Predictive Uncertainty

ESPAM2.1

8 January 2013

Allan Wylie IDWR

Predictive Uncertainty Report

Enhanced Snake Plain Aquifer Model

Version 2.1

Uncertainty Analysis

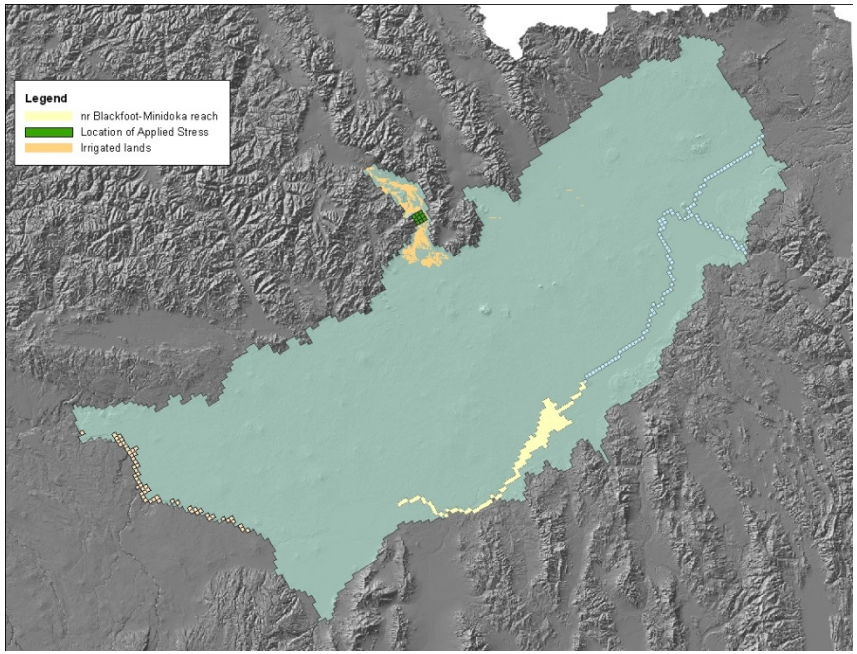
Idaho Department of Water Resources
Allan Wylie
December 2012

- Predictive Uncertainty report posted on ESHMC web page 18 December 2012.

Completed Predictive Uncertainty Runs

Centroid	Reach	Calibrated Impact	Maximized Impact	Minimized Impact	Range	Model Version
WD033	Clear Lakes	0.01	0.01	0.01	0.001	E120116A008
WD033	nr Blackfoot-Minidoka	0.61	0.62	0.61	0.009	E120116A008
WD034	Clear Lakes	0.03	0.03	0.00	0.030	E110712A002
WD034	nr Blackfoot-Minidoka	0.68	0.86	0.32	0.537	E120116A008
WD034	nr Blackfoot-Minidoka	0.49	0.76	0.43	0.331	E121025A001
WD099	Clear Lakes	0.00	0.00	0.00	0.001	E120116A008
WD099	nr Blackfoot-Minidoka	0.16	0.30	0.03	0.267	E120116A008
WD100	Clear Lakes	0.00	0.00	0.00	0.000	E120116A008
WD100	nr Blackfoot-Minidoka	0.20	0.20	0.20	0.000	E120116A008
WD110	Clear Lakes	0.00	0.00	0.00	0.000	E110712A002
WD110	nr Blackfoot-Minidoka	0.26	0.27	0.26	0.006	E120116A008
WD120	Clear Lakes	0.00	0.01	0.00	0.005	E110712A002
WD120	nr Blackfoot-Minidoka	0.67	0.91	0.55	0.363	E120116A008
WD130	Ashton-Rexburg	0.01	0.01	0.01	0.000	E120116A008
WD130	Clear Lakes	0.07	0.07	0.07	0.004	E110712A002
WD130	Clear Lakes	0.08	0.08	0.07	0.012	E121025A001
WD130	nr Blackfoot-Minidoka	0.22	0.22	0.15	0.067	E120116A008
WD140	Clear Lakes	0.05	0.05	0.04	0.002	E120116A008
WD140	nr Blackfoot-Minidoka	0.35	0.35	0.35	0.003	E120116A008

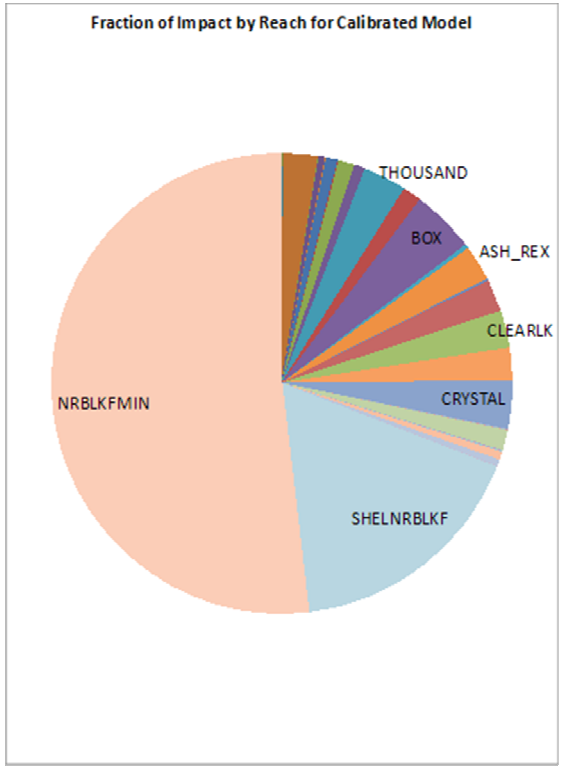
WD034
nr Blackfoot-Minidoka



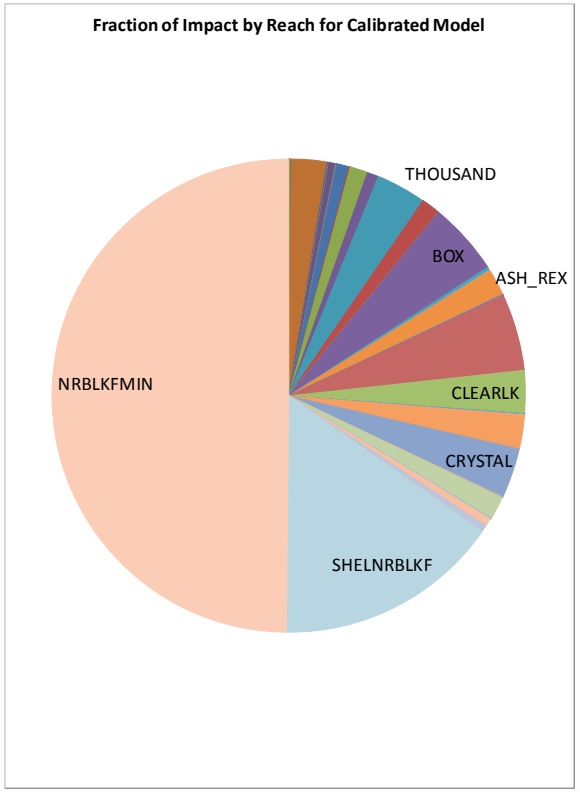
- WD034 centroid on nr Blackfoot-Minidoka
- Minimize = minimize the impact on nr Blackfoot-Minidoka
- Maximize = maximize the impact on nr Blackfoot-Minidoka

