River Model Inter-comparison for (and before) SWOT Preliminary comparison of simulations

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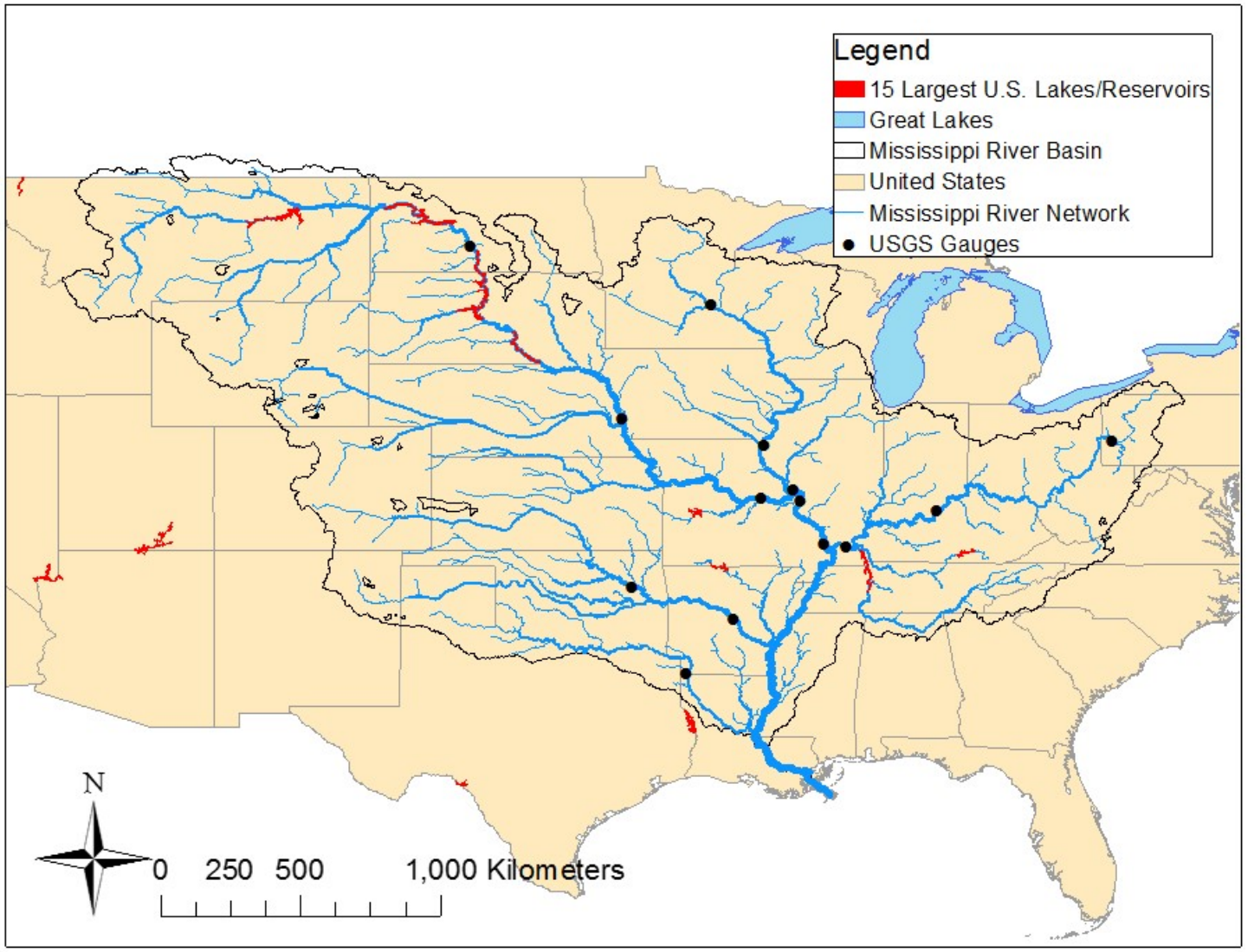
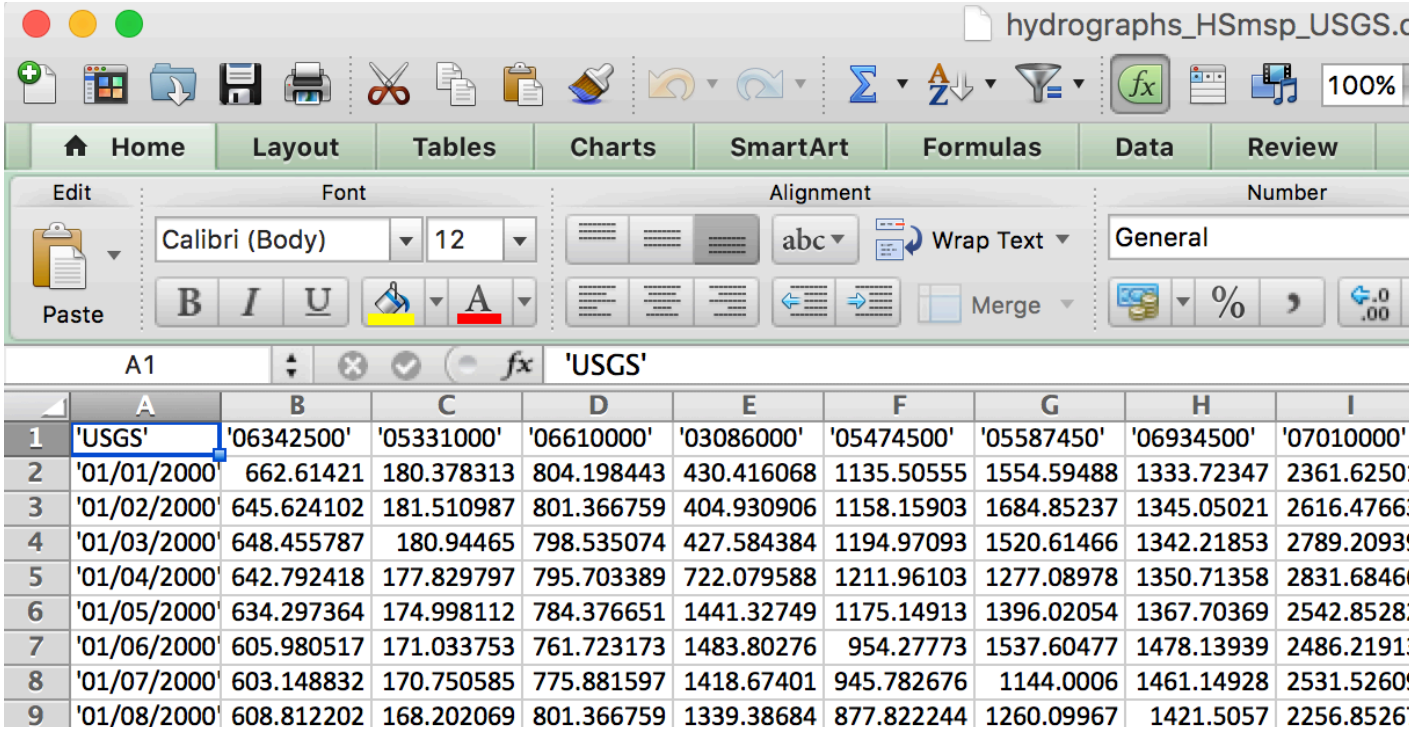
Study domain



