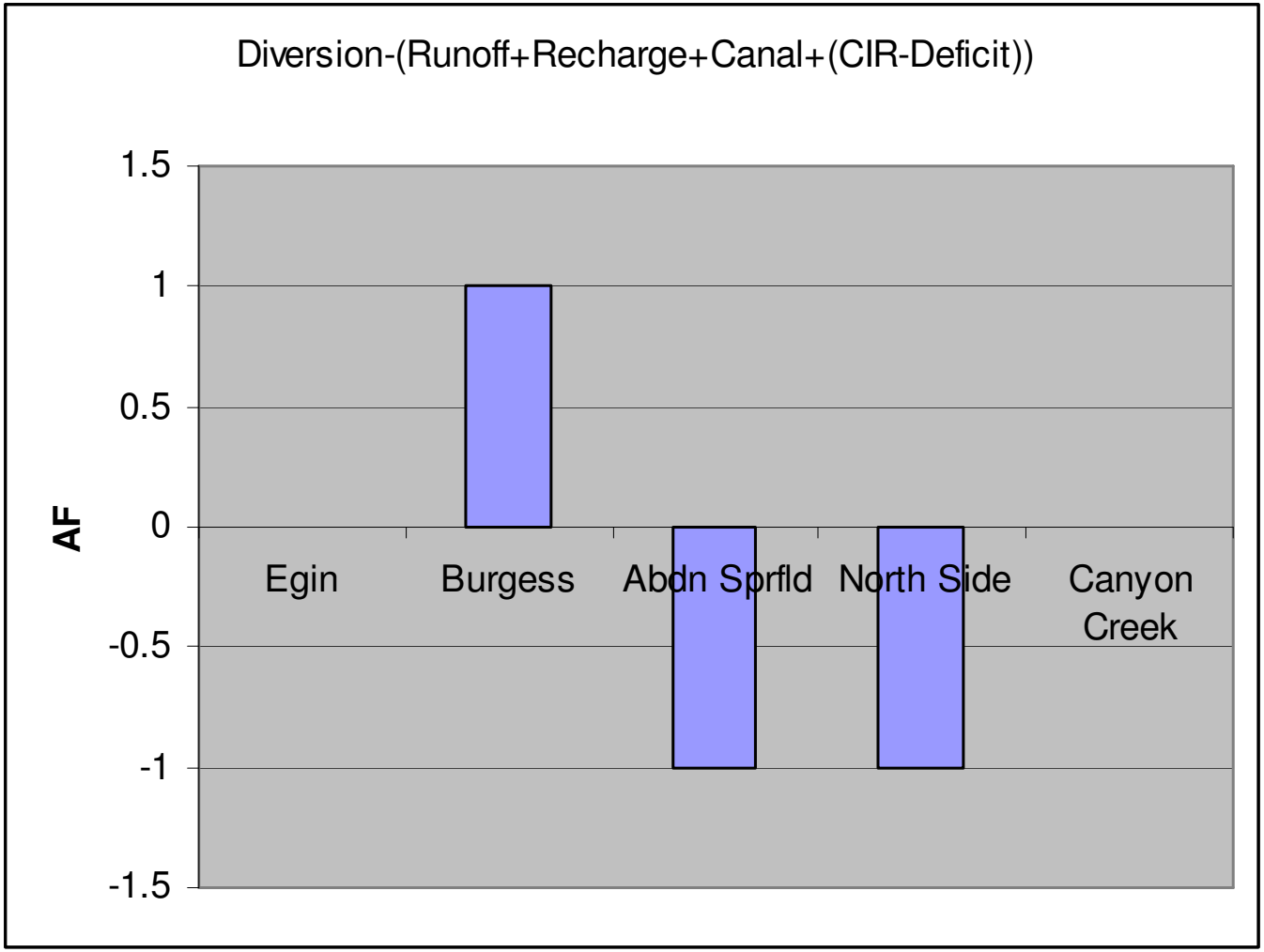
- IESW056 Henrys Fork,
- IESW057 Blackfoot River

Surface Water Fate 0.3



Canal	Canal Seepage
Recharge	Deep percolation to groundwater
Runoff	Surface runoff
Applied	Applied surface water irrigation
ET	Evapotranspiration
CIR	Crop Irrigation Requirement
Deficit	Unmet CIR
Excess	Irrigation more than CIR

Surface Water Fate 0.3



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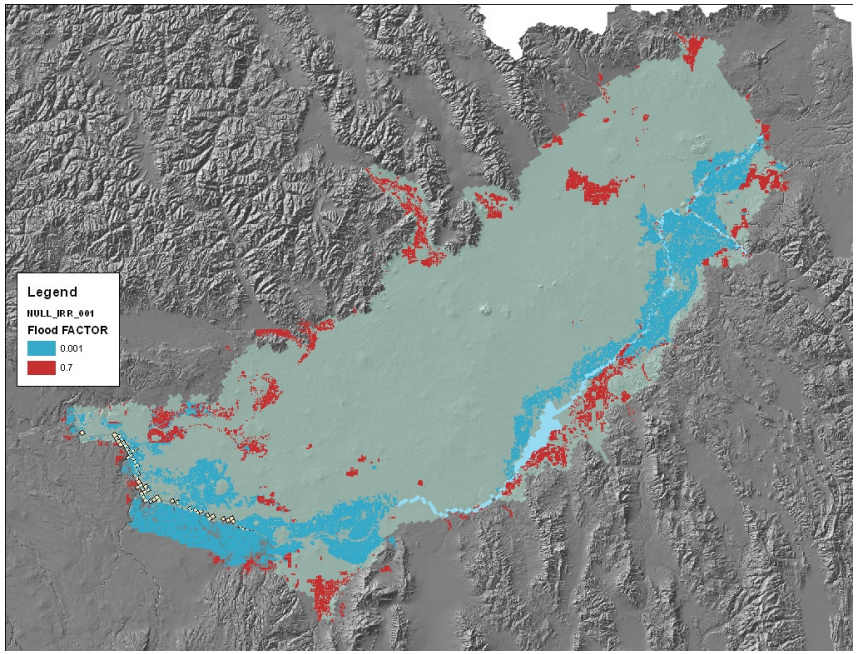