WD034 nr Blackfoot-Minidoka

ESPAM2.0 Calibrated

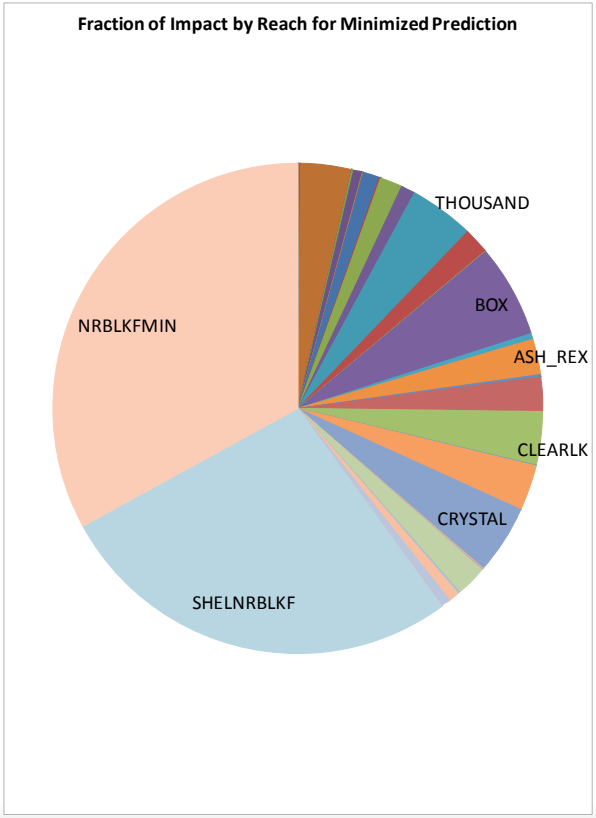


ESPAM2.1 Calibrated

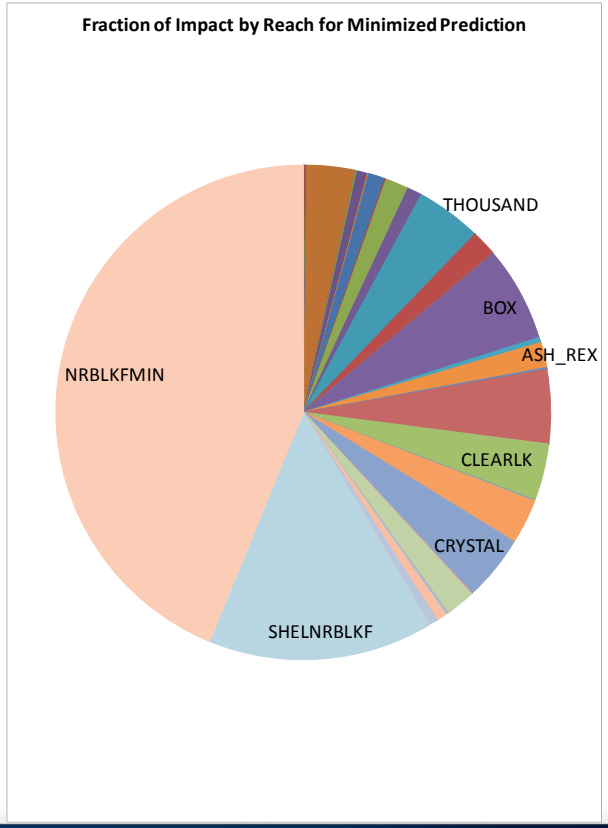


WD034 nr Blackfoot-Minidoka

ESPAM2.0 Minimized

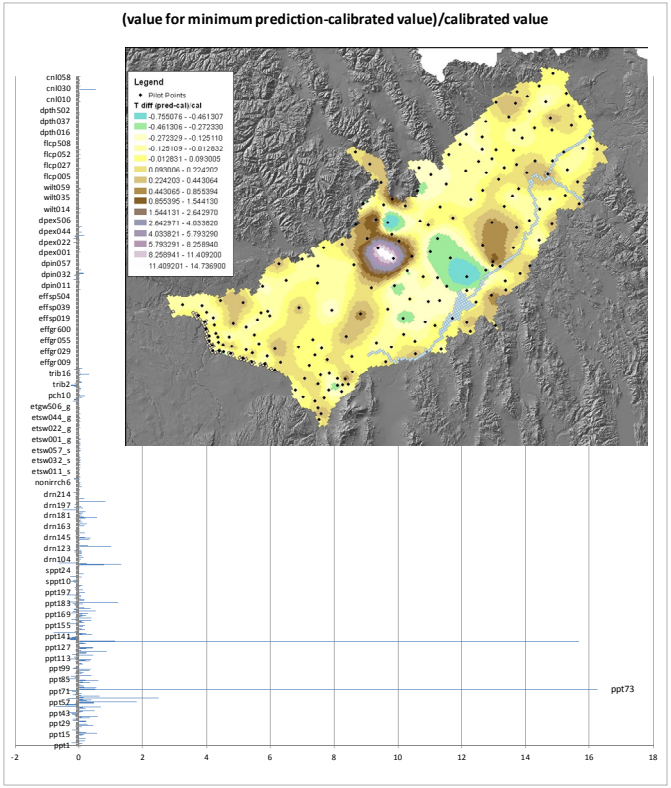


ESPAM2.1 Minimized

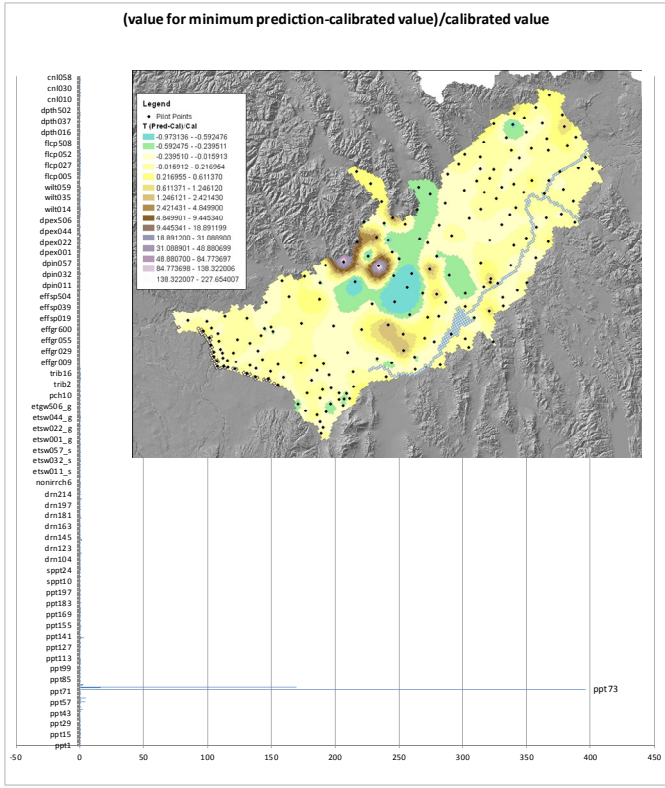


WD034 nr Blackfoot-Minidoka

ESPAM2.0 Minimized

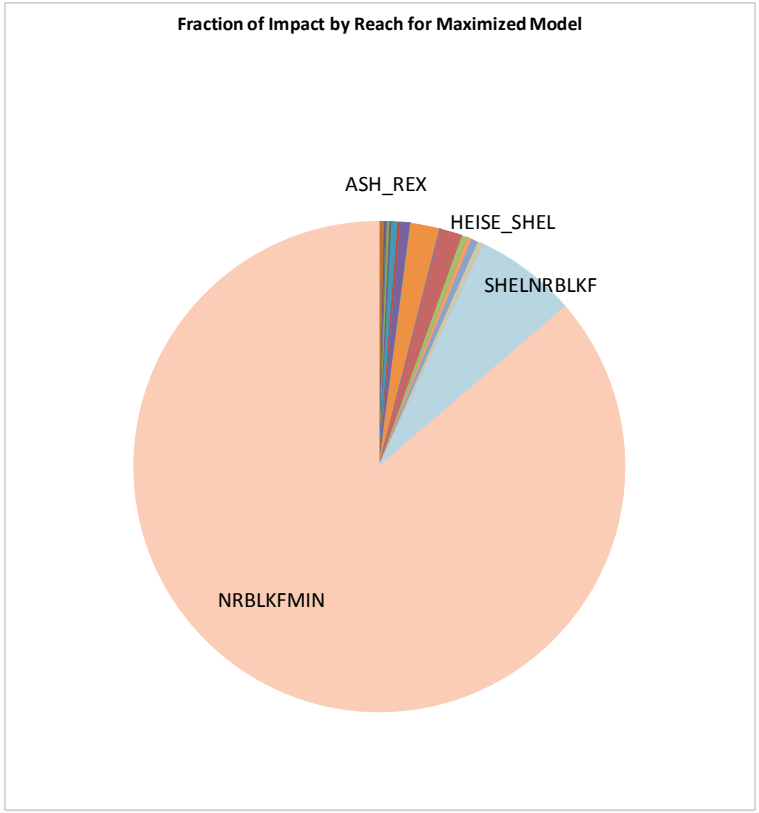


ESPAM2.1 Minimized