Model outputs used

- RAPID (from David et al., 2015 WRR)
- CaMa-Flood (prepared for this study)
- MGB (prepared for this study: Hydrodynamic model; Depth h95 and Width default; without linear reservoirs)

File formats

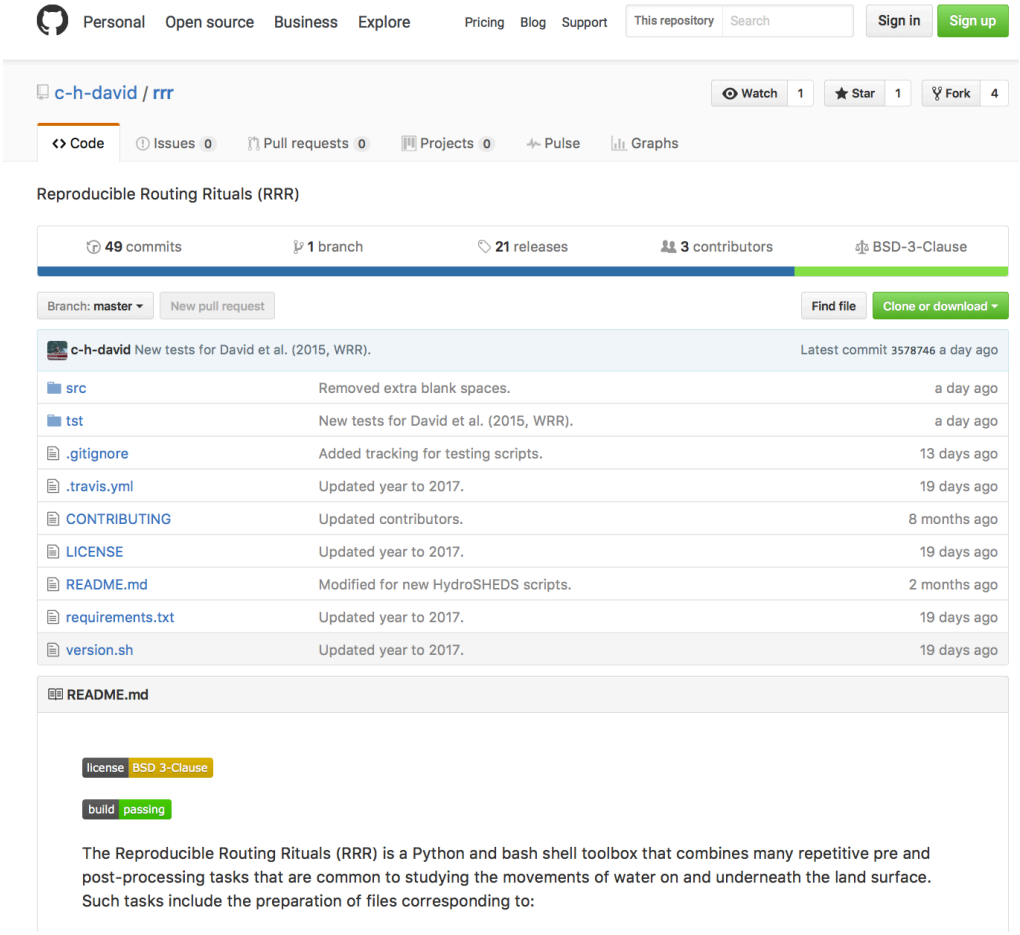


	A	B	C	D	E	F	G	H	I
1	'USGS'	'06342500'	'05331000'	'06610000'	'03086000'	'05474500'	'05587450'	'06934500'	'07010000'
2	'01/01/2000'	662.61421	180.378313	804.198443	430.416068	1135.50555	1554.59488	1333.72347	2361.6250
3	'01/02/2000'	645.624102	181.510987	801.366759	404.930906	1158.15903	1684.85237	1345.05021	2616.4766
4	'01/03/2000'	648.455787	180.94465	798.535074	427.584384	1194.97093	1520.61466	1342.21853	2789.2093
5	'01/04/2000'	642.792418	177.829797	795.703389	722.079588	1211.96103	1277.08978	1350.71358	2831.6846
6	'01/05/2000'	634.297364	174.998112	784.376651	1441.32749	1175.14913	1396.02054	1367.70369	2542.8528
7	'01/06/2000'	605.980517	171.033753	761.723173	1483.80276	954.27773	1537.60477	1478.13939	2486.2191
8	'01/07/2000'	603.148832	170.750585	775.881597	1418.67401	945.782676	1144.0006	1461.14928	2531.5260
9	'01/08/2000'	608.812202	168.202069	801.366759	1339.38684	877.822244	1260.09967	1421.5057	2256.8526