- DPin = DPex = 0.5
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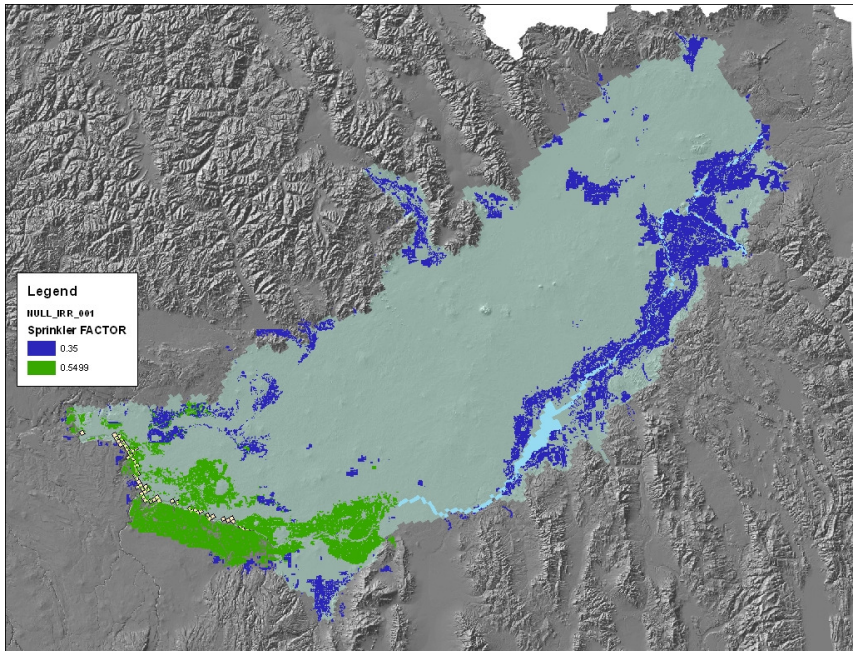
- OnFarm
  - Standard error = 8.965

On Farm Water Budget



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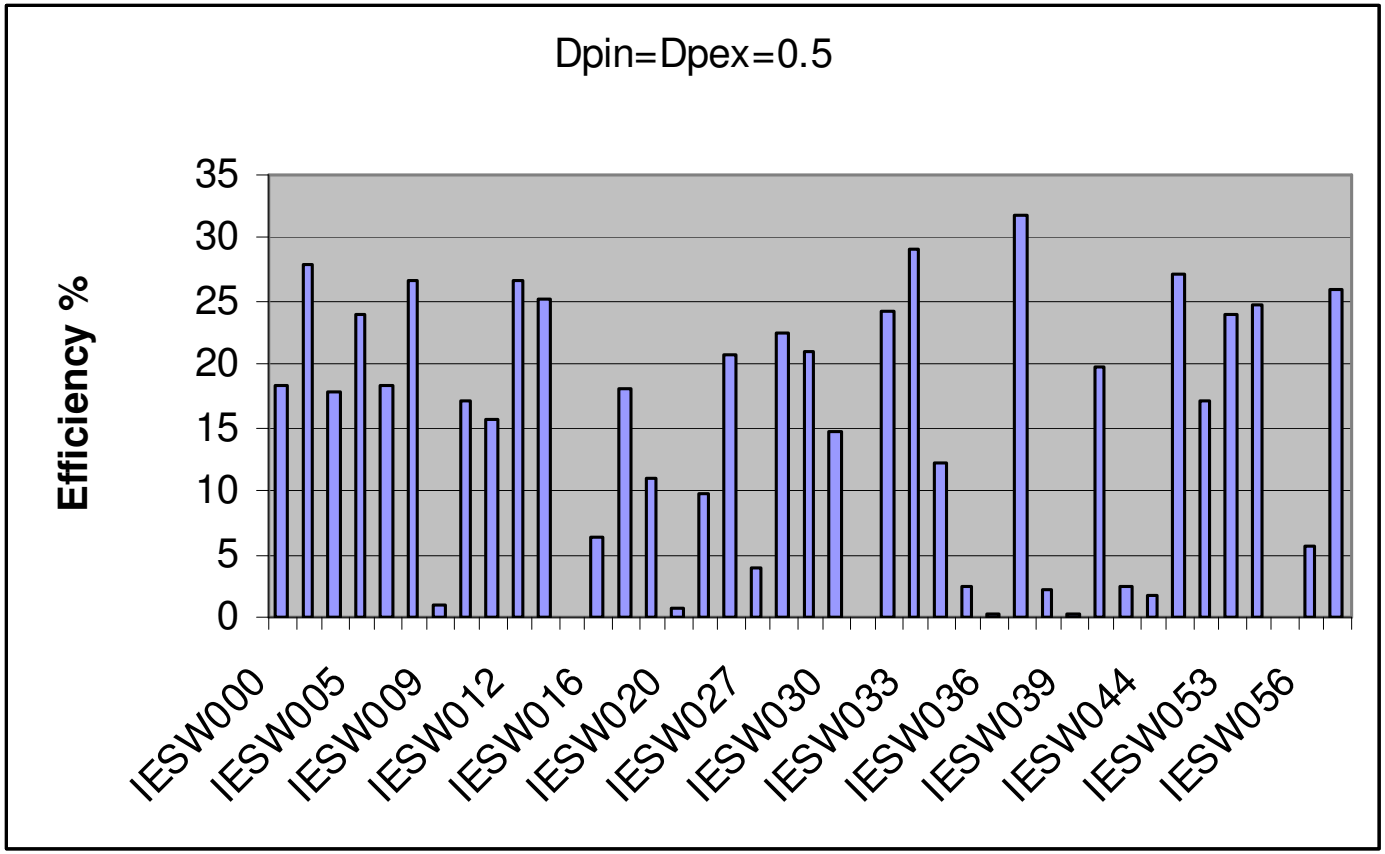

