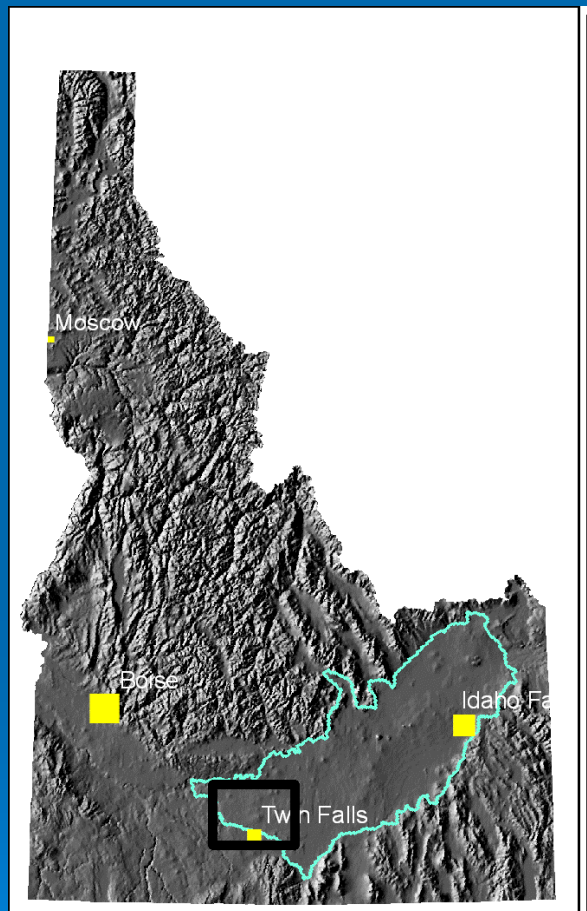
2007 Late Season Recharge

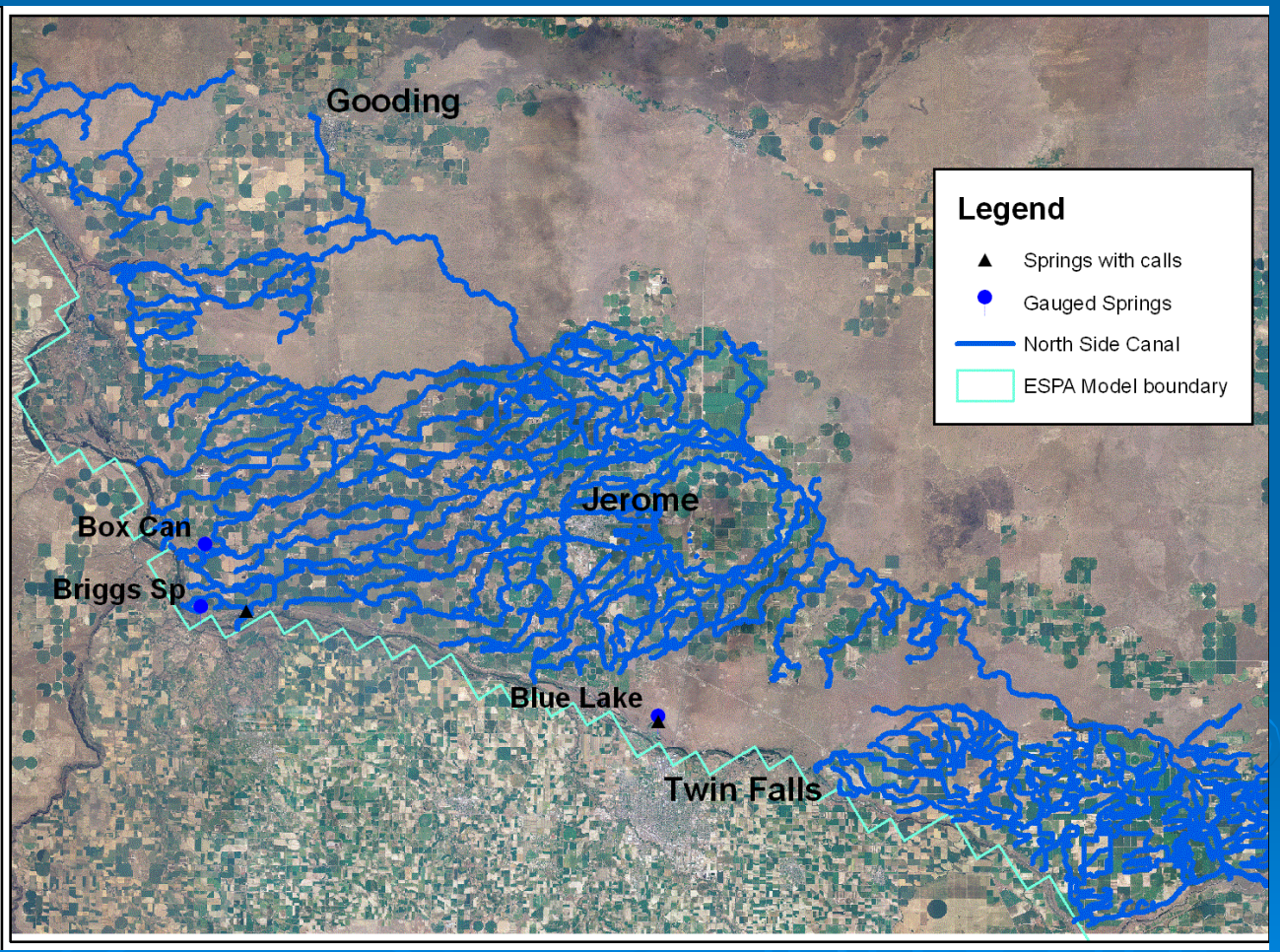
Allan Wylie
IDWR

Outline

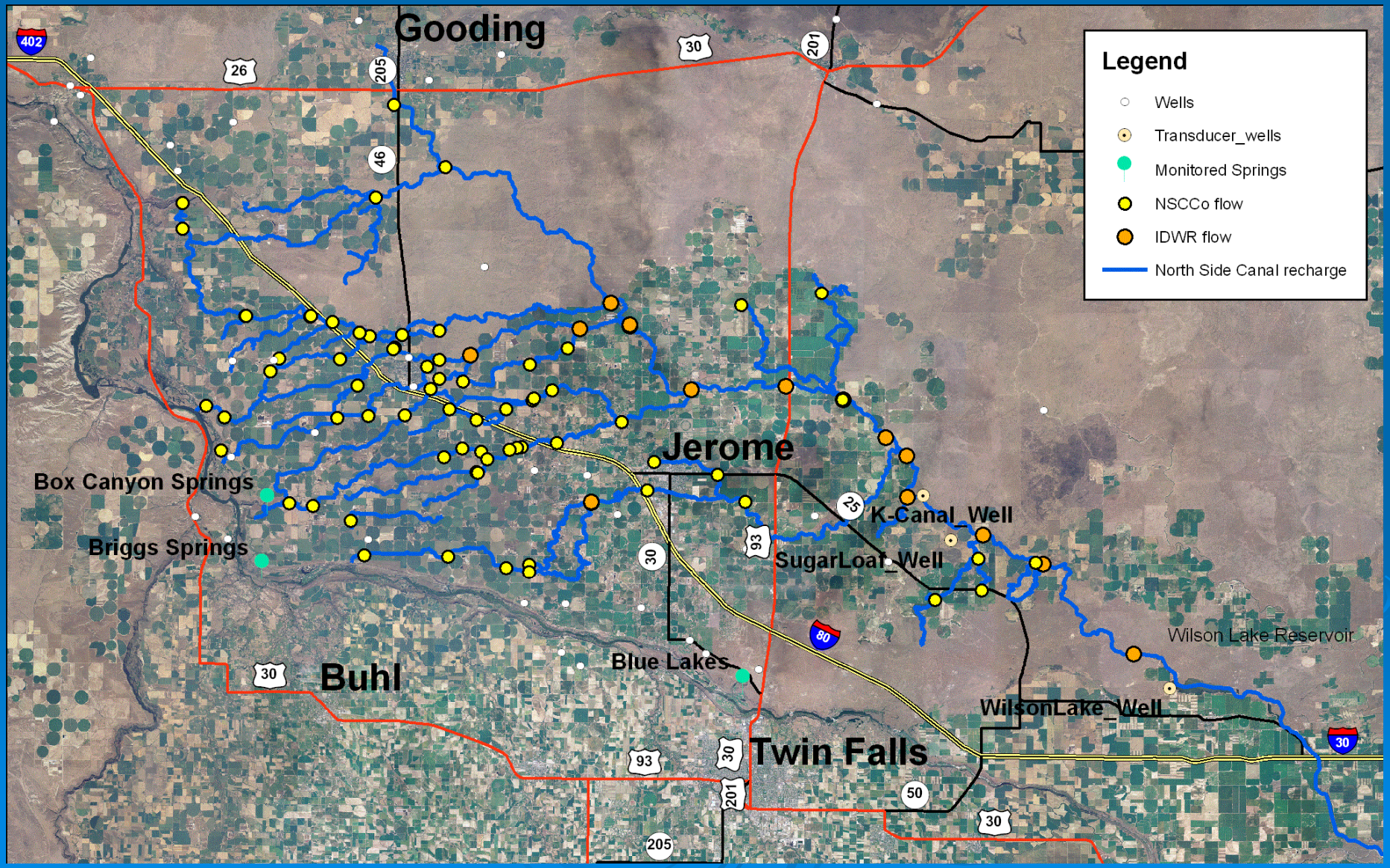
- Data
  - Water levels collected by or for IDWR
  - Wells with transducer data
  - USGS spring measurements
  - IDWR November seepage run
  - NSCCo ditch rider data collected at checks, weirs, and rated sections
- Field observations
- Results