14 locations throughout the Mississippi River Basin

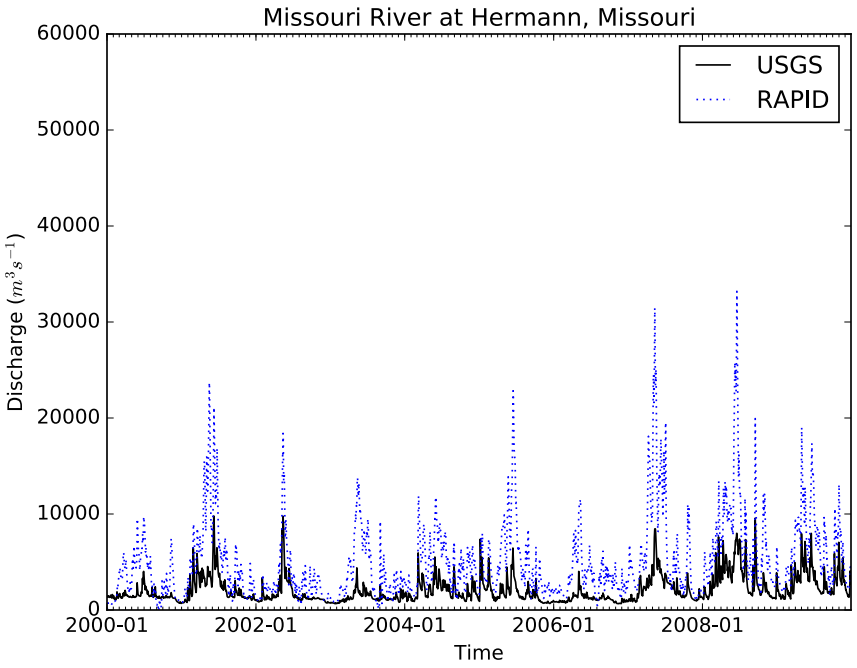
As specified in experimental design table:
http://rapid-hub.org/docs/SWOT_ST_WG_Mississippi_Experimental_Design.pdf