WD034 nr Blackfoot-Minidoka

ESPAM2.0 Maximized



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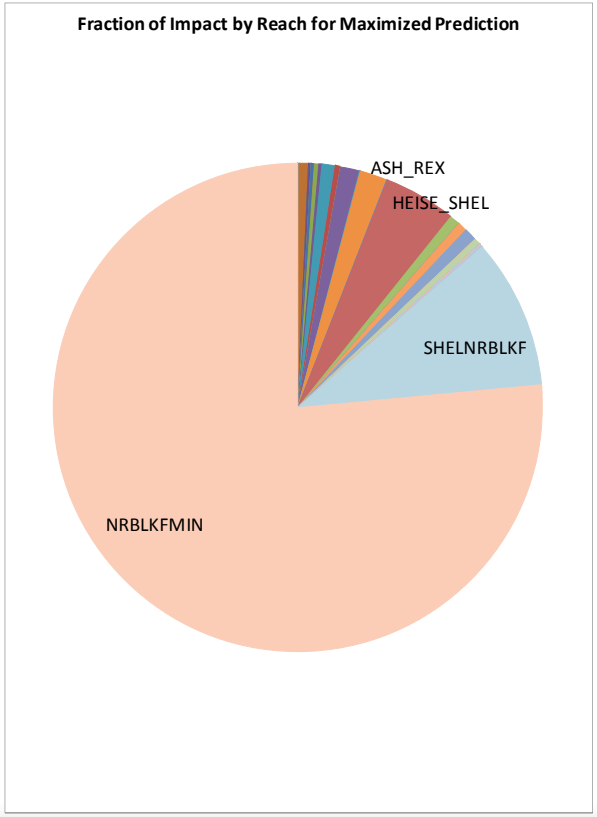

WD034 nr Blackfoot-Minidoka

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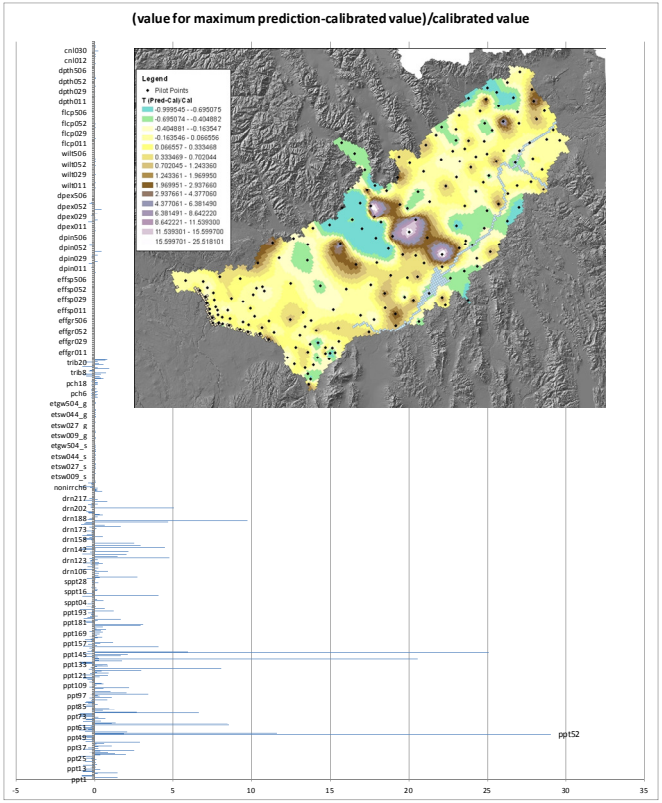

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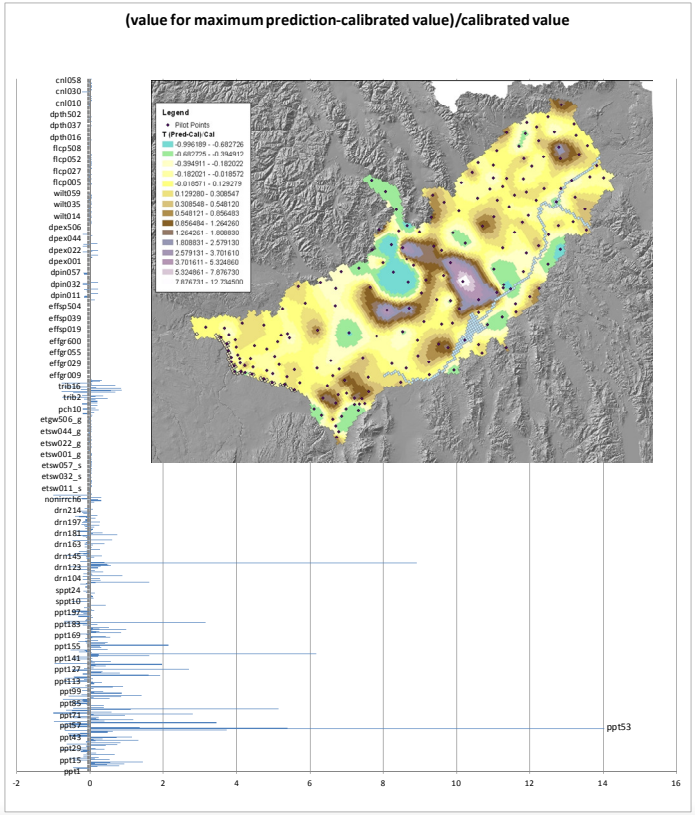
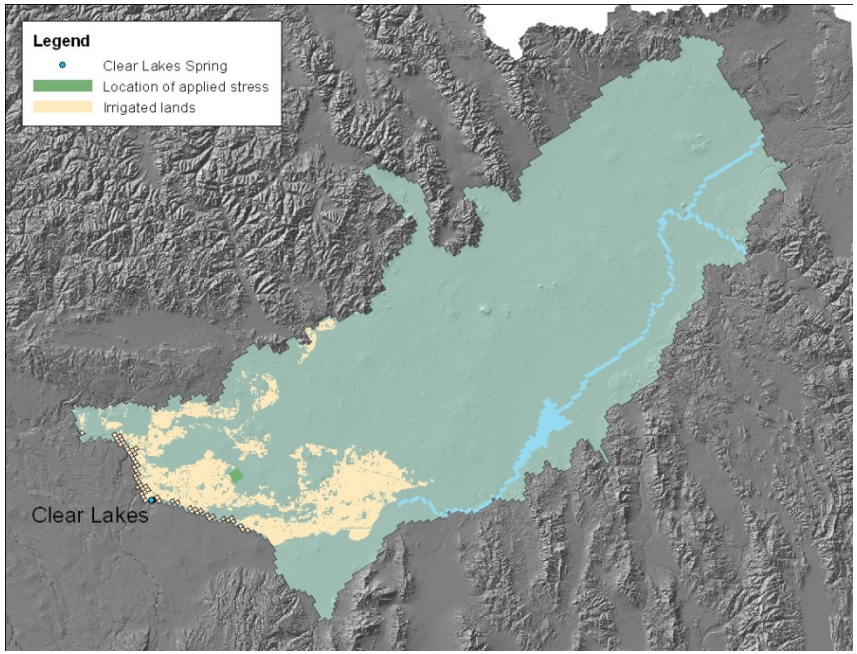