North Side Canal Co

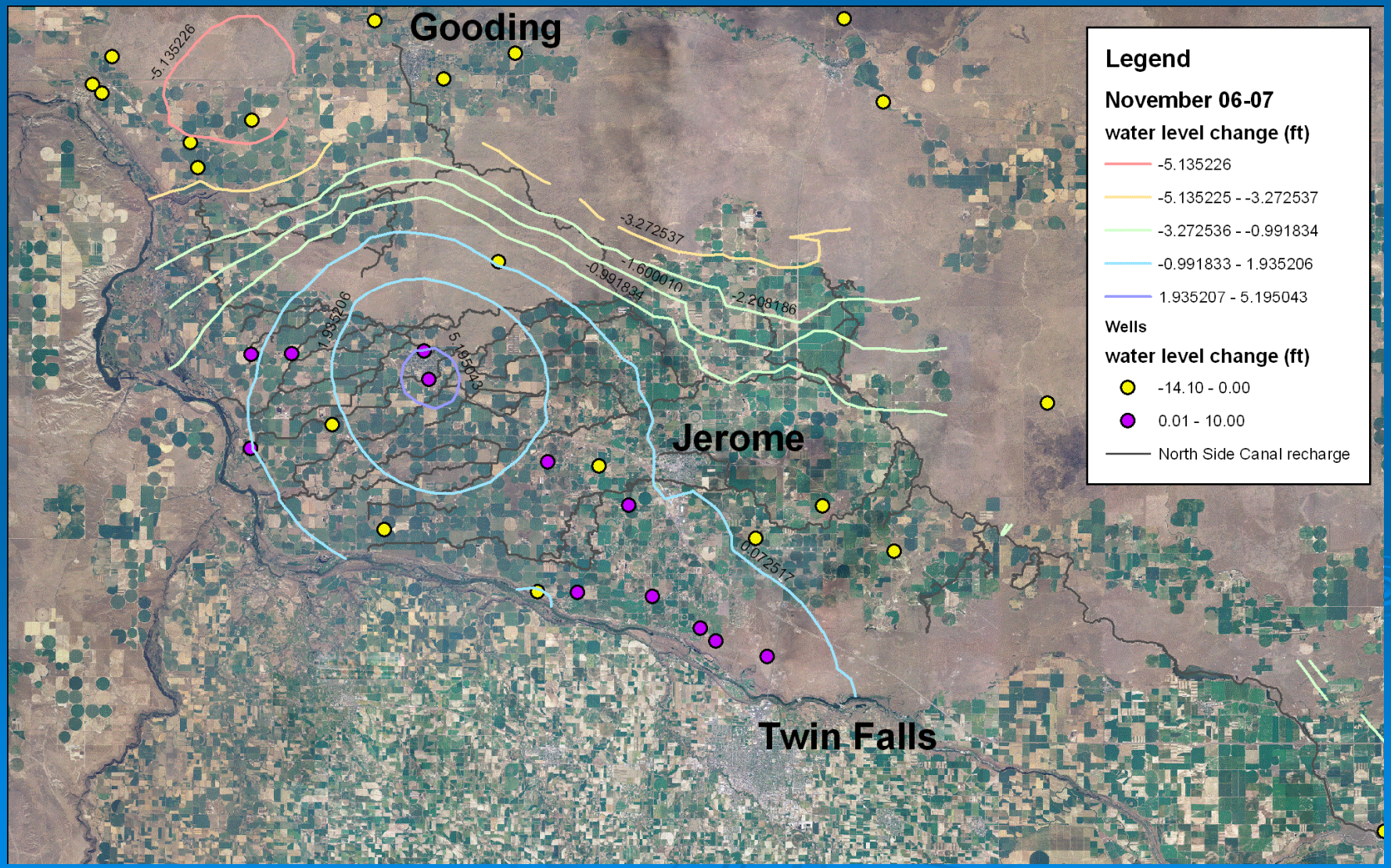




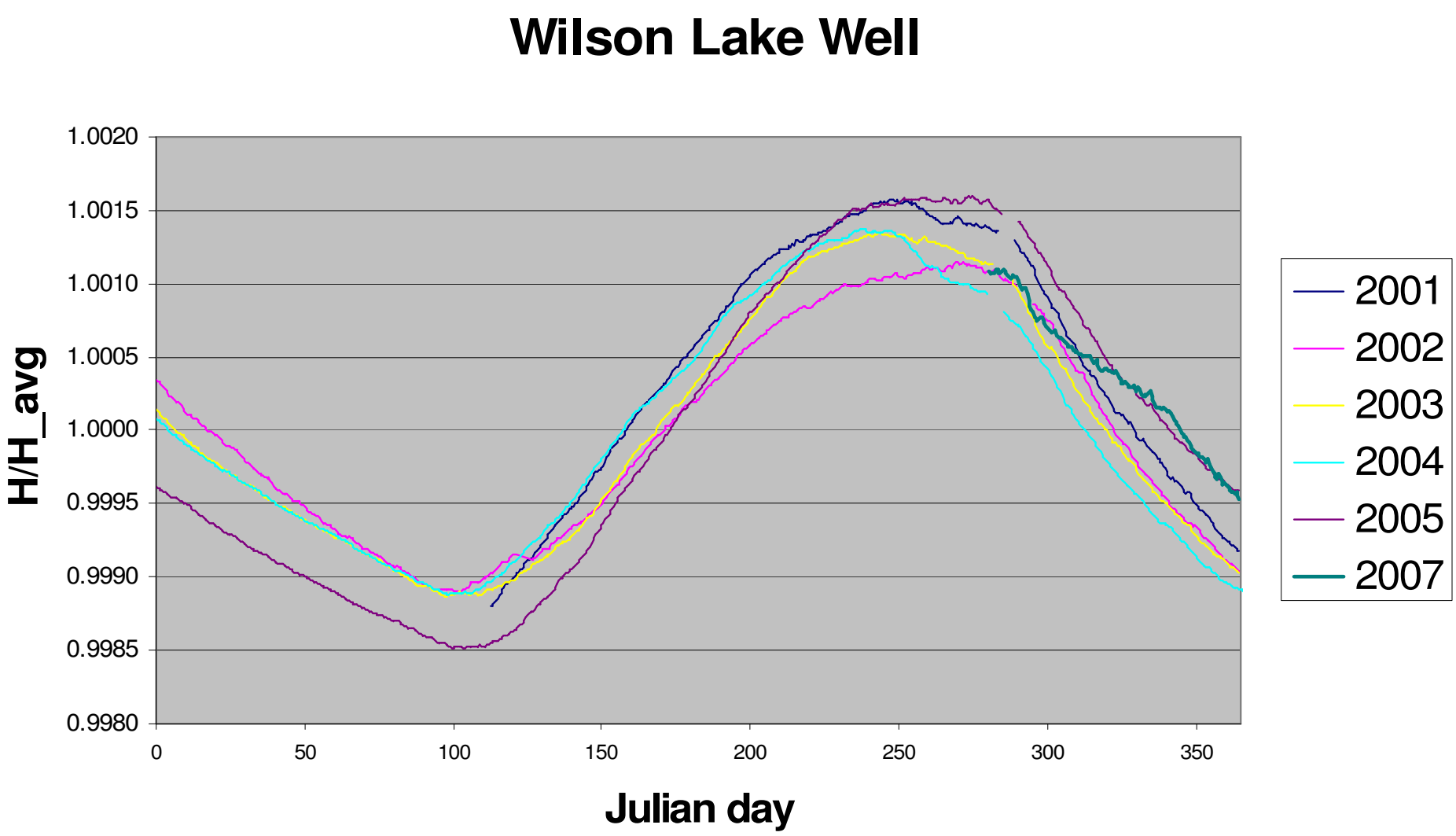