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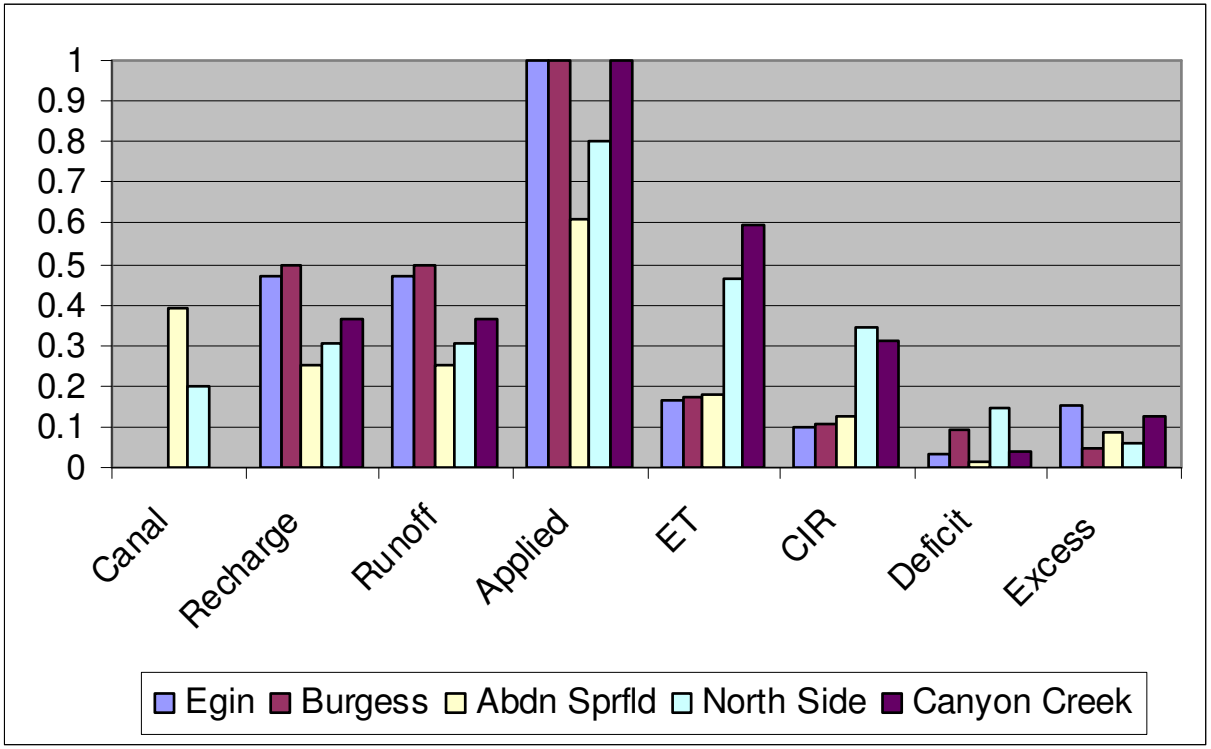
Surface Water Fate 0.5



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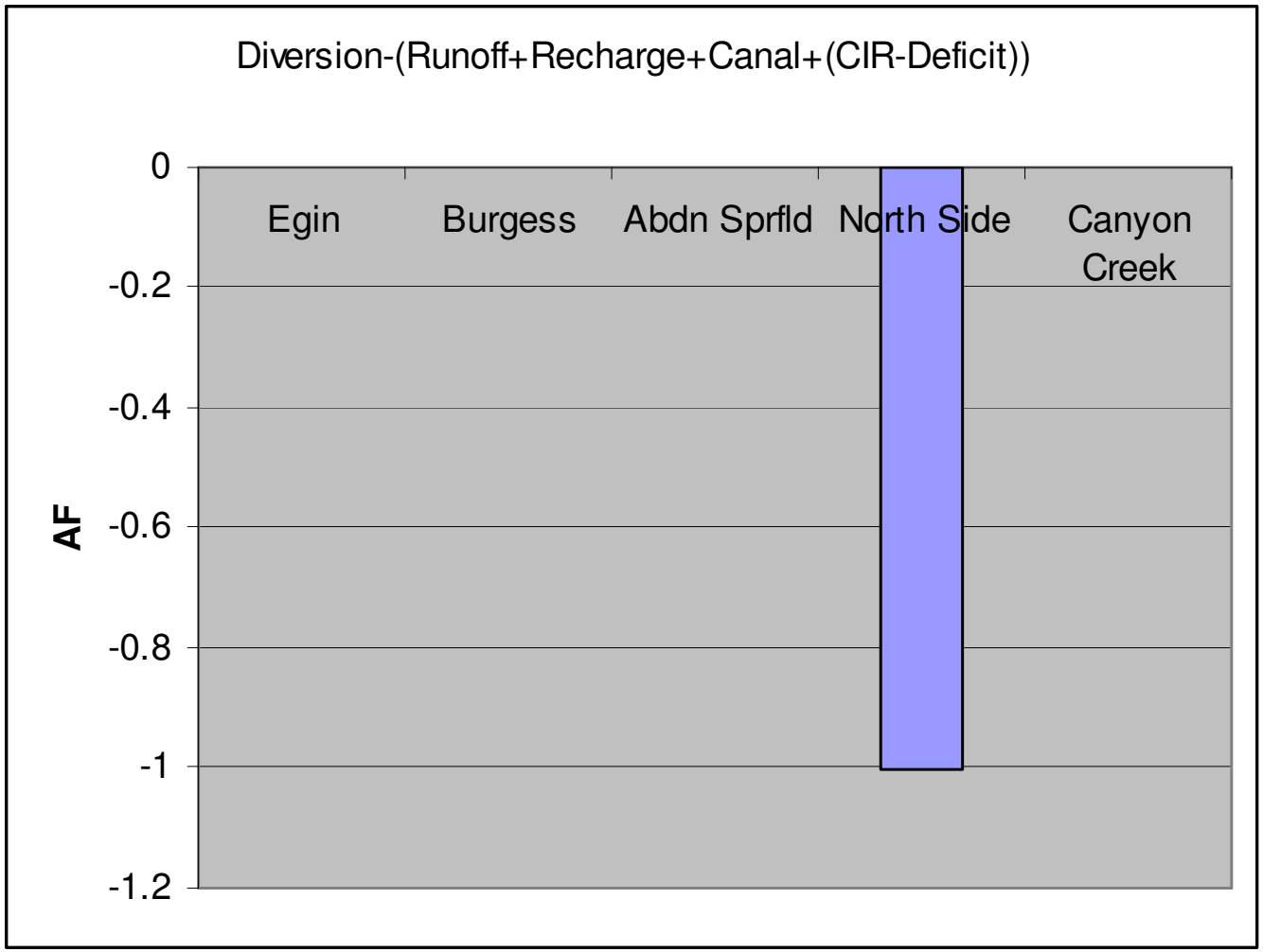