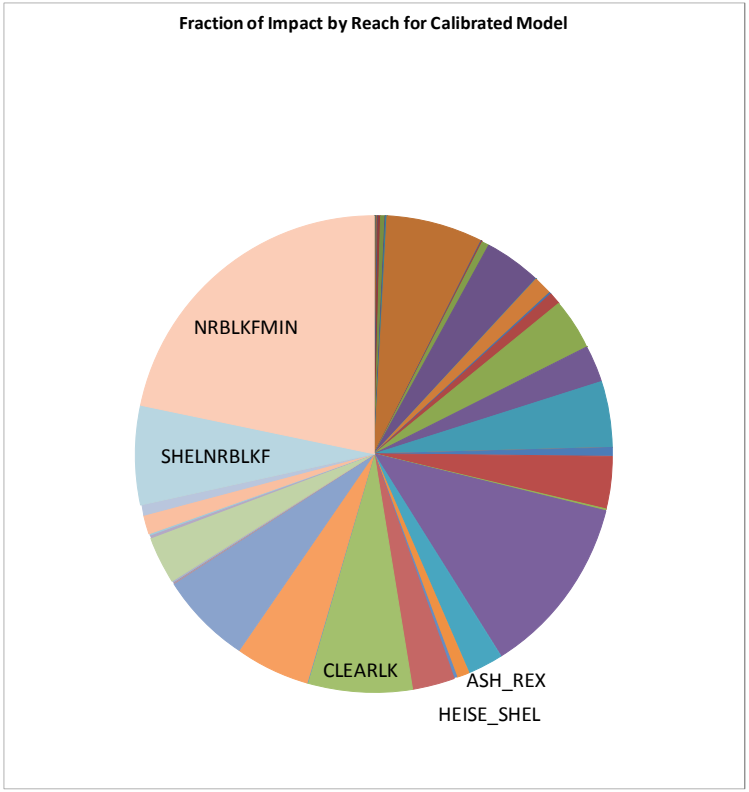
WD130 Clear Lakes



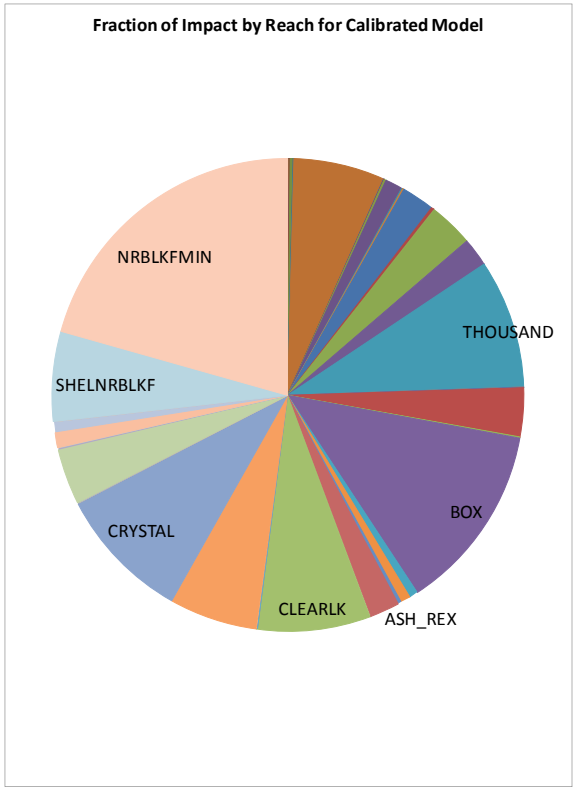
- WD130 centroid on Clear Lakes
- Minimize = minimize the impact on nr Blackfoot-Minidoka
- Maximize = maximize the impact on nr Blackfoot-Minidoka

