



Little Colorado River PIT Antenna Update 2014

William Persons

Scott Vanderkooi

Grand Canyon Monitoring and Research Center

January 2015

U.S. Department of the Interior
U.S. Geological Survey

Science Questions:

- How can native and nonnative fish best be monitored while minimizing impacts from capture and handling or sampling?





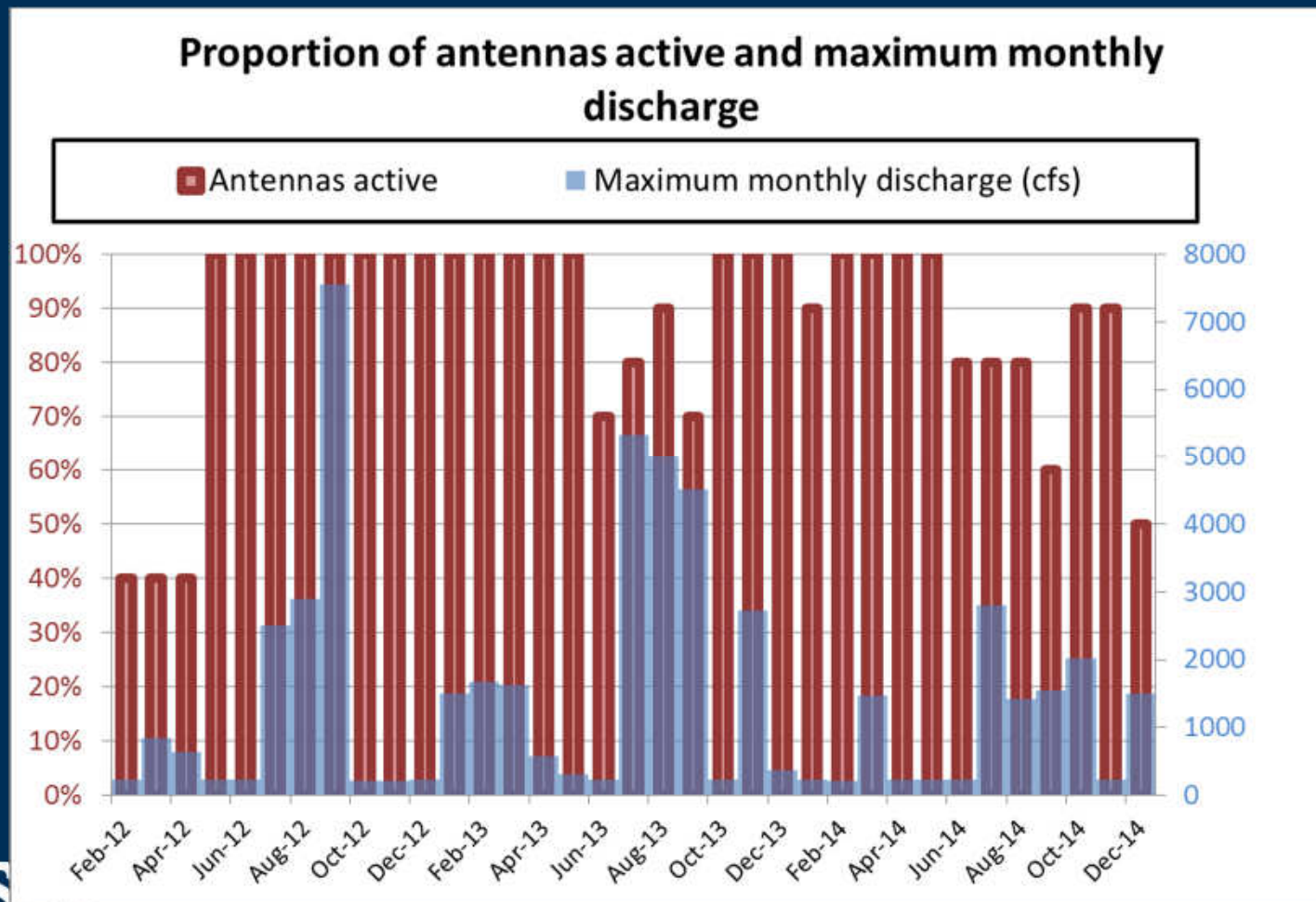






