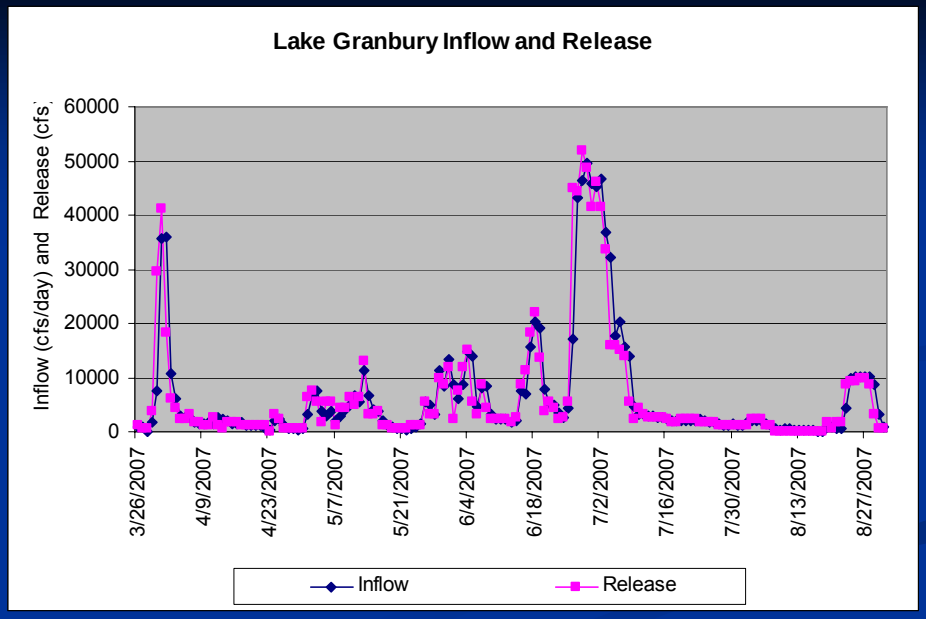
Brazos River Authority

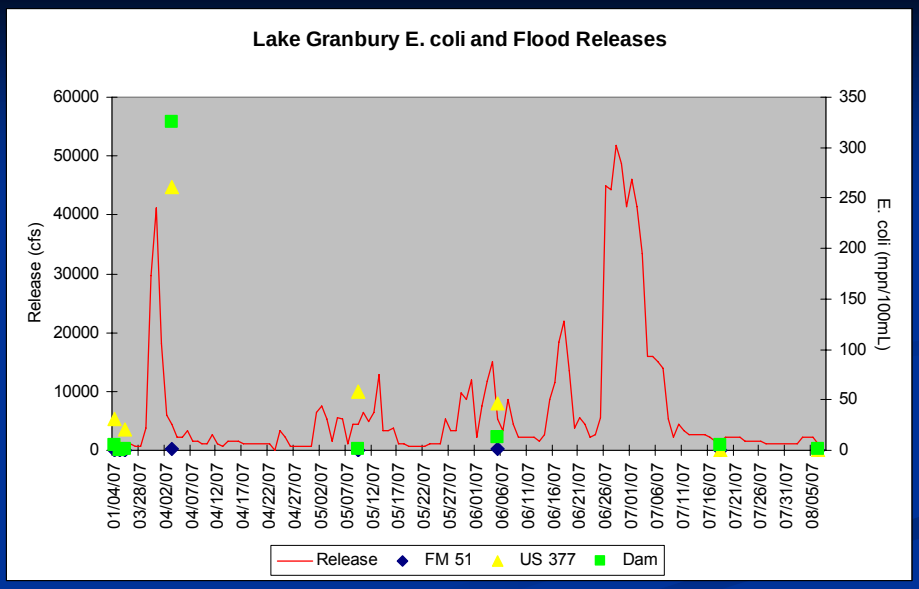
Impact of Flooding on Water Quality

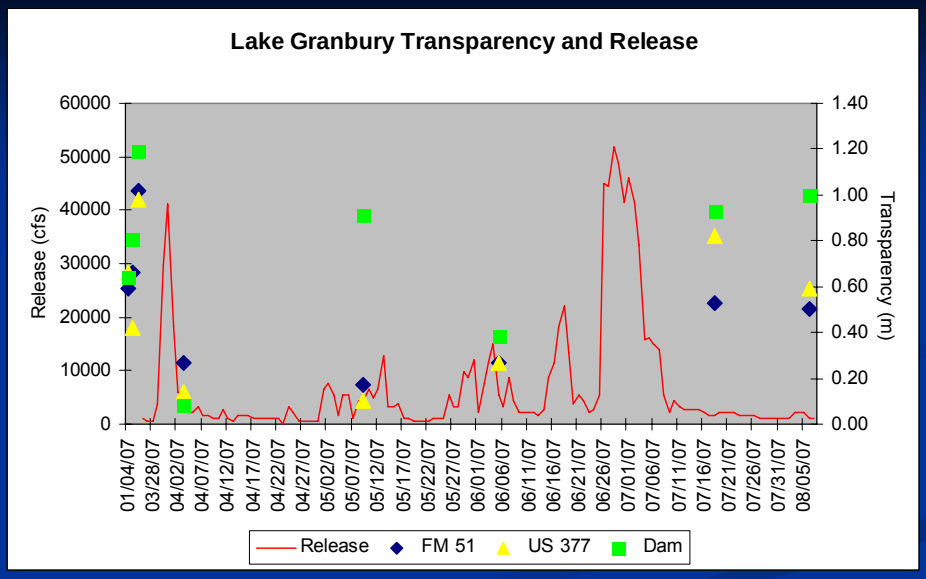
Flood Statistics

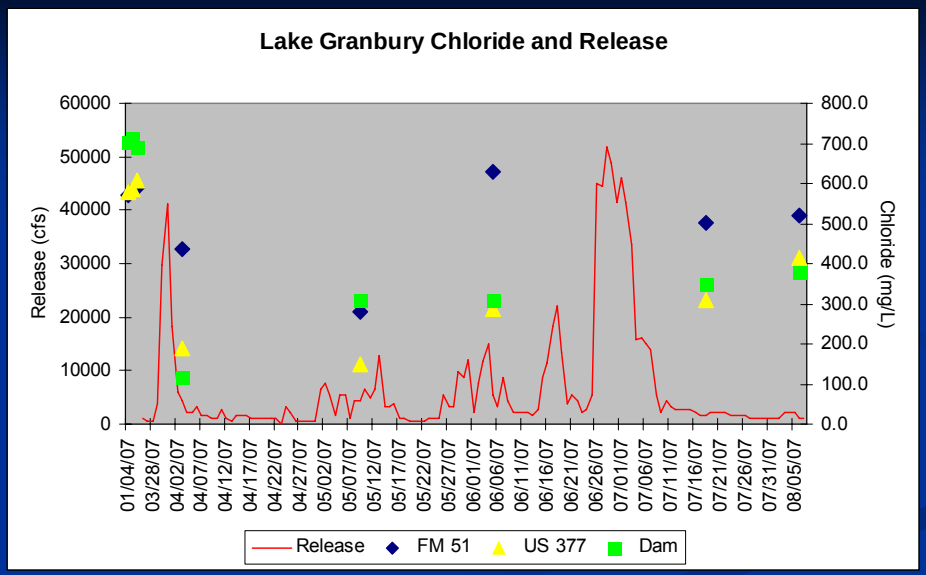
- Total Release from March 26, 2007 through August 7, 2007 ≈ 1,830,000 ac-ft, roughly 13 times the capacity of the lake
- July releases alone ≈ 805,000 ac-ft, roughly 6.5 times the capacity of the lake
- Peak release rate of 52,000 cfs