WD130 Clear Lakes

E110712A001 Calibrated

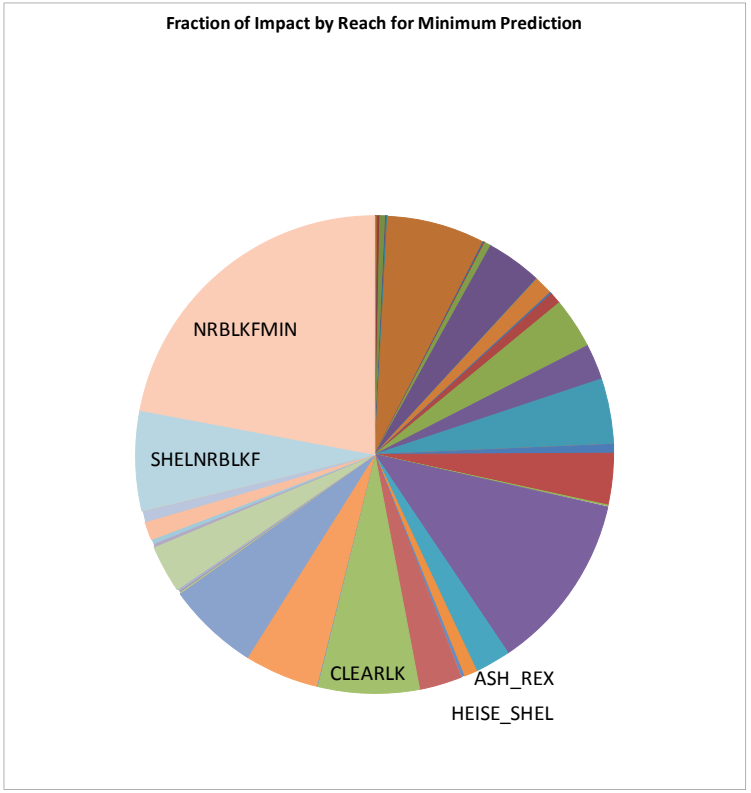


ESPAM2.1 Calibrated

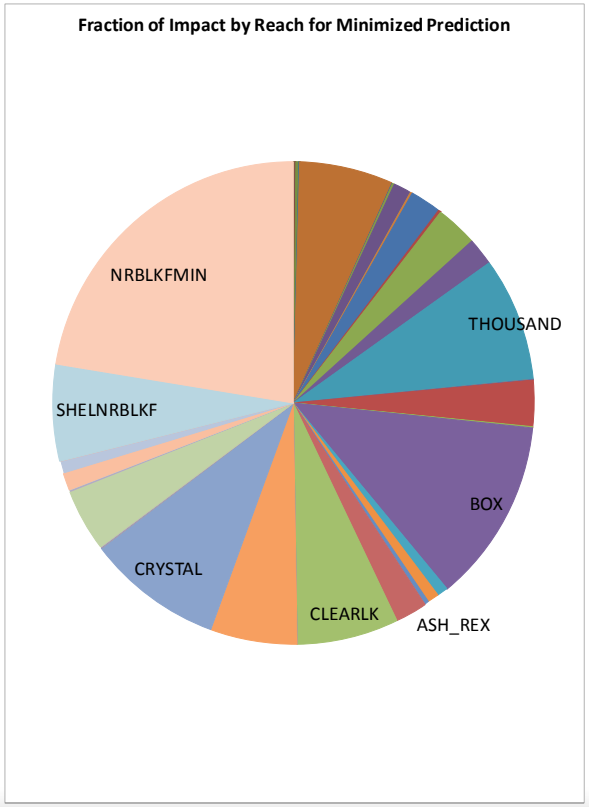


WD130 Clear Lakes

E110712A001 Minimized

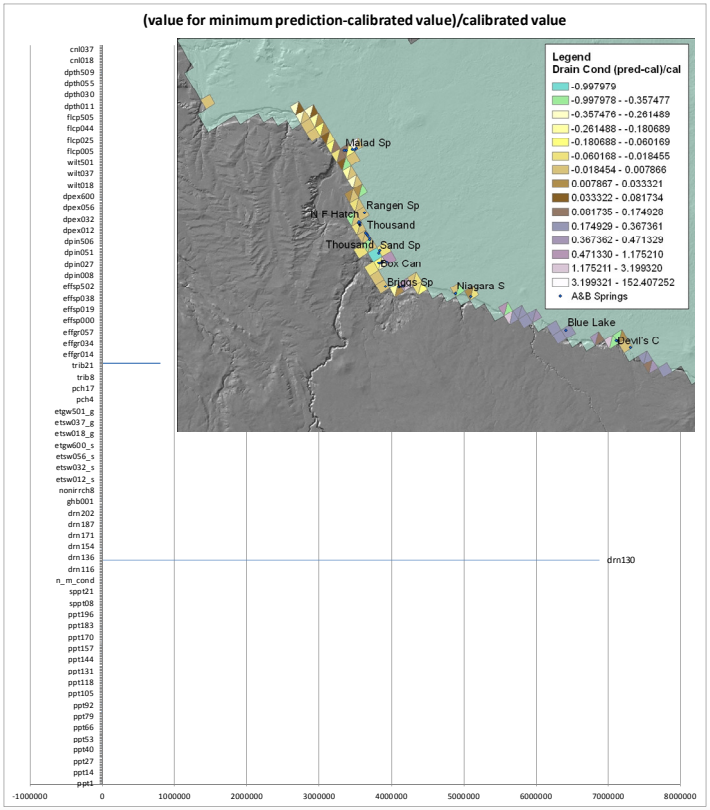


ESPAM2.1 Minimized



WD130 Clear Lakes

E110712A001 Minimized



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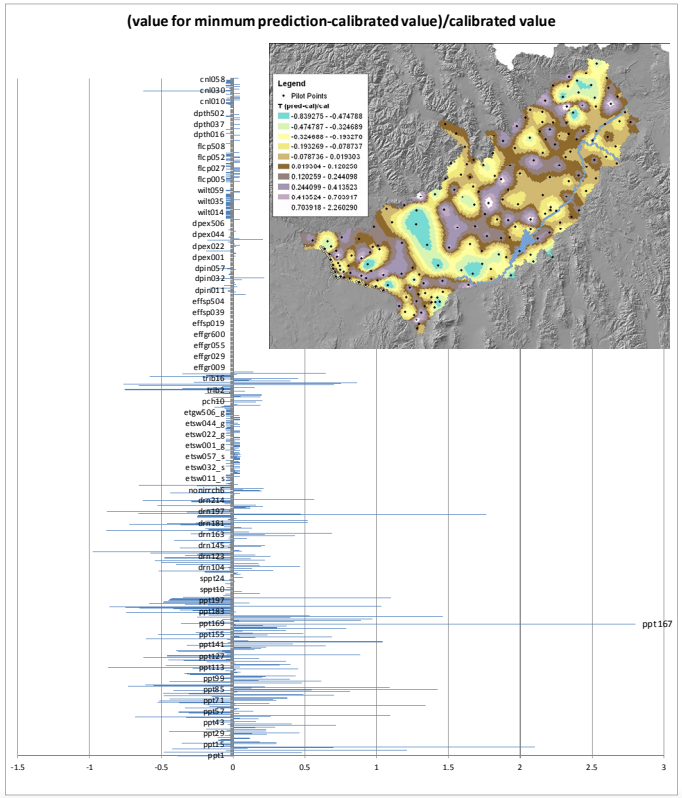
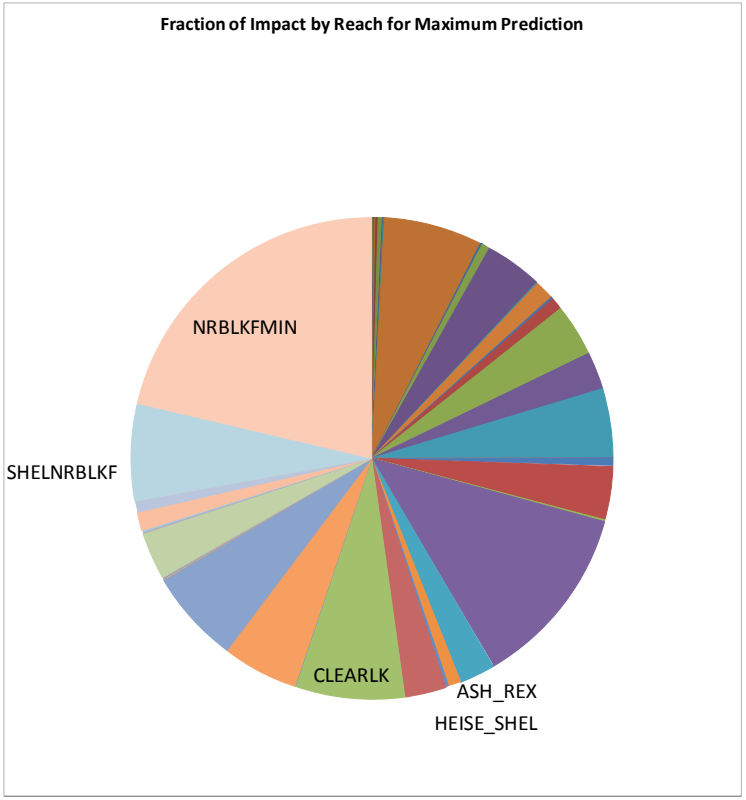
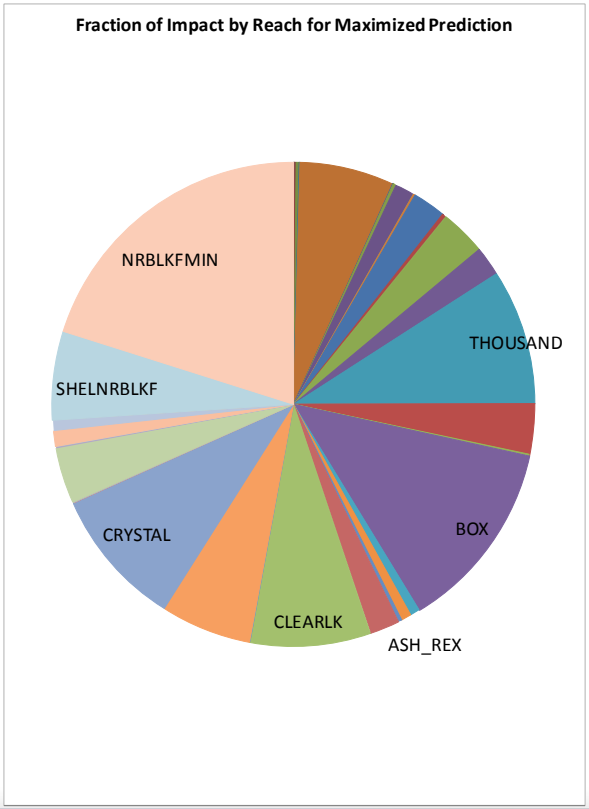