Measurement Locations



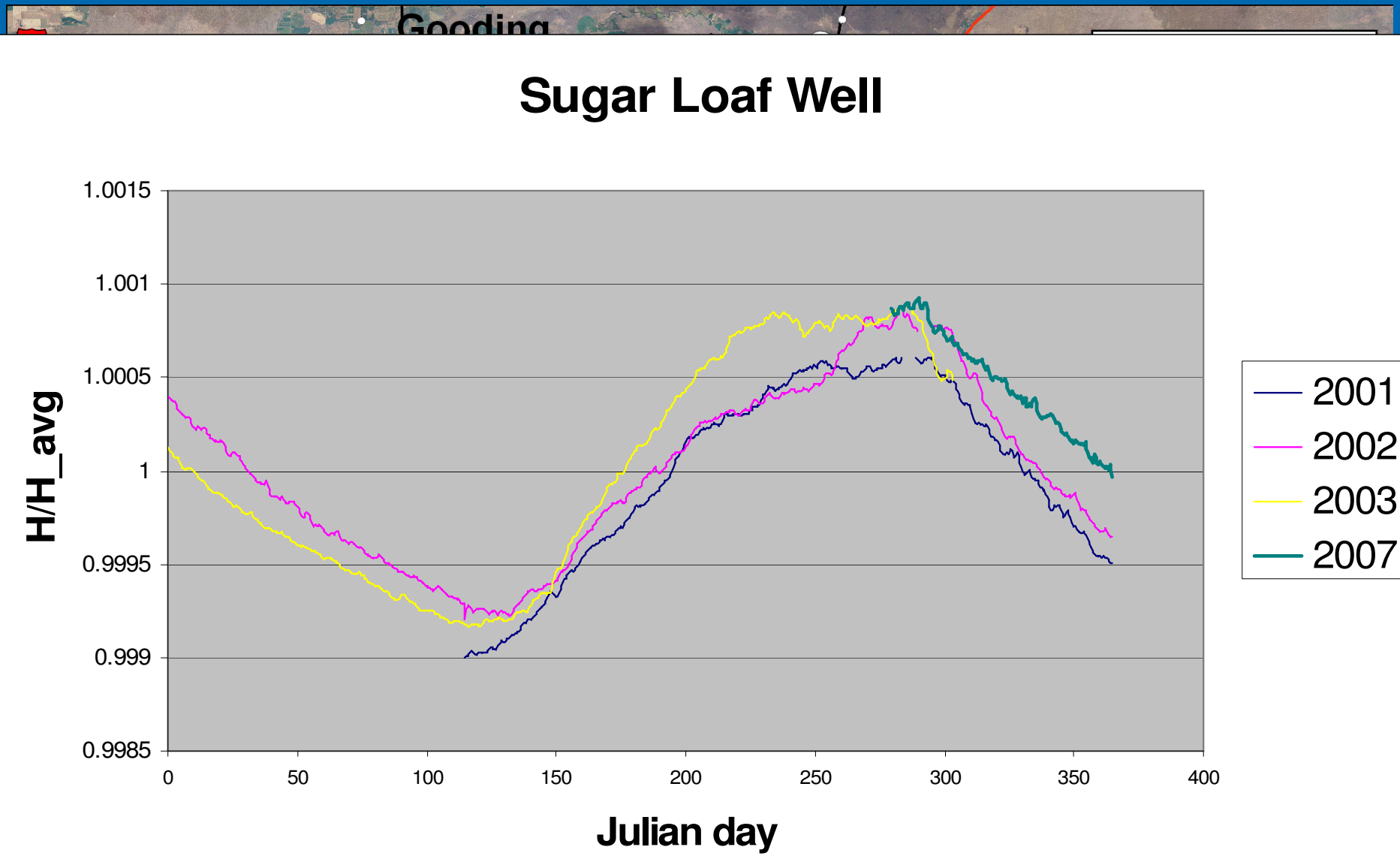
Water level change November 2006 – November 2007