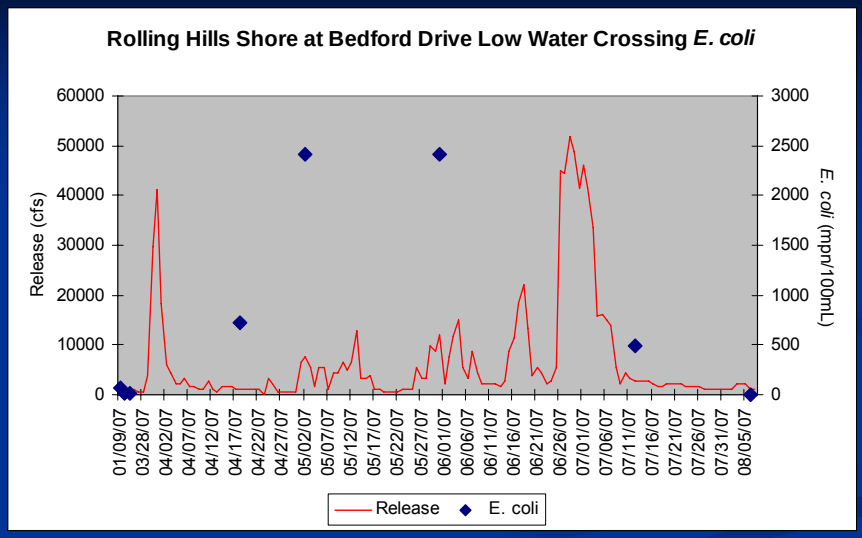
06/27/2007

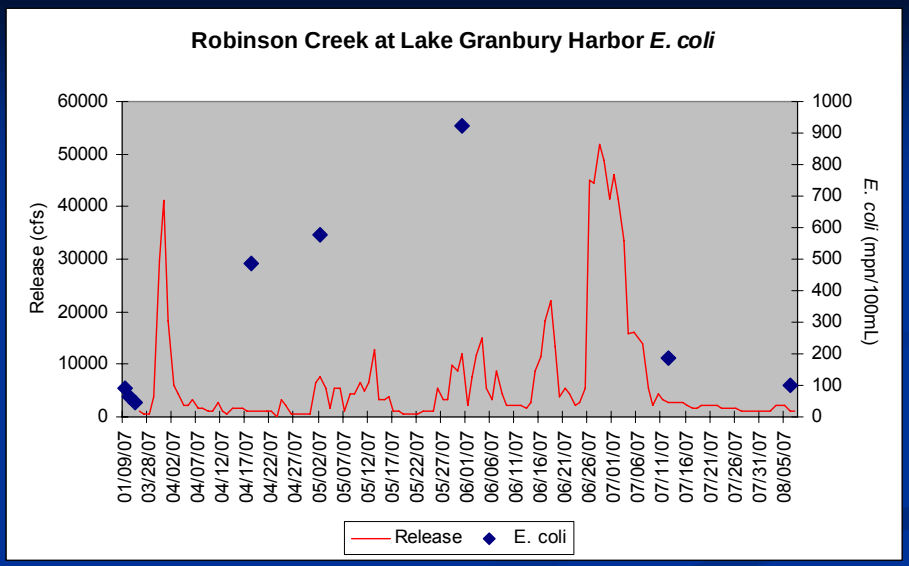

Lake Granbury Inflow and Release
Inflow (cfs/day) and Release (cfs)
60000
50000
40000
30000
20000
10000
0
3/26/2007
4/9/2007
4/23/2007
5/7/2007
5/21/2007
6/4/2007
6/18/2007
7/2/2007
7/16/2007
7/30/2007
8/13/2007
8/27/2007
Inflow
Release


Lake Granbury E. coli and Flood Releases
Release (cfs)
60000
50000
40000
30000
20000
10000
0
E. coli (mpn/100mL)
350
300
250
200
150
100
50
0
01/04/07
03/28/07
04/02/07
04/07/07
04/12/07
04/17/07
04/22/07
04/27/07
05/02/07
05/07/07
05/12/07
05/17/07
05/22/07
05/27/07
06/01/07
06/06/07
06/11/07
06/16/07
06/21/07
06/26/07
07/01/07
07/06/07
07/11/07
07/16/07
07/21/07
07/26/07
07/31/07
08/05/07
Release
FM 51
US 377
Dam


Lake Granbury Transparency and Release
Release (cfs)
Transparency (m)
60000
50000
40000
30000
20000
10000
0
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
01/04/07
03/28/07
04/02/07
04/07/07
04/12/07
04/17/07
04/22/07
04/27/07
05/02/07
05/07/07
05/12/07
05/17/07
05/22/07
05/27/07
06/01/07
06/06/07
06/11/07
06/16/07
06/21/07
06/26/07
07/01/07
07/06/07
07/11/07
07/16/07
07/21/07
07/26/07
07/31/07
08/05/07
Release
FM 51
US 377
Dam


Lake Granbury Chloride and Release
Release (cfs)
Chloride (mg/L)
60000
50000
40000
30000
20000
10000
0
800.0
700.0
600.0
500.0
400.0
300.0
200.0
100.0
0.0
01/04/07
03/28/07
04/02/07
04/07/07
04/12/07
04/17/07
04/22/07
04/27/07
05/02/07
05/07/07
05/12/07
05/17/07
05/22/07
05/27/07
06/01/07
06/06/07
06/11/07
06/16/07
06/21/07
06/26/07
07/01/07
07/06/07
07/11/07
07/16/07
07/21/07
07/26/07
07/31/07
08/05/07
Release
FM 51
US 377
Dam


Rolling Hills Shore at Bedford Drive Low Water Crossing E. coli
Release (cfs)
E. coli (mpn/100mL)
60000
50000
40000
30000
20000
10000
0
3000
2500
2000
1500
1000
500
0
01/09/07
03/28/07
04/02/07
04/07/07
04/12/07
04/17/07
04/22/07
04/27/07
05/02/07
05/07/07
05/12/07
05/17/07
05/22/07
05/27/07
06/01/07
06/06/07
06/11/07
06/16/07
06/21/07
06/26/07
07/01/07
07/06/07
07/11/07
07/16/07
07/21/07
07/26/07
07/31/07
08/05/07
Release
E. coli


Robinson Creek at Lake Granbury Harbor E. coli
Release (cfs)
E. coli (mpn/100mL)
60000
50000
40000
30000
20000
10000
0
1000
900
800
700
600
500
400
300
200
100
0
01/09/07
03/28/07
04/02/07
04/07/07
04/12/07
04/17/07
04/22/07
04/27/07
05/02/07
05/07/07
05/12/07
05/17/07
05/22/07
05/27/07
06/01/07
06/06/07
06/11/07
06/16/07
06/21/07
06/26/07
07/01/07
07/06/07
07/11/07
07/16/07
07/21/07
07/26/07
07/31/07
08/05/07
Release
E. coli

Summary

- Watershed received a major cleansing
- Flood had temporary but prominent impact on water quality in the mainbody of the lake and tributary streams
  - Chlorides
  - Transparency
- Impacts on canals highly variable
  - Some experienced a decline in water quality
  - Most did not exhibit much change
- Mainstem and affected coves appear to be returning to normal conditions