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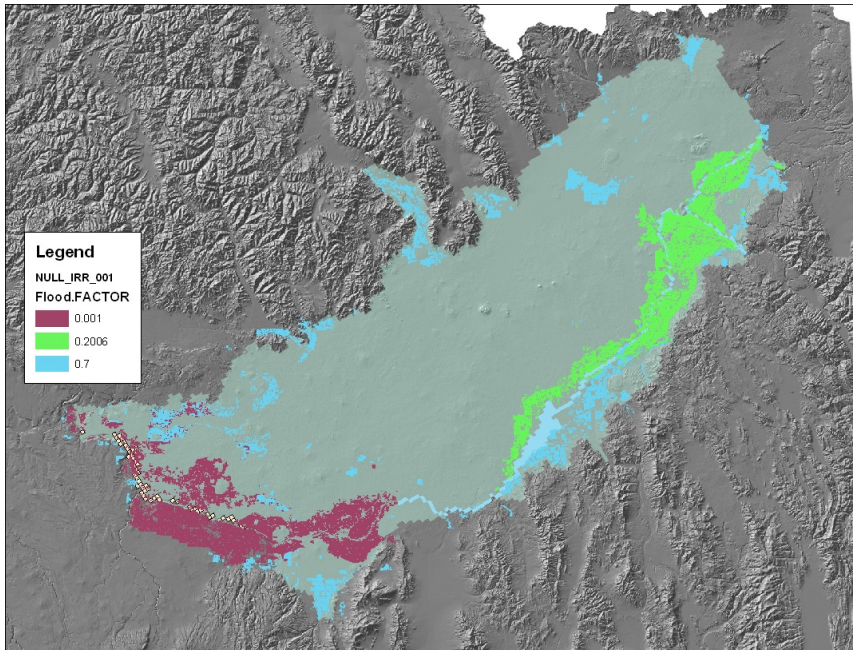

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- OnFarm
  - Standard error = 7.542

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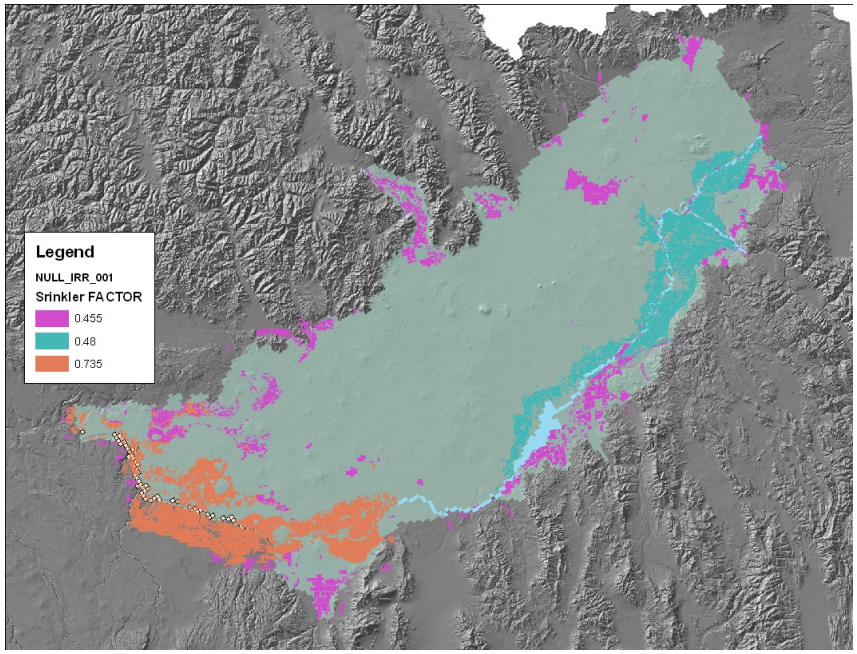