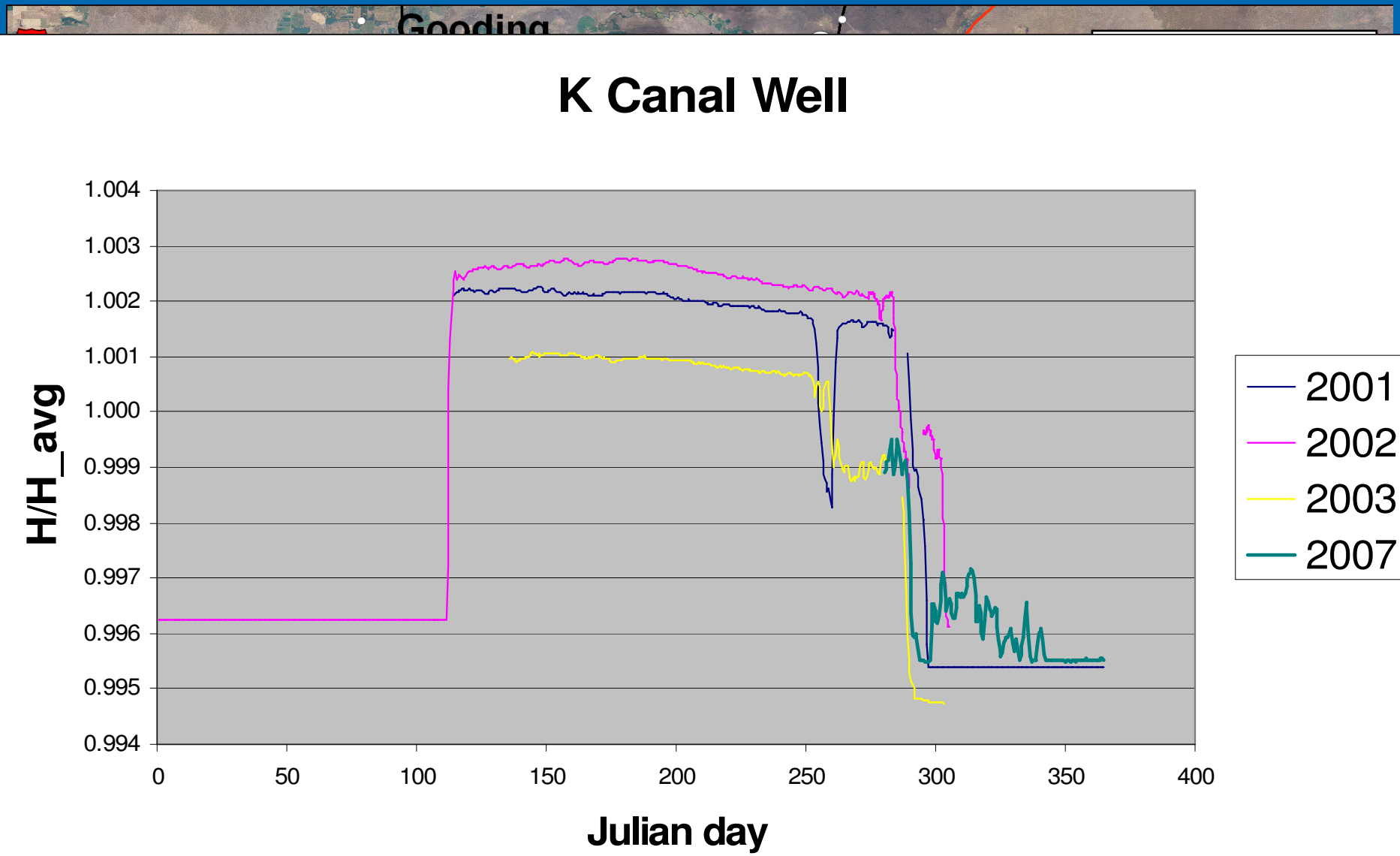
Wilson Lake Well



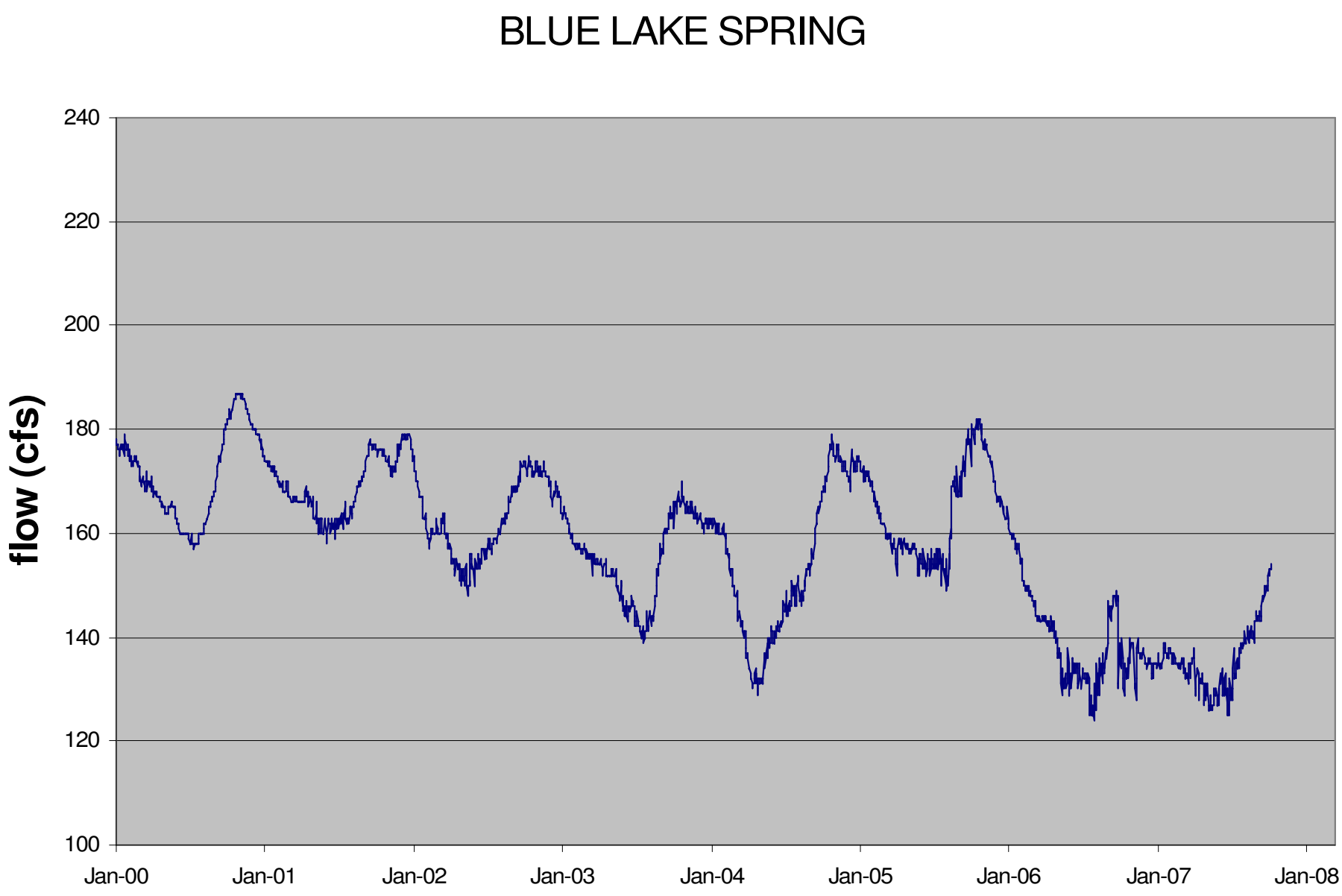
Sugar Loaf Well



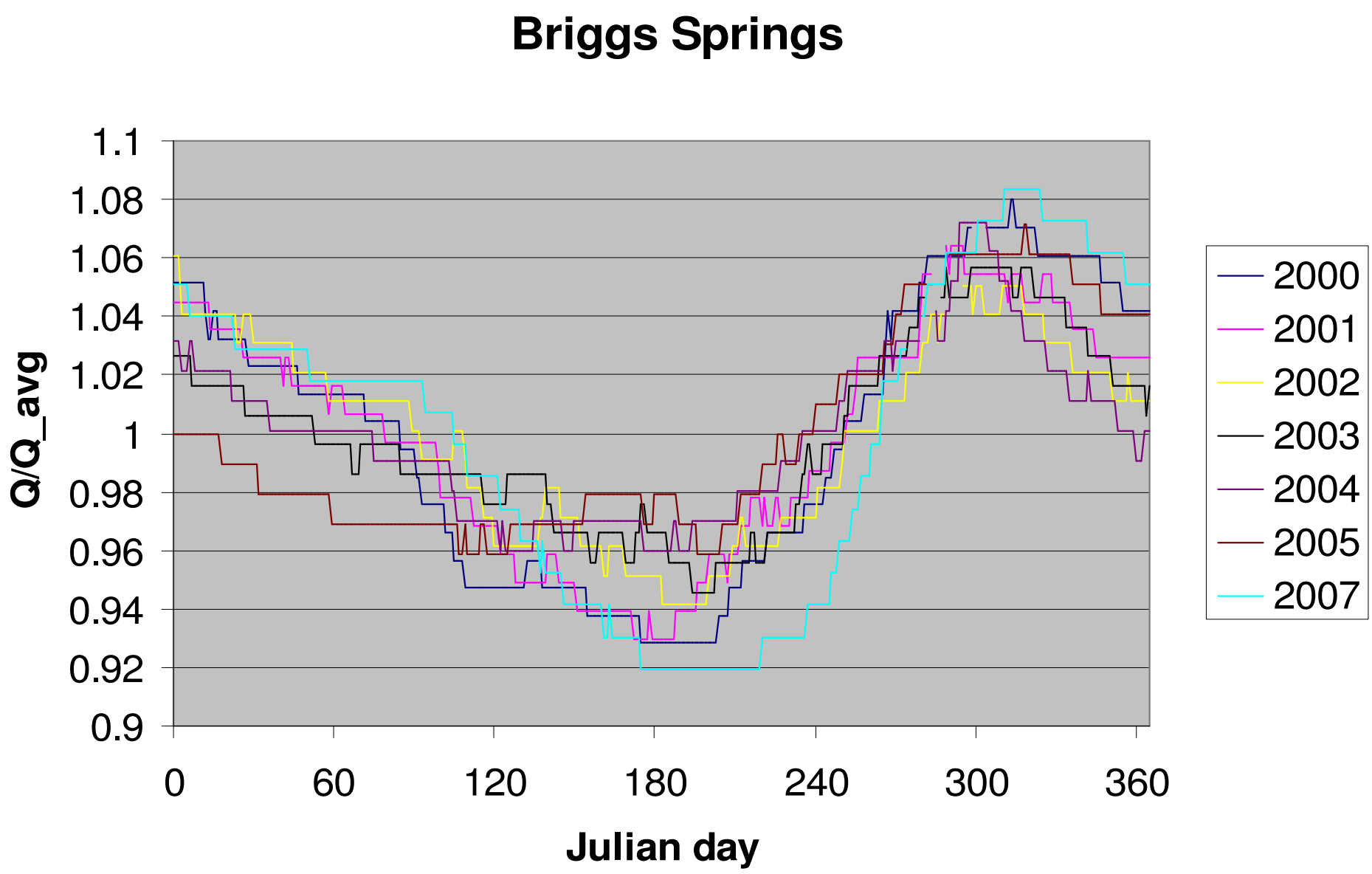
K Canal Well


K Canal Well
H/H_avg
1.004
1.003
1.002
1.001
1.000
0.999
0.998
0.997
0.996
0.995
0.994
0
50
100
150
200
250
300
350
400
Julian day
2001
2002
2003
2007