WD130 Clear Lakes

E110712A001 Maximized



ESPAM2.1 Maximized



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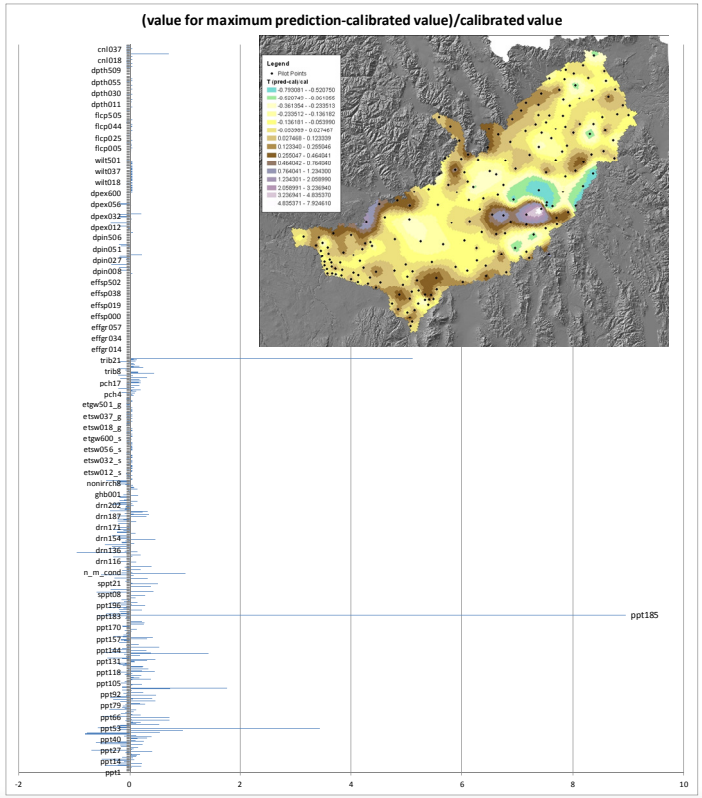
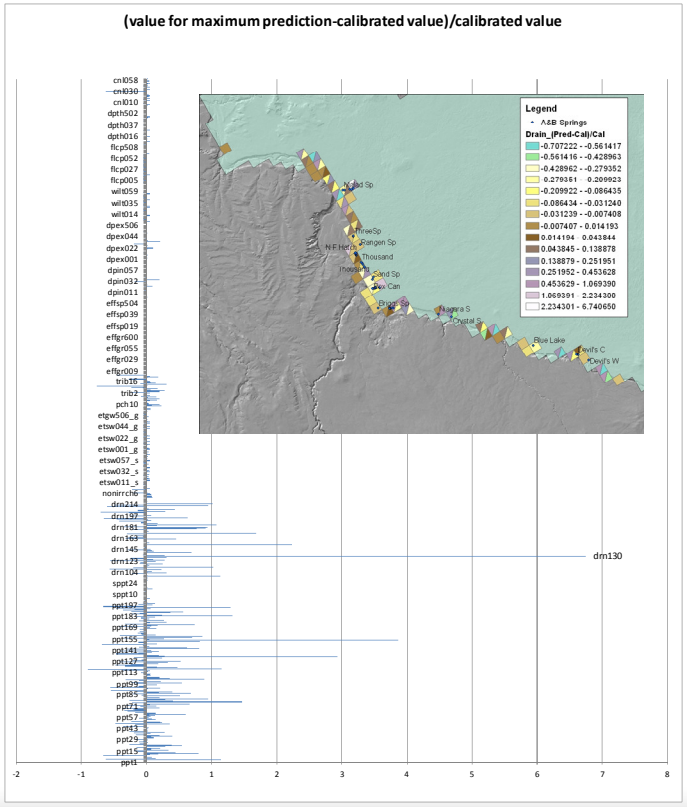
WD130 Clear Lakes

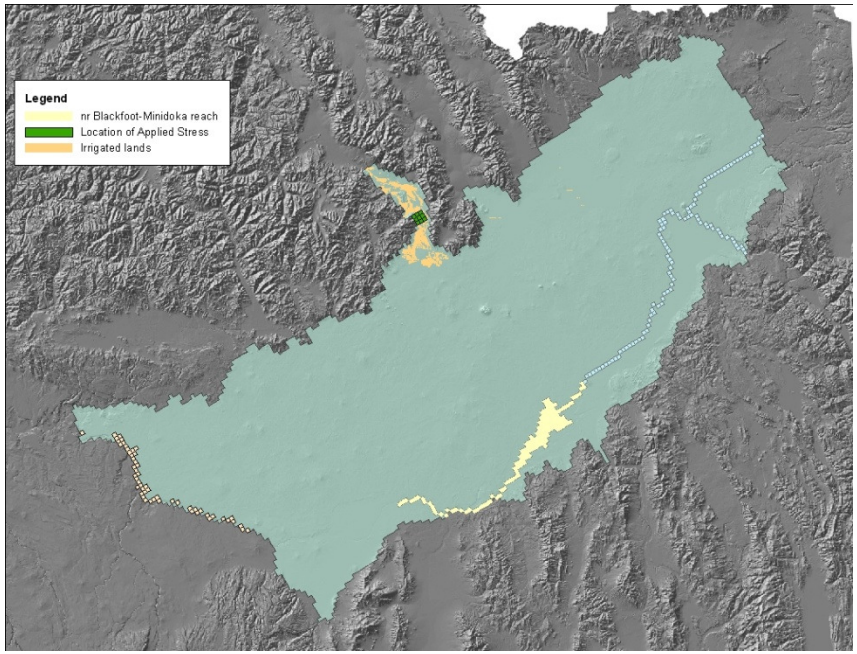
E110712A001 Maximized



ESPAM2.1 Maximized



Filtered & un-Filtered Gains WD034 nr Blackfoot-Minidoka



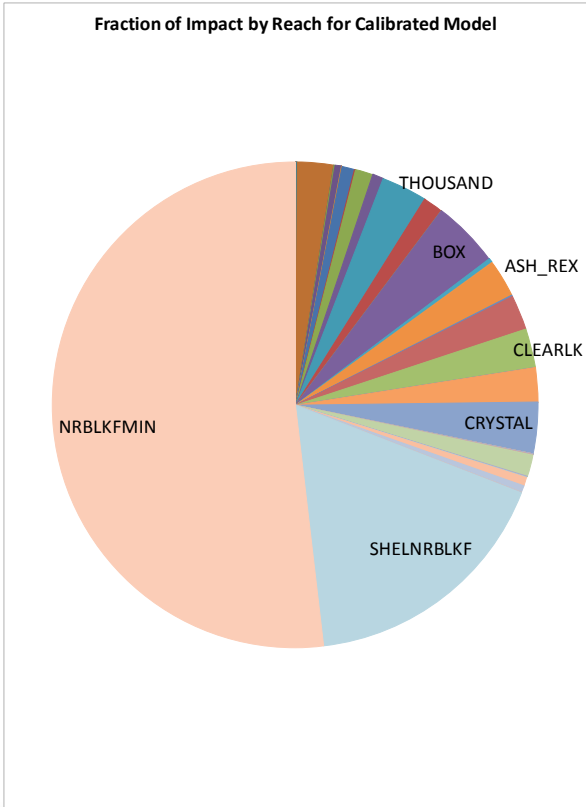
- WD034 on nr Blackfoot-Minidoka
- ESPAM2.0
  - Calibration run E120116A008
- E120116A.filt
  - E120116A008 with both filtered and un-filtered Snake River Gains
- Minimize = minimize the impact on nr Blackfoot-Minidoka
- Maximized = maximize the impact on nr Blackfoot-Minidoka

Snake River Filtered and Un-filtered Test

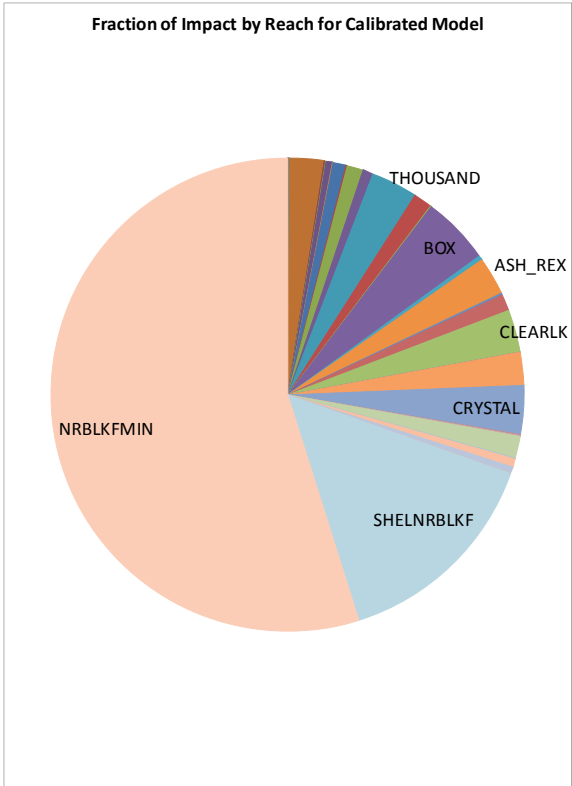
Centroid	Reach	Calibrated Impact	Maximized Impact	Minimized Impact	Range	Model Version
WD034	nr Blackfoot-Minidoka	0.682	0.862	0.324	0.537	E120116A008
WD034	nr Blackfoot-Minidoka	0.542	0.812	0.475	0.338	E120116Afilt