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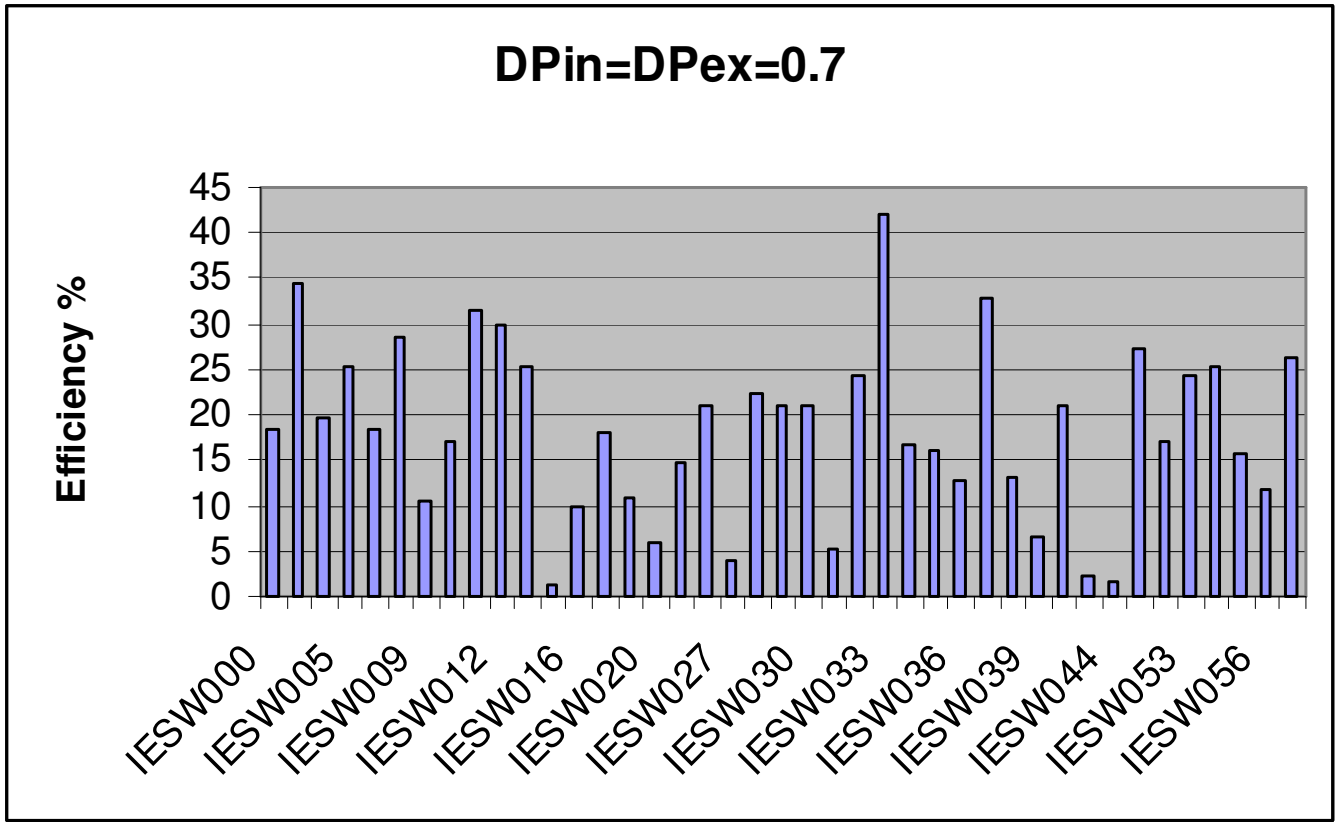

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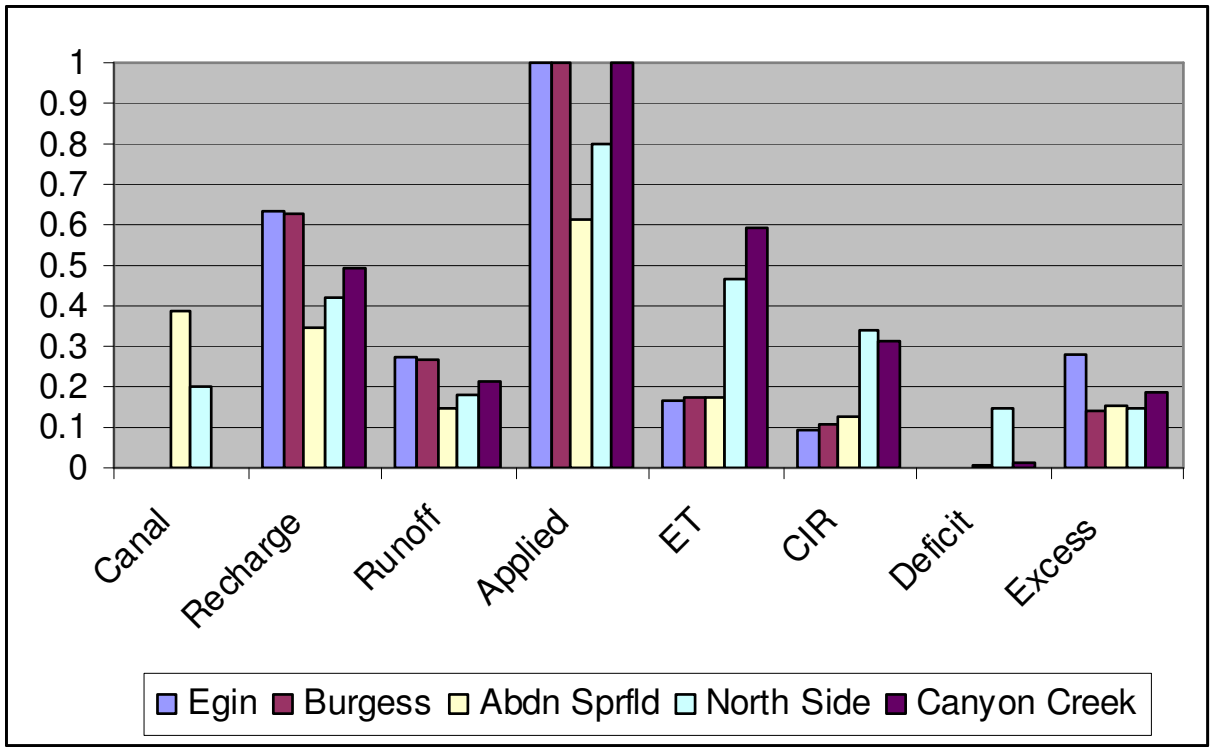