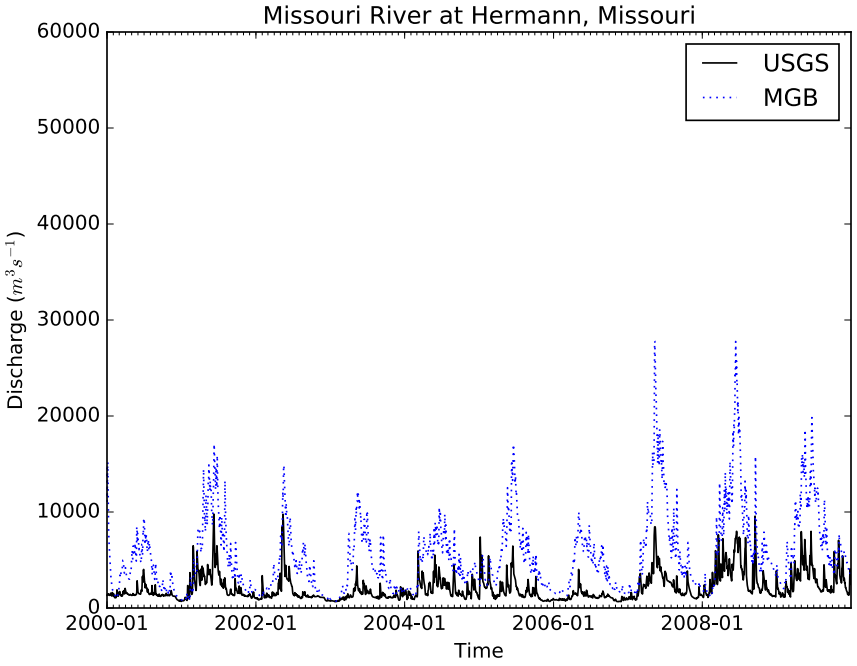
Processing toolbox

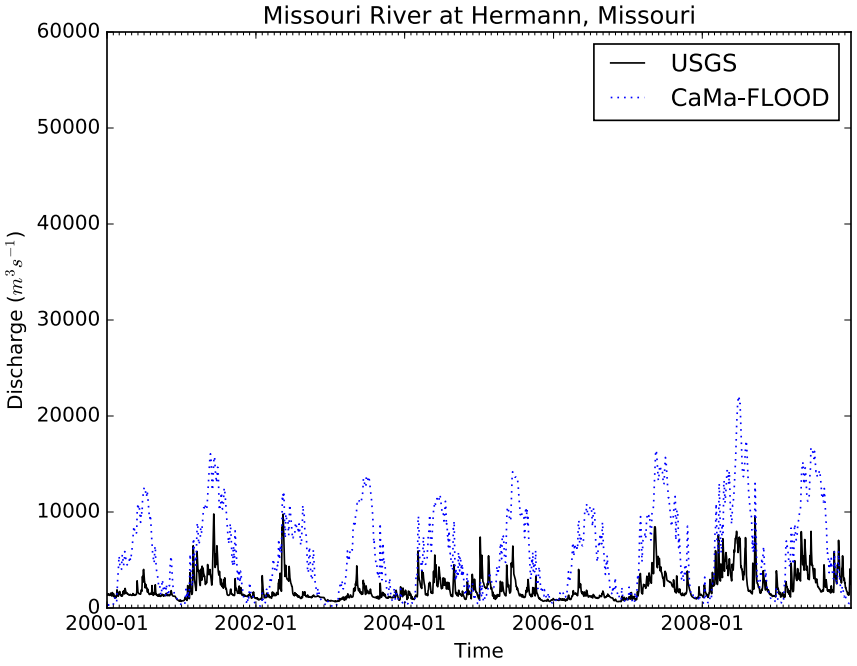


https://github.com/c-h-david/rrr
Currently being updated with the Python scripts for analysis