Filtered & un-Filtered Gains WD034 nr Blackfoot-Minidoka

Calibrated ESPAM2.filt

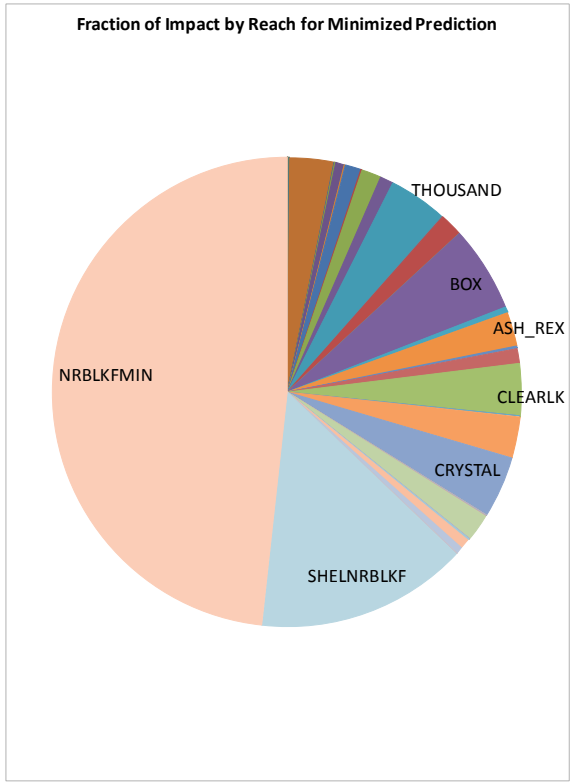


Calibrated ESPAM2.0

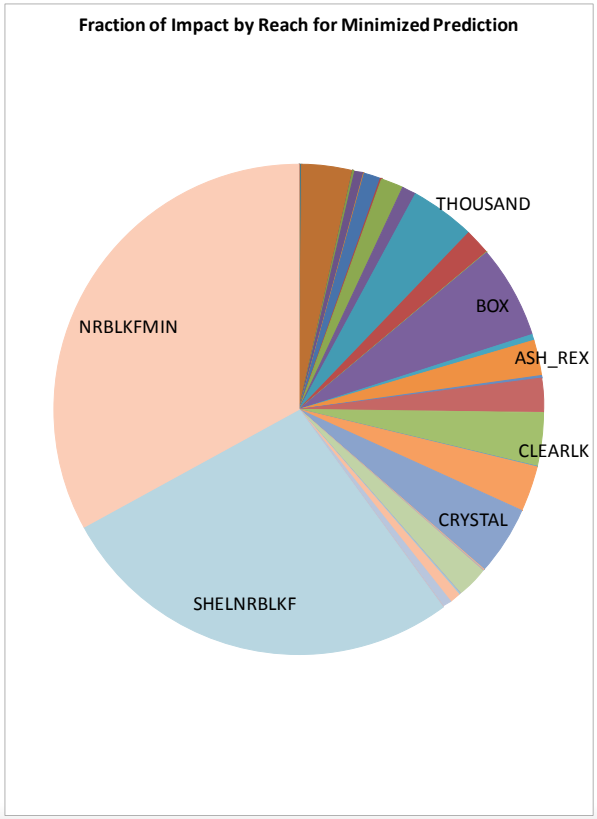


Filtered & un-Filtered Gains WD034 nr Blackfoot-Minidoka

Minimized ESPAM2.filt



Minimized ESPAM2.0



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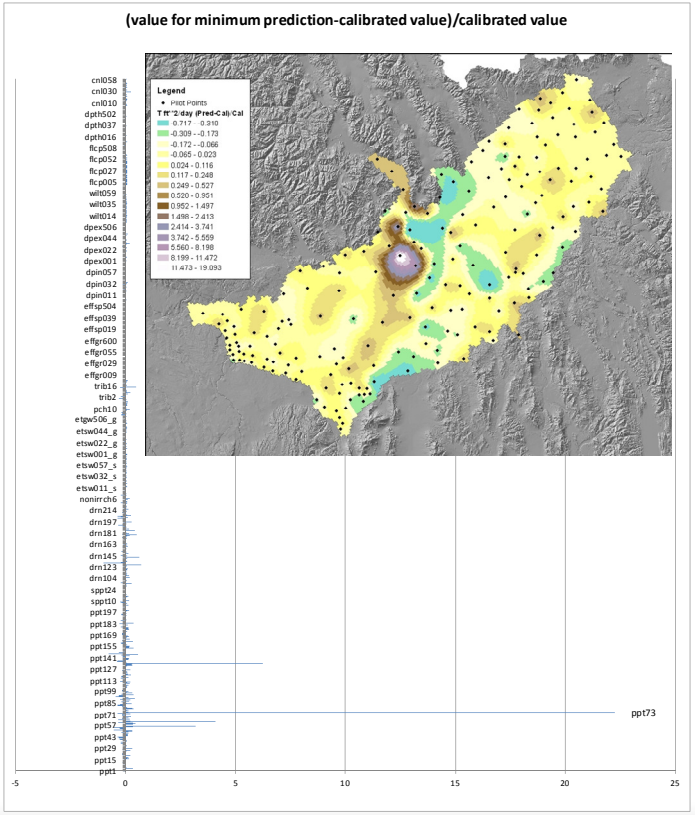
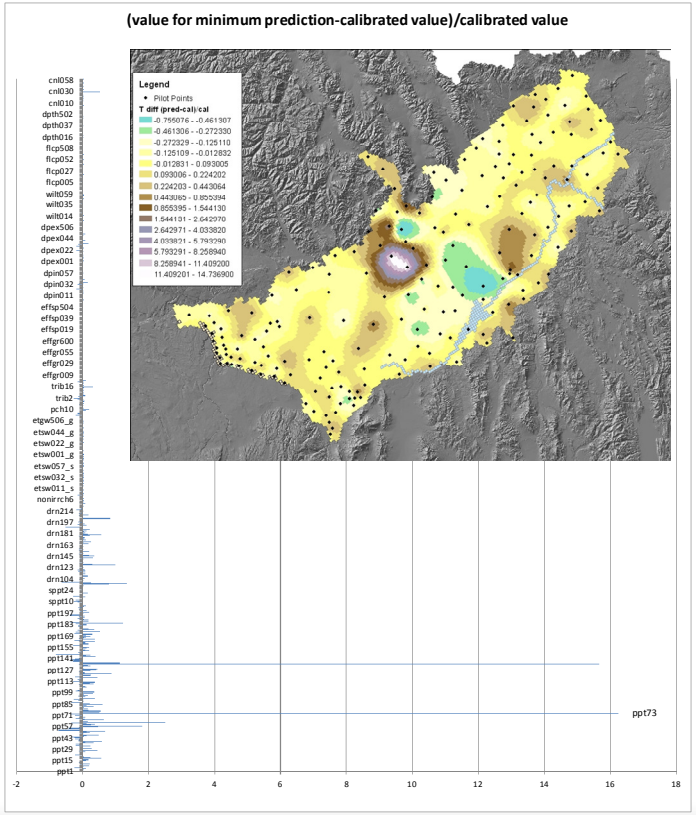
Filtered & un-Filtered Gains WD034 nr Blackfoot-Minidoka