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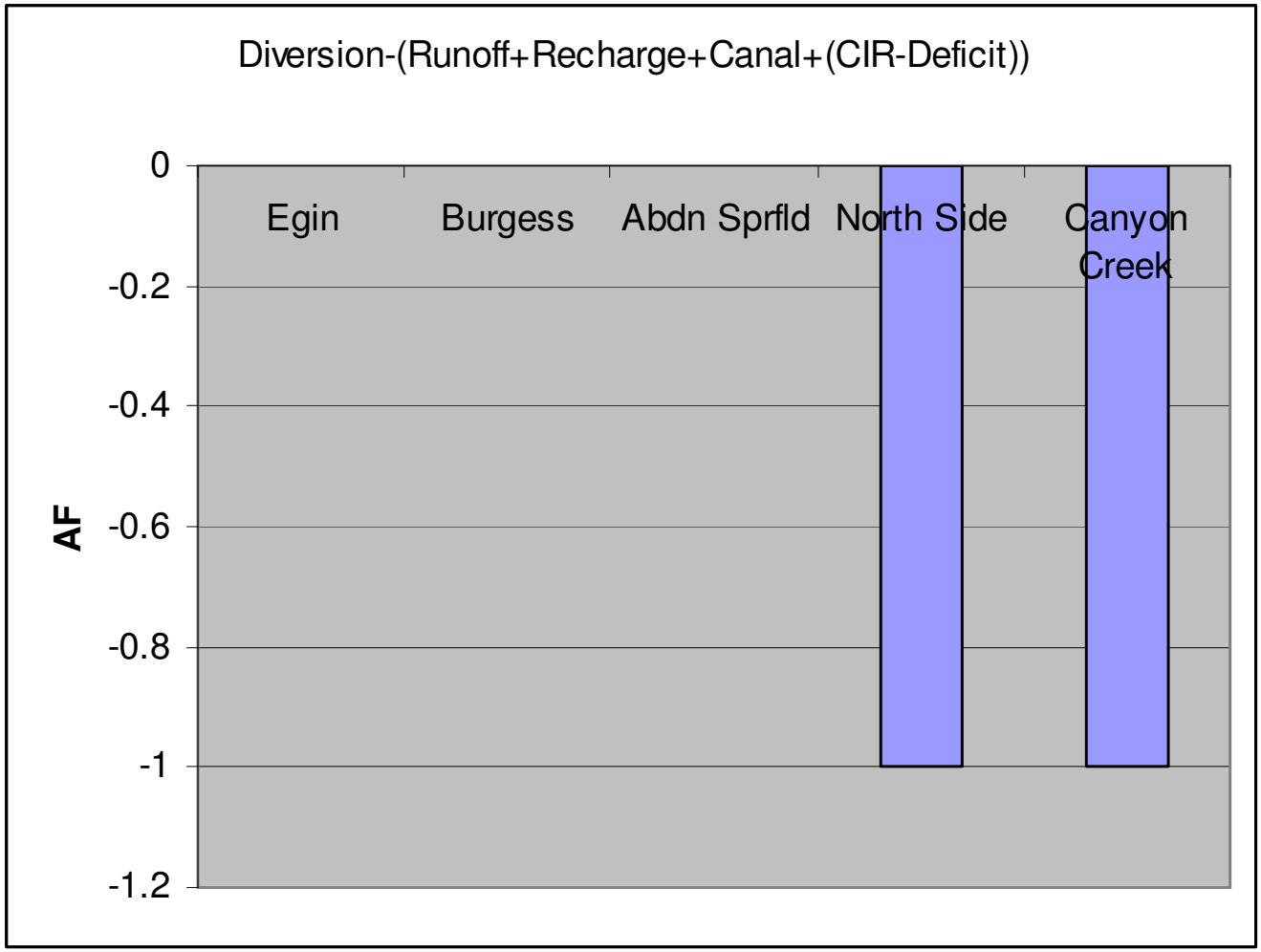

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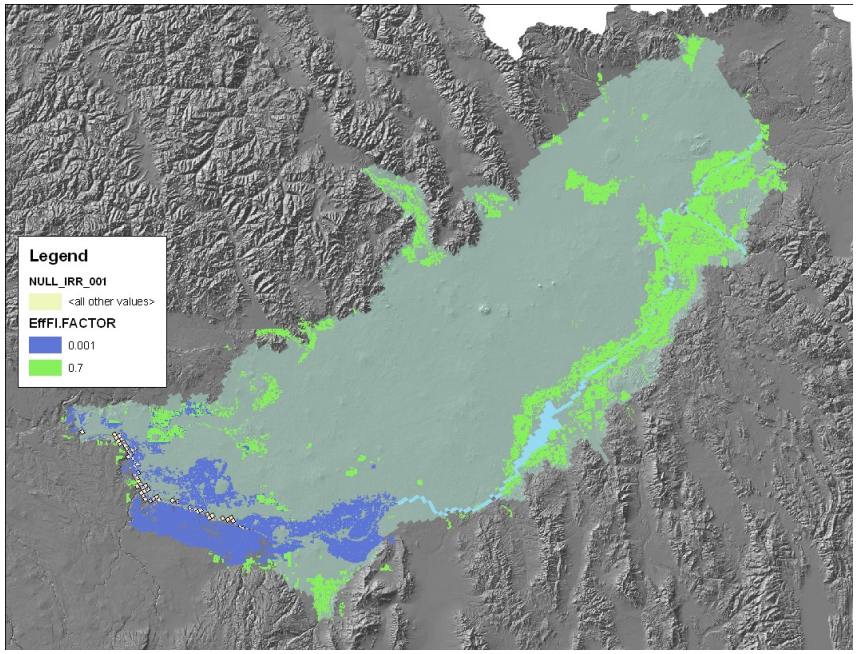