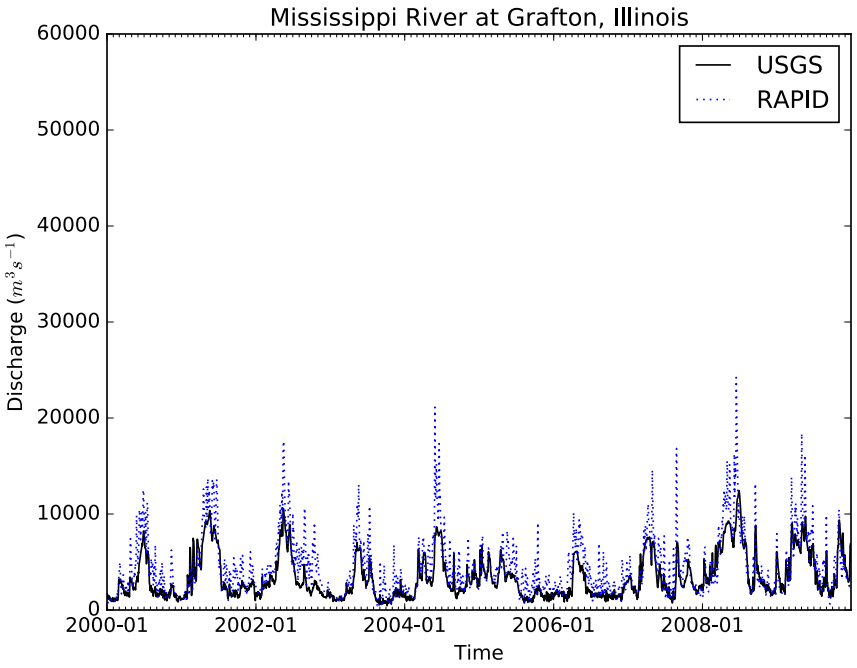
Outlet of Missouri River

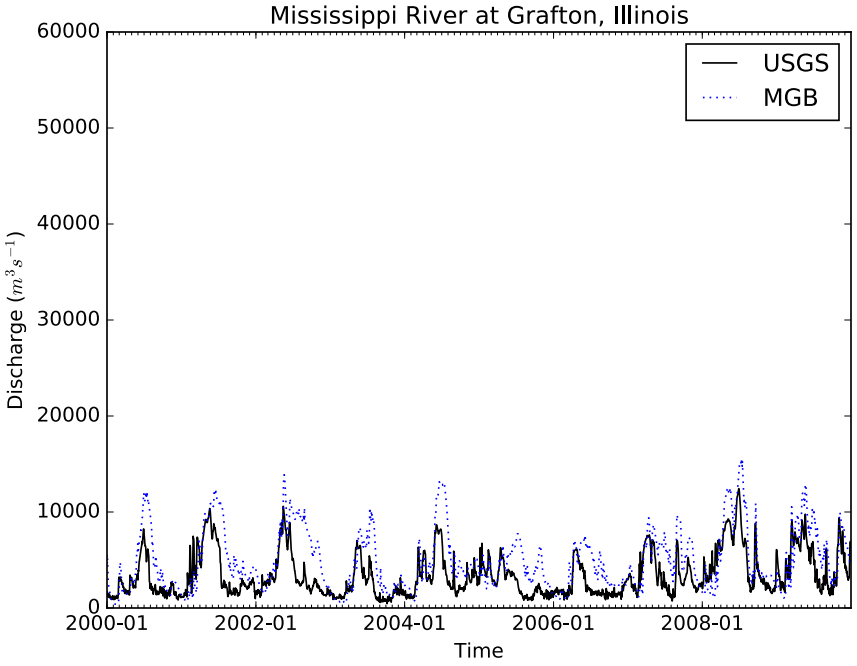


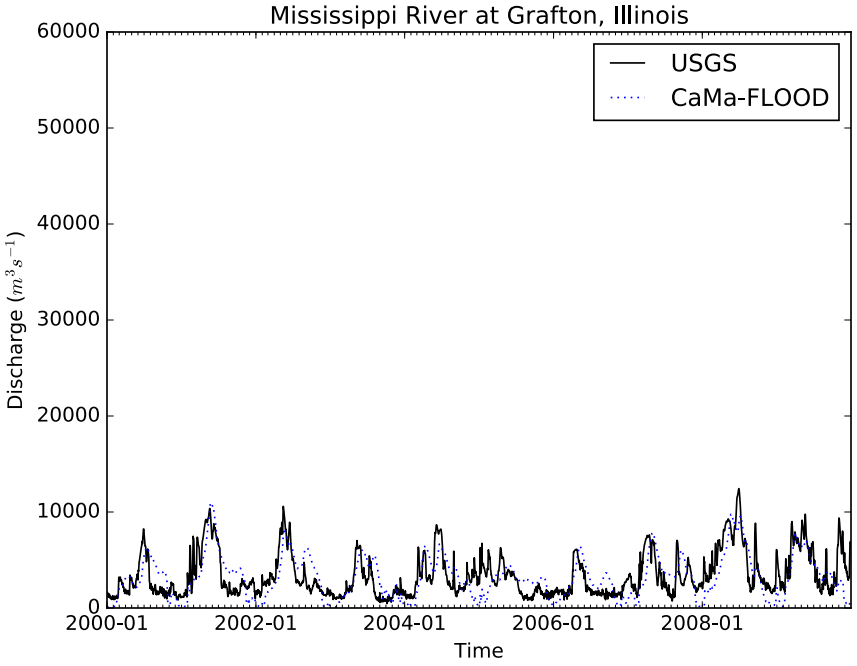