Minimized ESPAM2.filt

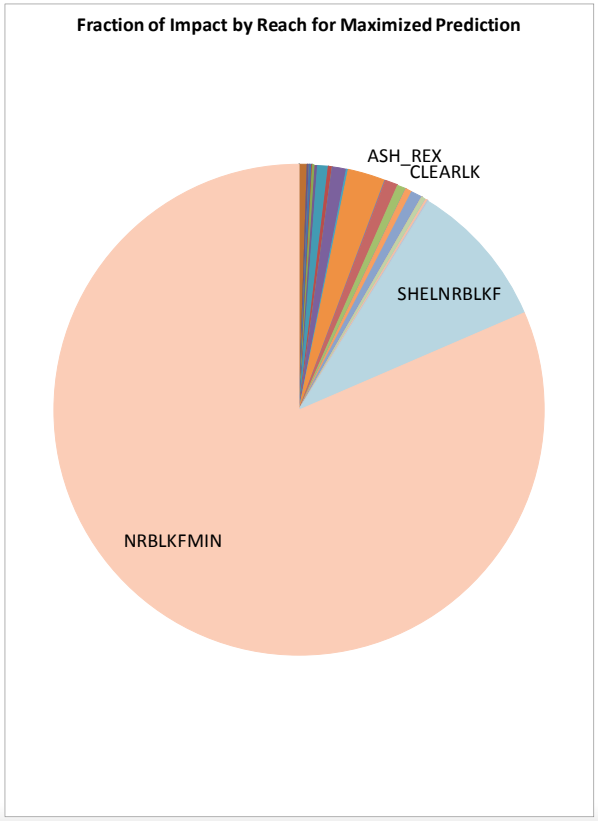


Minimized ESPAM2.0

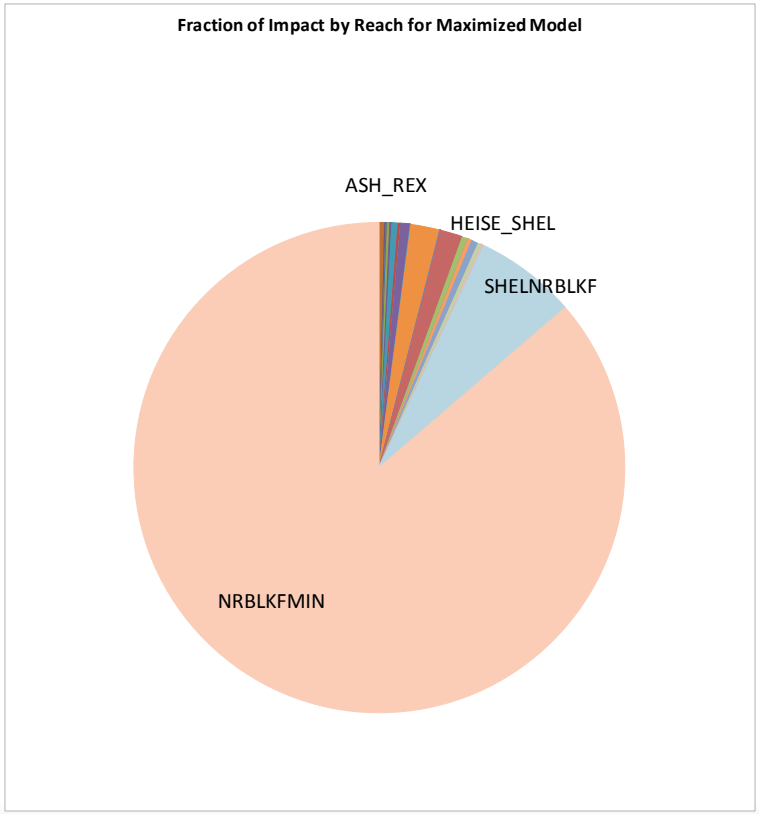


Filtered & un-Filtered Gains WD034 nr Blackfoot-Minidoka

Maximized ESPAM2.filt



Maximized ESPAM2.0



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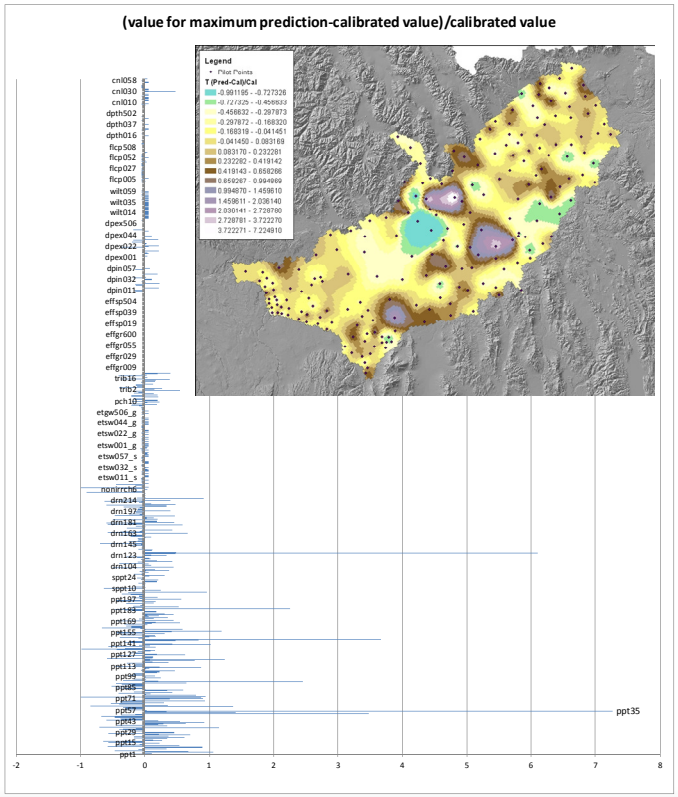
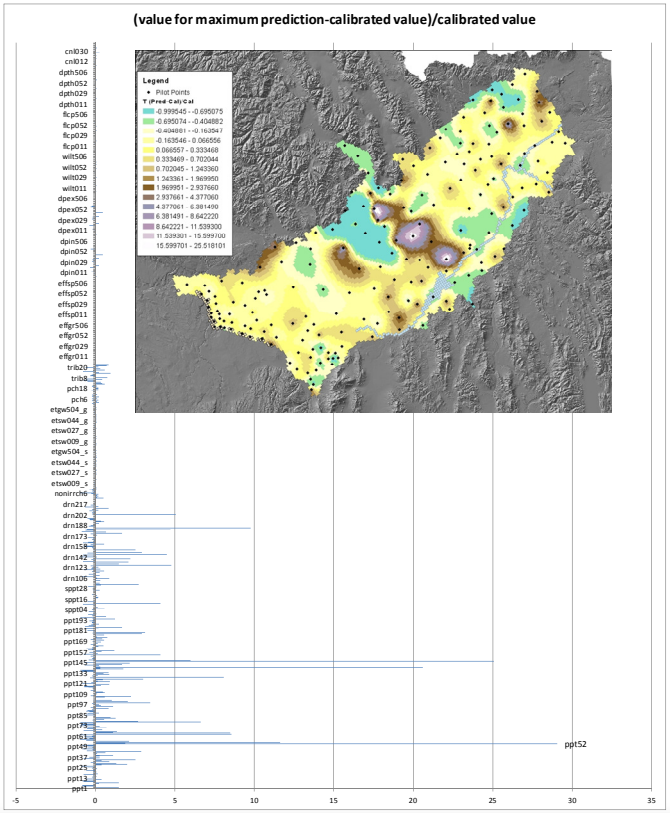
Filtered & un-Filtered Gains WD034 nr Blackfoot-Minidoka

Maximized ESPAM2.filt



Maximized ESPAM2.0



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