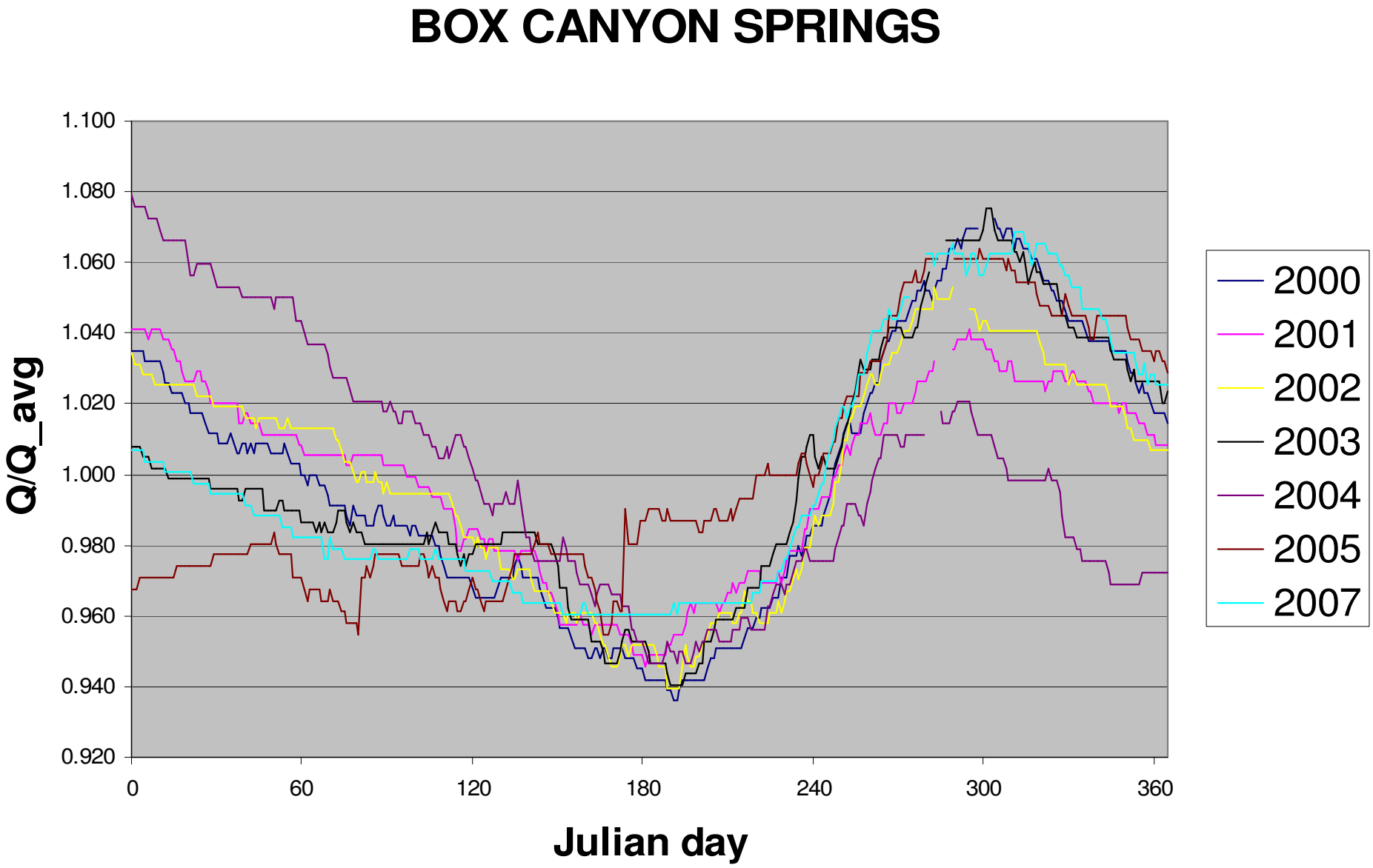
Blue Lake Spring



Briggs Springs



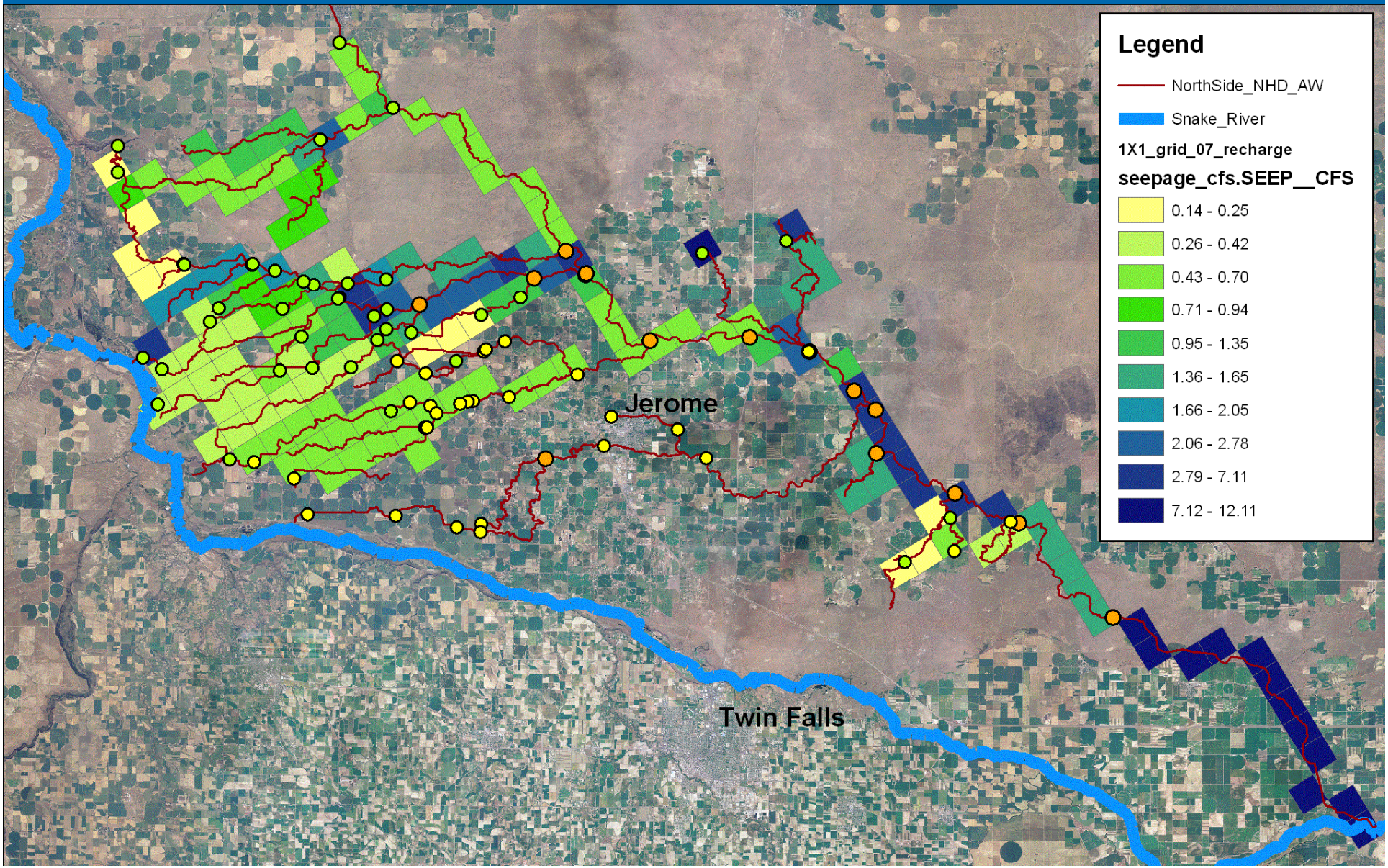
Box Canyon Springs



Spring Statistics

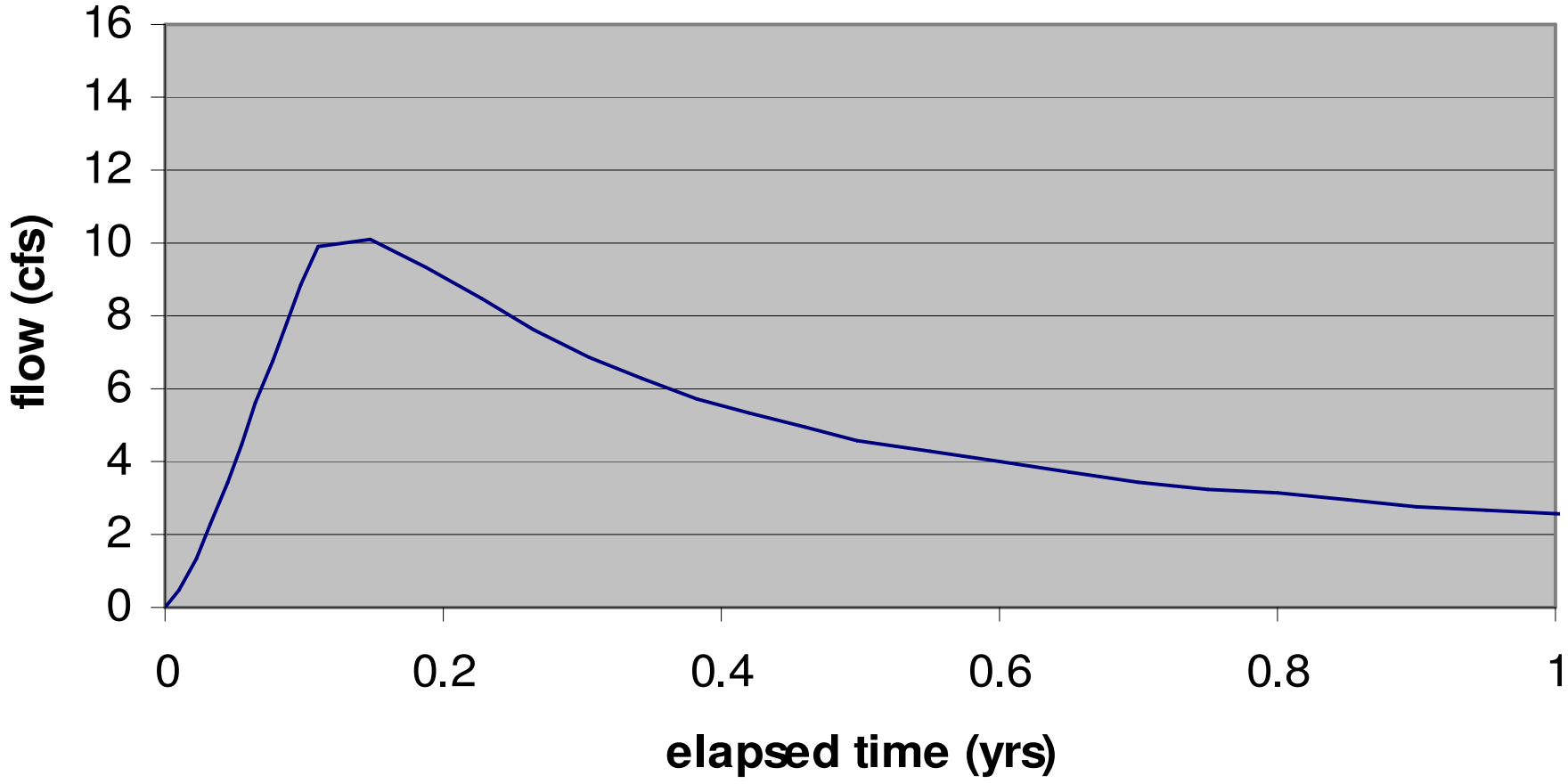
Briggs Spring		Box Canyon Springs	
Date of Max Q	days past shutoff	Date of Max Q	days past shutoff
11/9/2000	12	10/31/2000	3
10/16/2001	2	10/23/2001	9
10/21/2002	1	10/11/2002	-9
10/17/2003	5	10/29/2003	17
10/21/2004	12	10/10/2004	1
11/15/2005	31	10/27/2005	12
11/21/2007	47	11/11/2007	37
mean	10.50	mean	5.50
stand dev	11.11	stand dev	9.20
count	6	count	6
conf int	19.39	conf int	12.86