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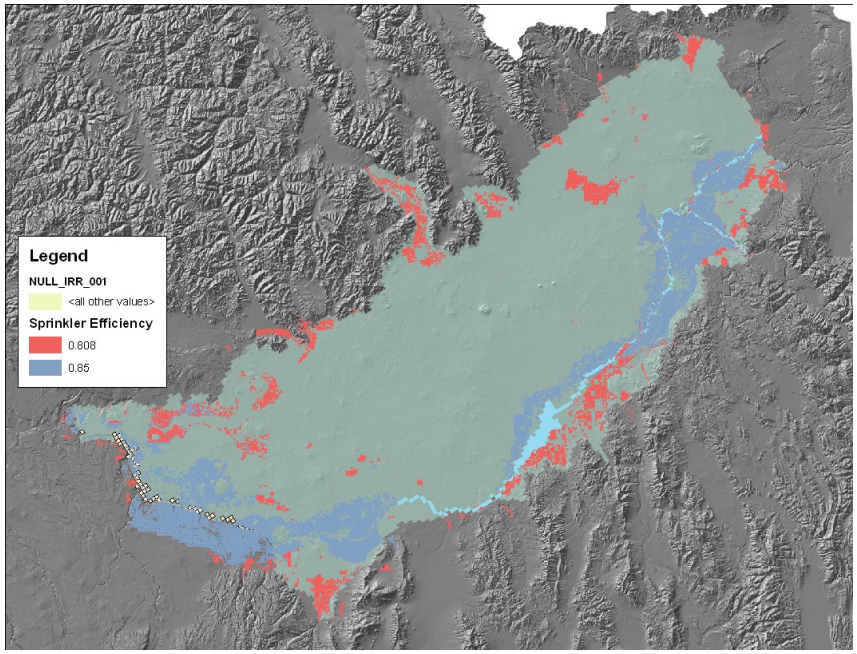

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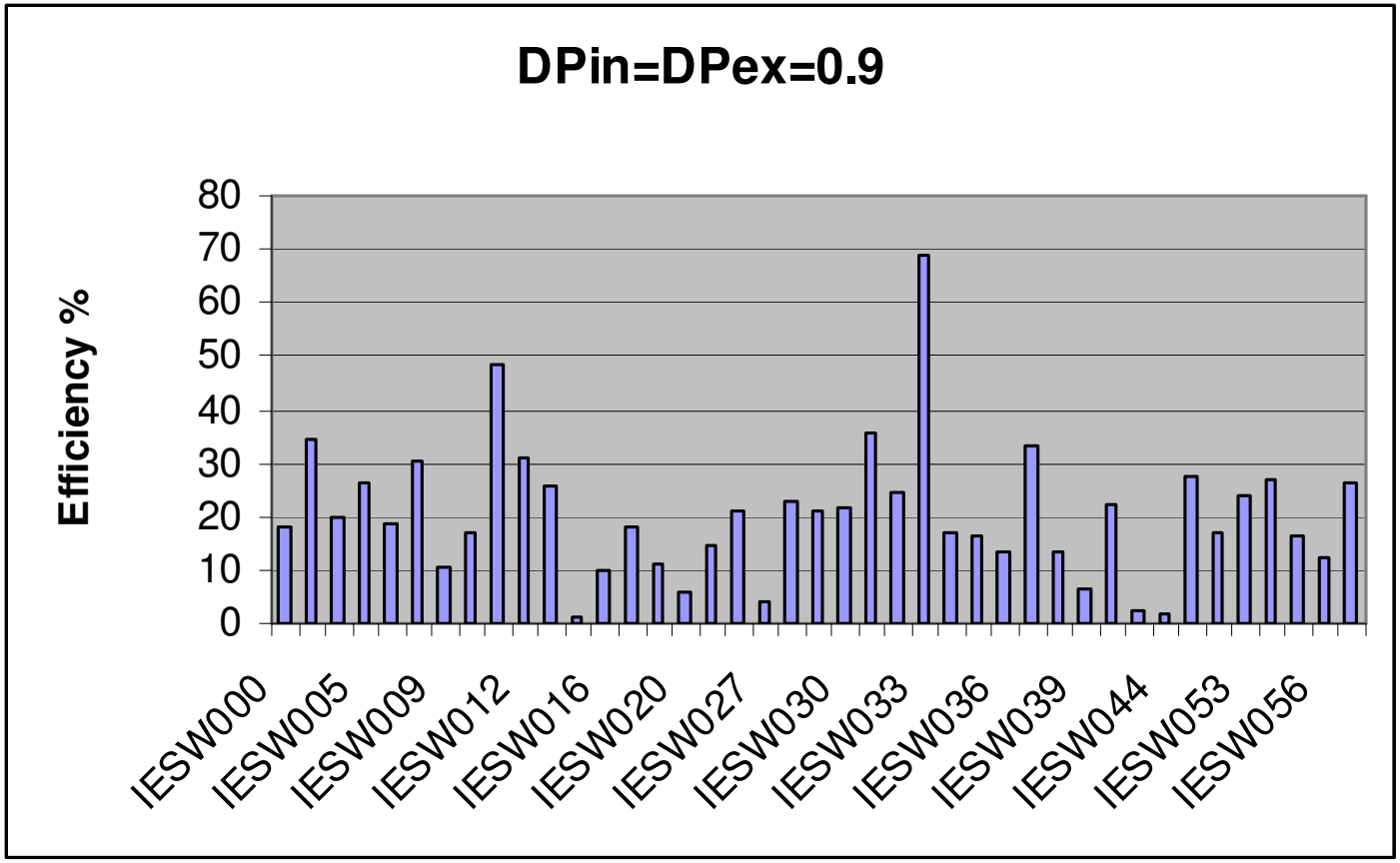