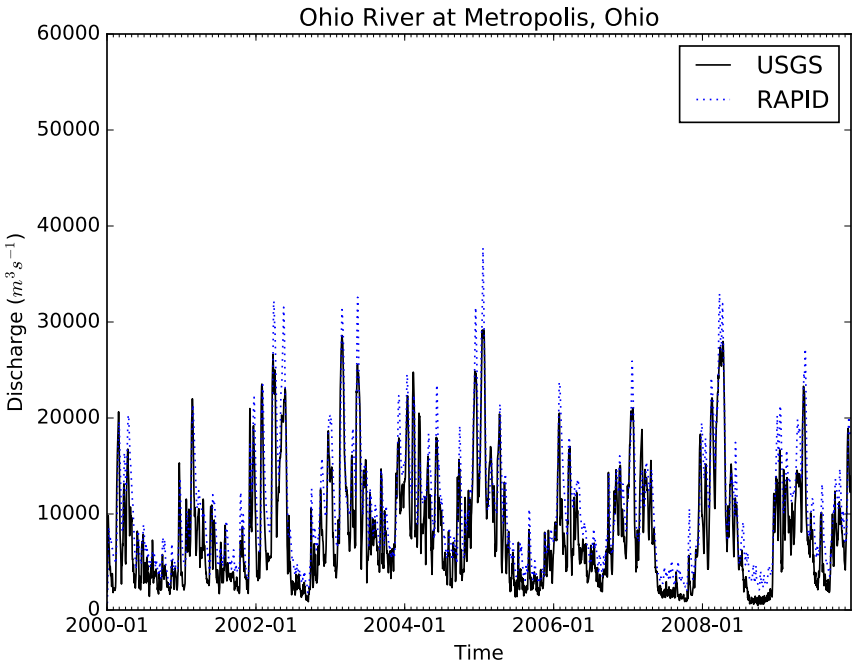


Outlet of Upper Mississippi River

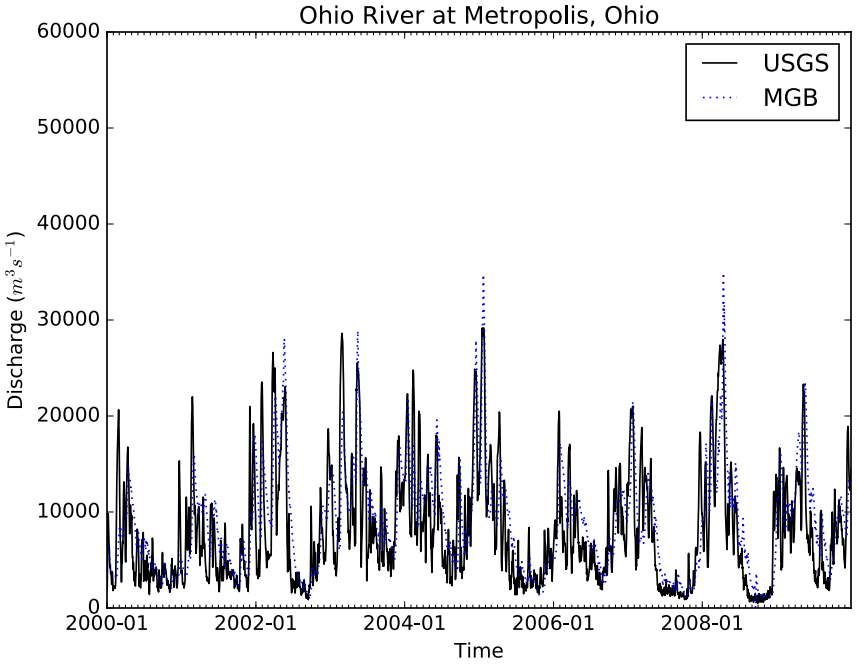


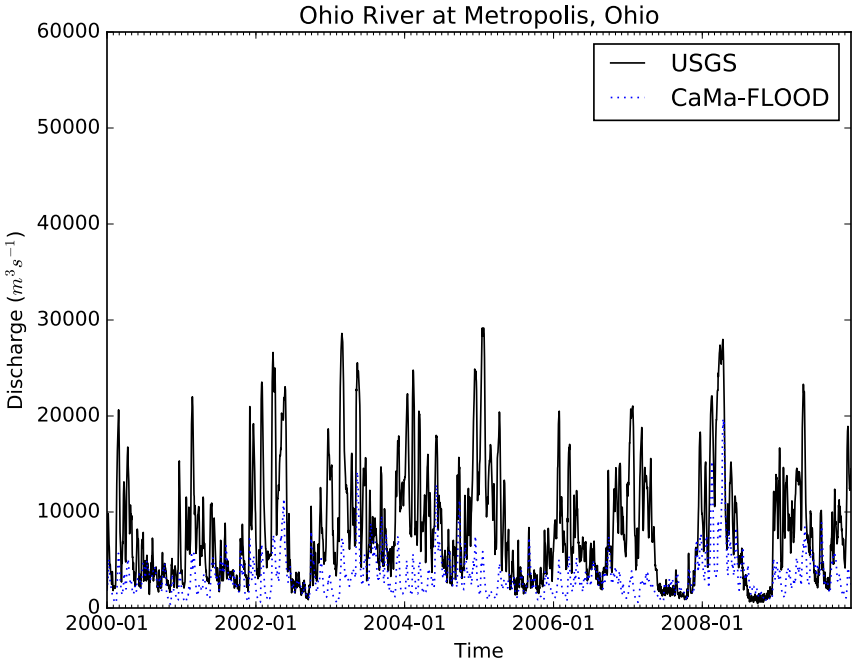