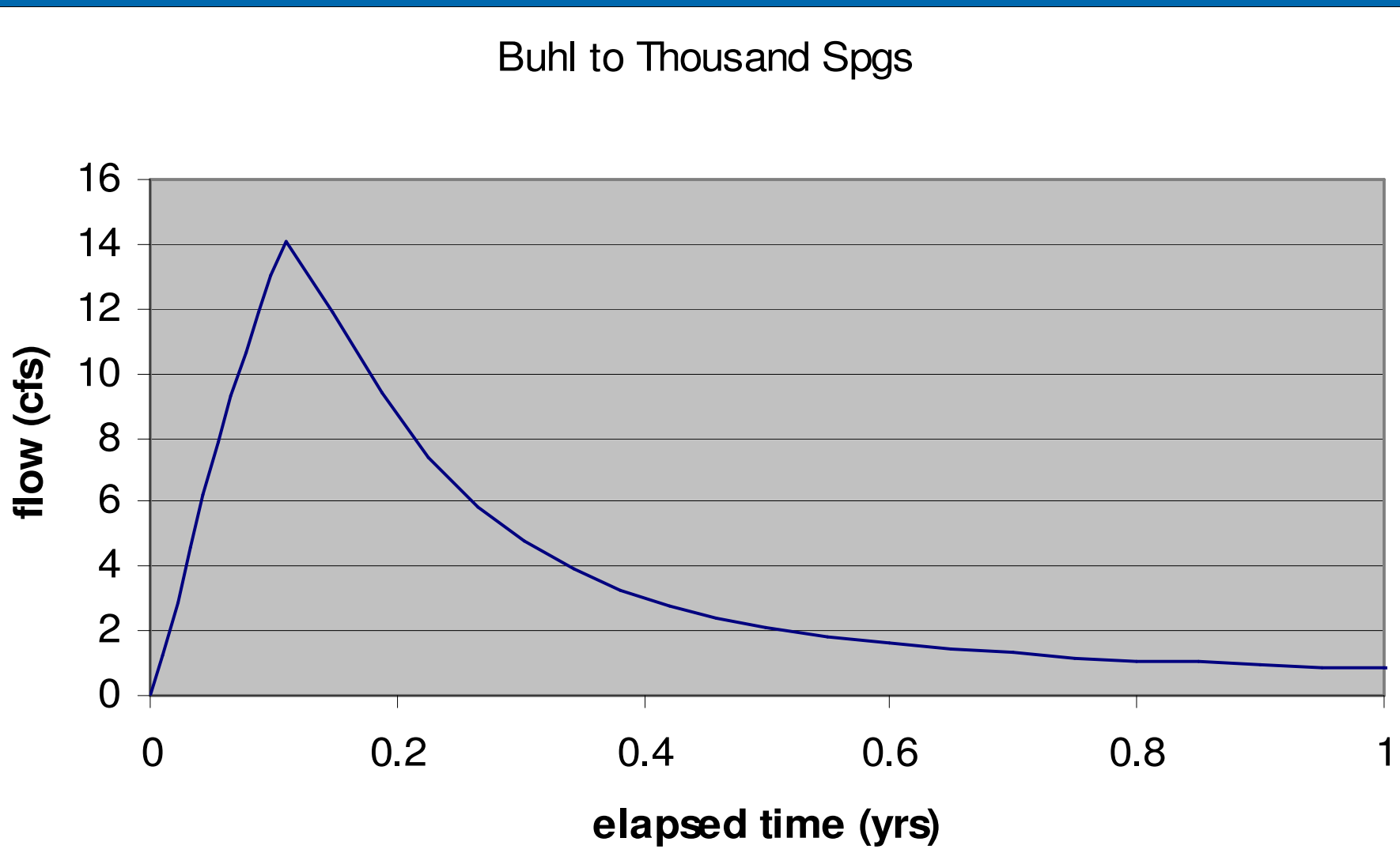
Seepage Calculation

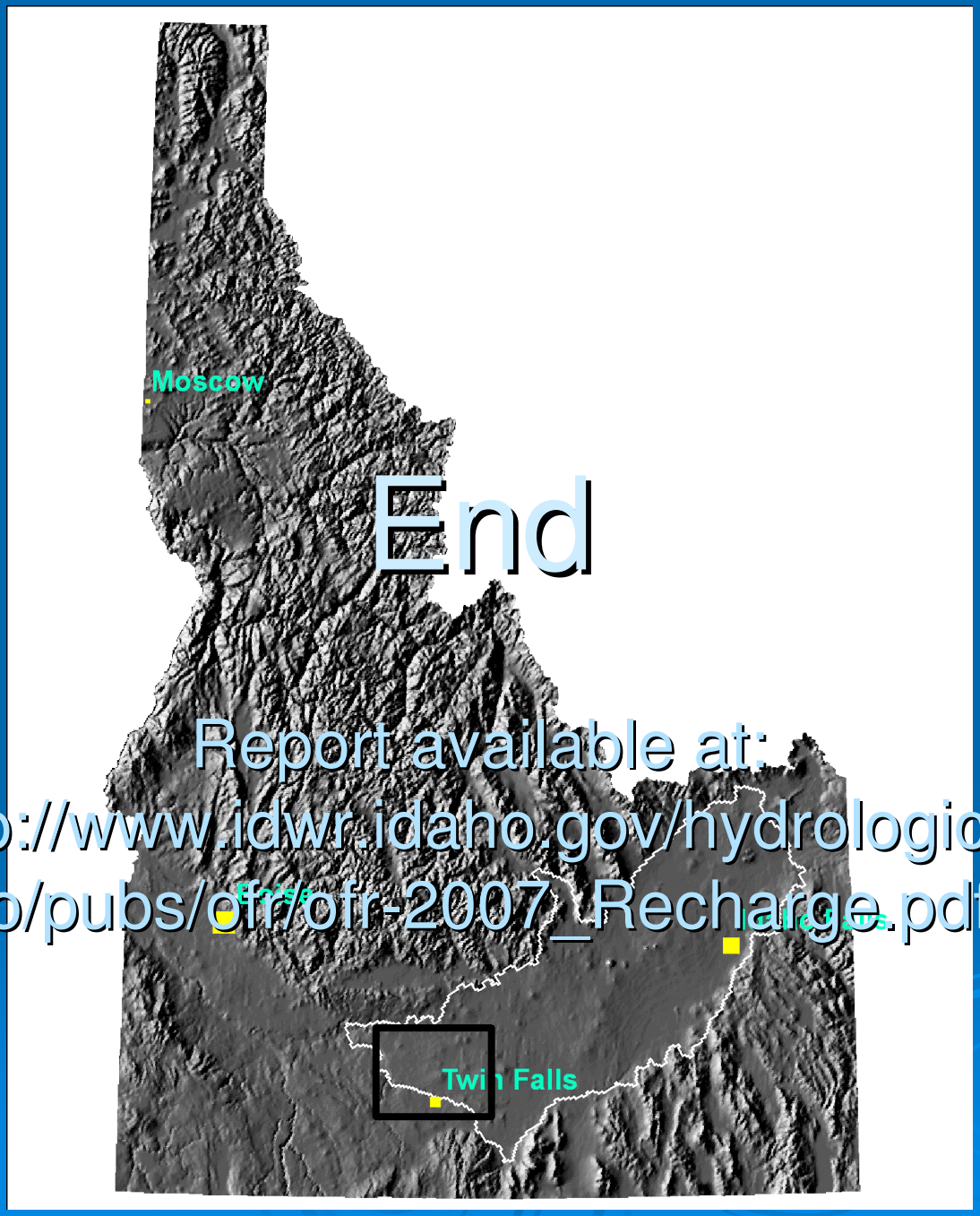


Modeled Steady State Impact

Model Reach	% of recharge
Ashton-Rexburg	0.52%
Heise-Shelley	0.60%
Shelley-nr Blackfoot	4.44%
nr Blackfoot-Neeley	15.47%
Neeley-Minidoka	4.36%
Devils Washbowl-Buhl (Blue Lakes)	34.72%
Buhl-Thousand Spgs. (Briggs & Box Canyon Springs)	16.99%
Thousand Spgs.	12.67%
Thousand Spgs.-Malad	1.41%
Malad	8.50%
Malad-Bancroft	0.31%


Devils Washbowl to Buhl
16
14
12
10
8
6
4
2
0
flow (cfs)
0
0.2
0.4
0.6
0.8
1
elapsed time (yrs)


Buhl to Thousand Spgs
16
14
12
10
8
6
4
2
0
flow (cfs)
0
0.2
0.4
0.6
0.8
1
elapsed time (yrs)



End

Report available at:
http://www.idwr.idaho.gov/hydrologic/info/pubs/ofr/ofr-2007_Recharge.pdf