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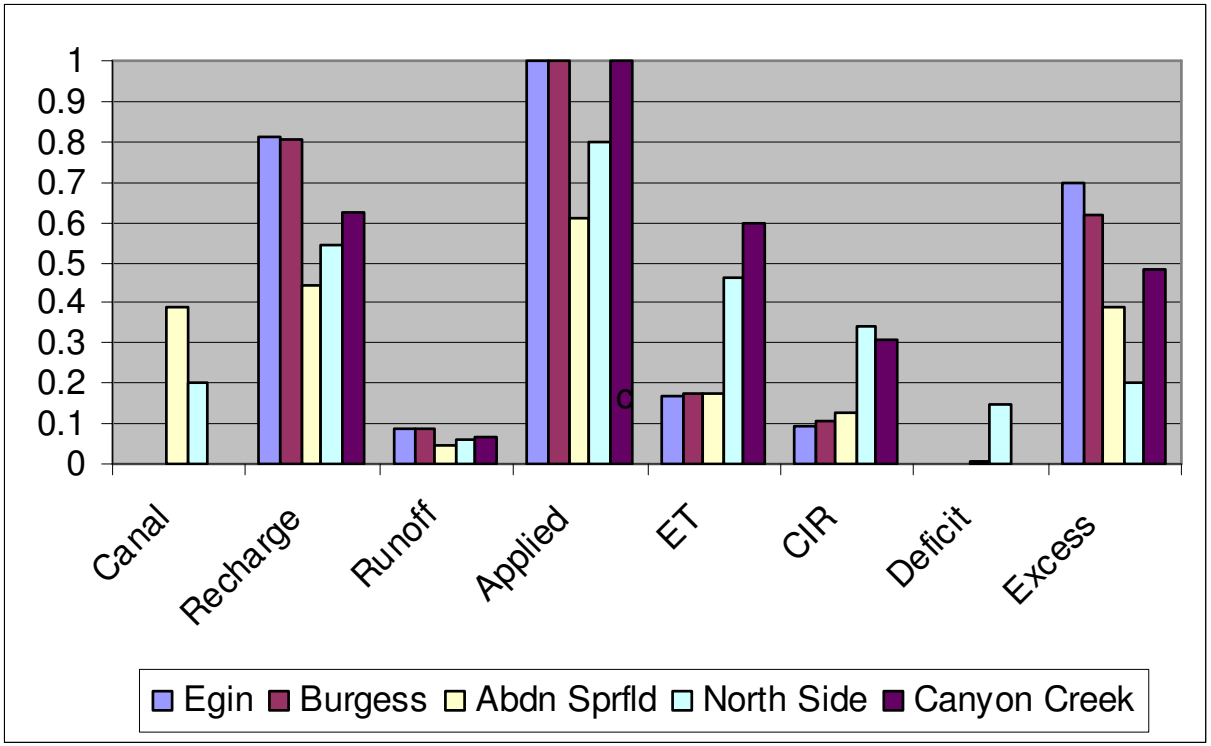

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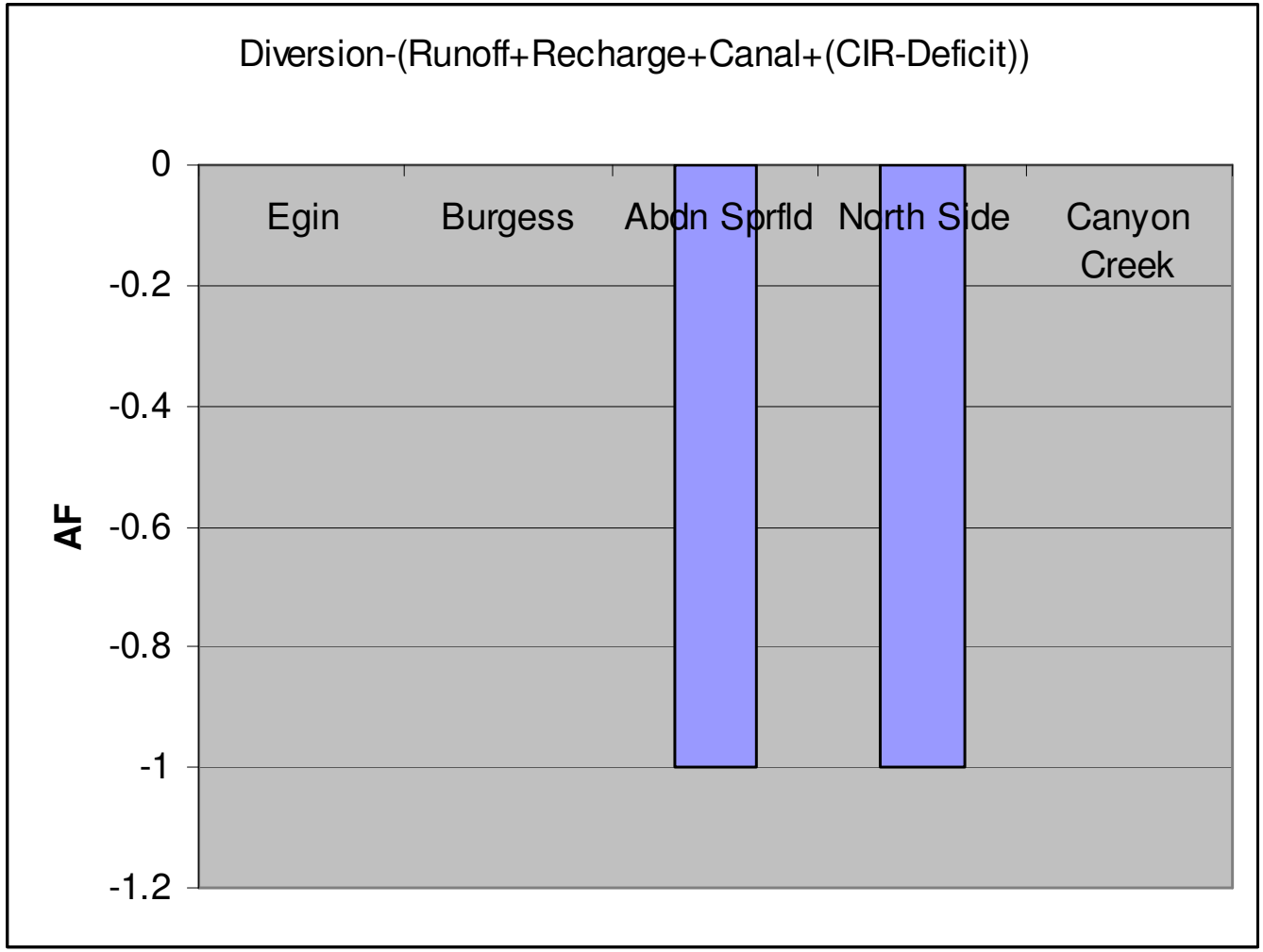

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