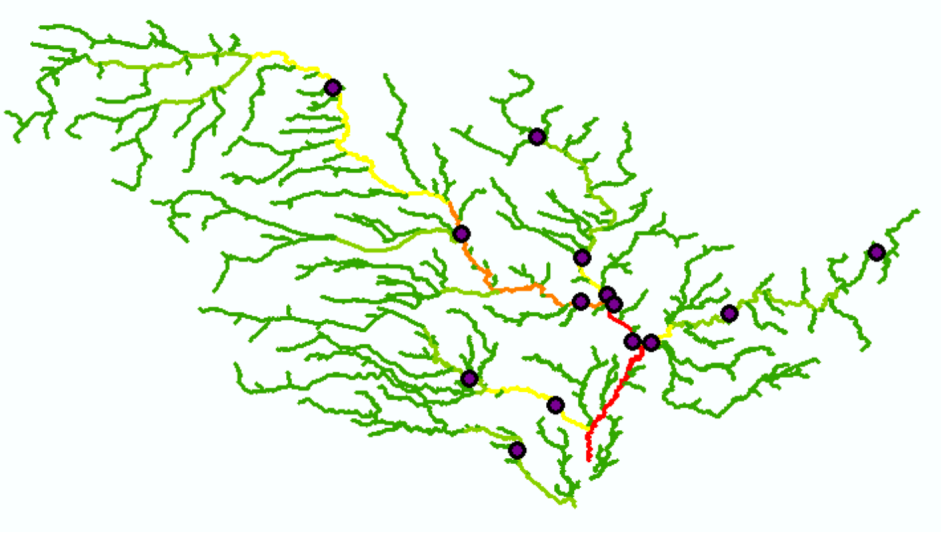
Outlet of Ohio River





Next steps

- Bias
- RMSE
- Nash Sutcliffe Efficiency
- Map of variability?
- Other models?



Thanks!
Questions?