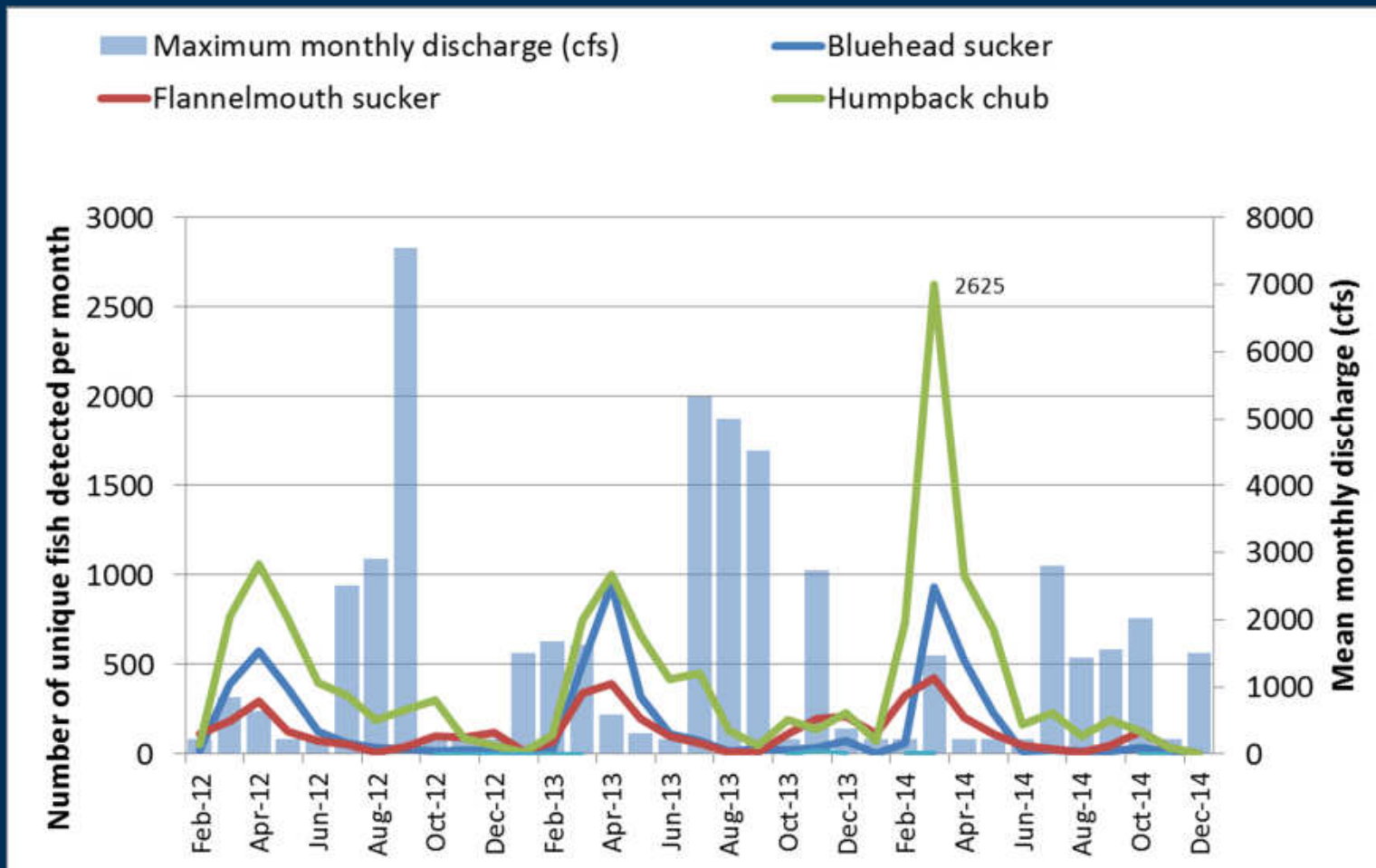


Relative antenna performance



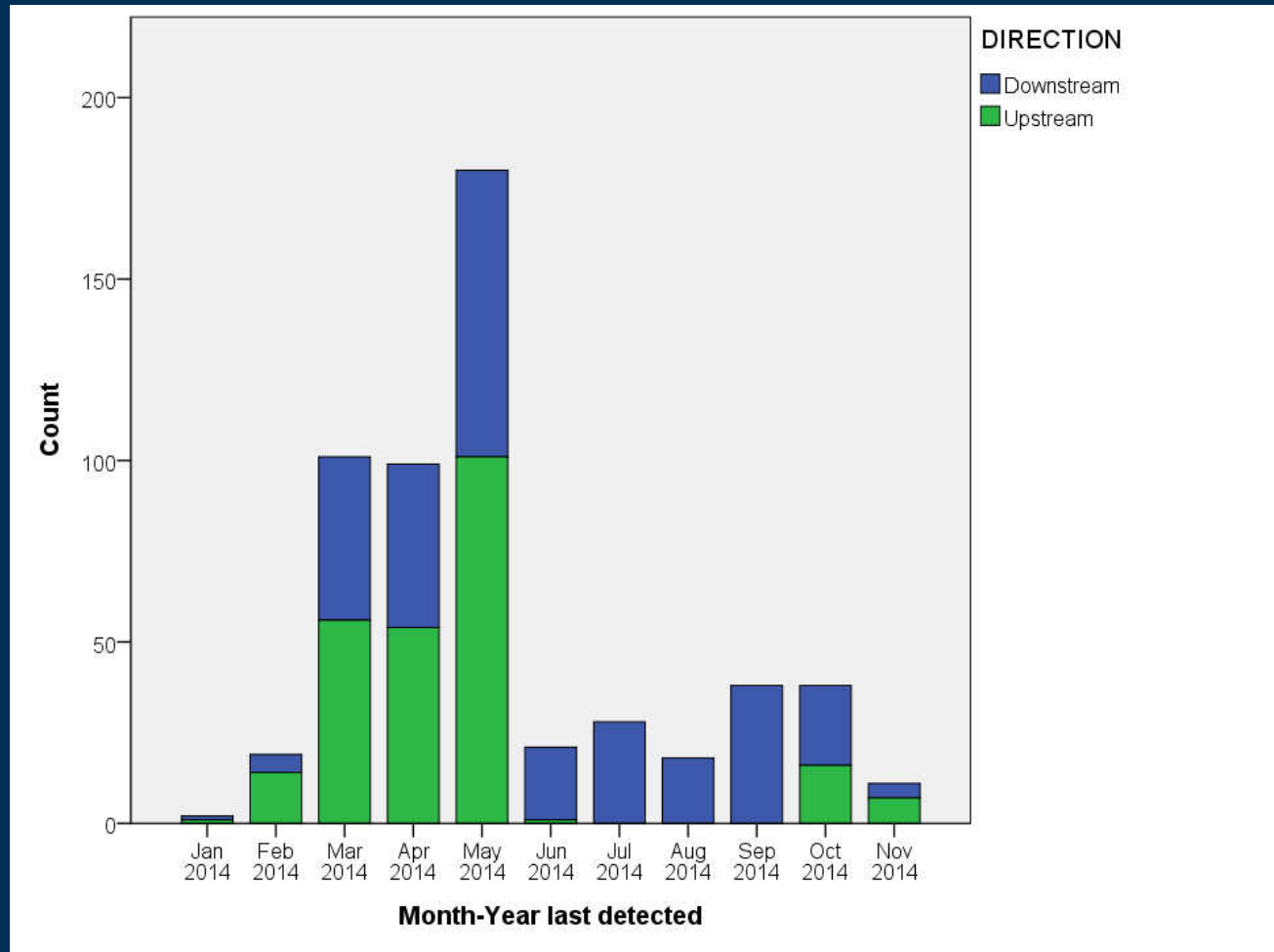
PRELIMINARY DATA, SUBJECT TO REVISION, DO NOT CITE

Unique fish/month and discharge

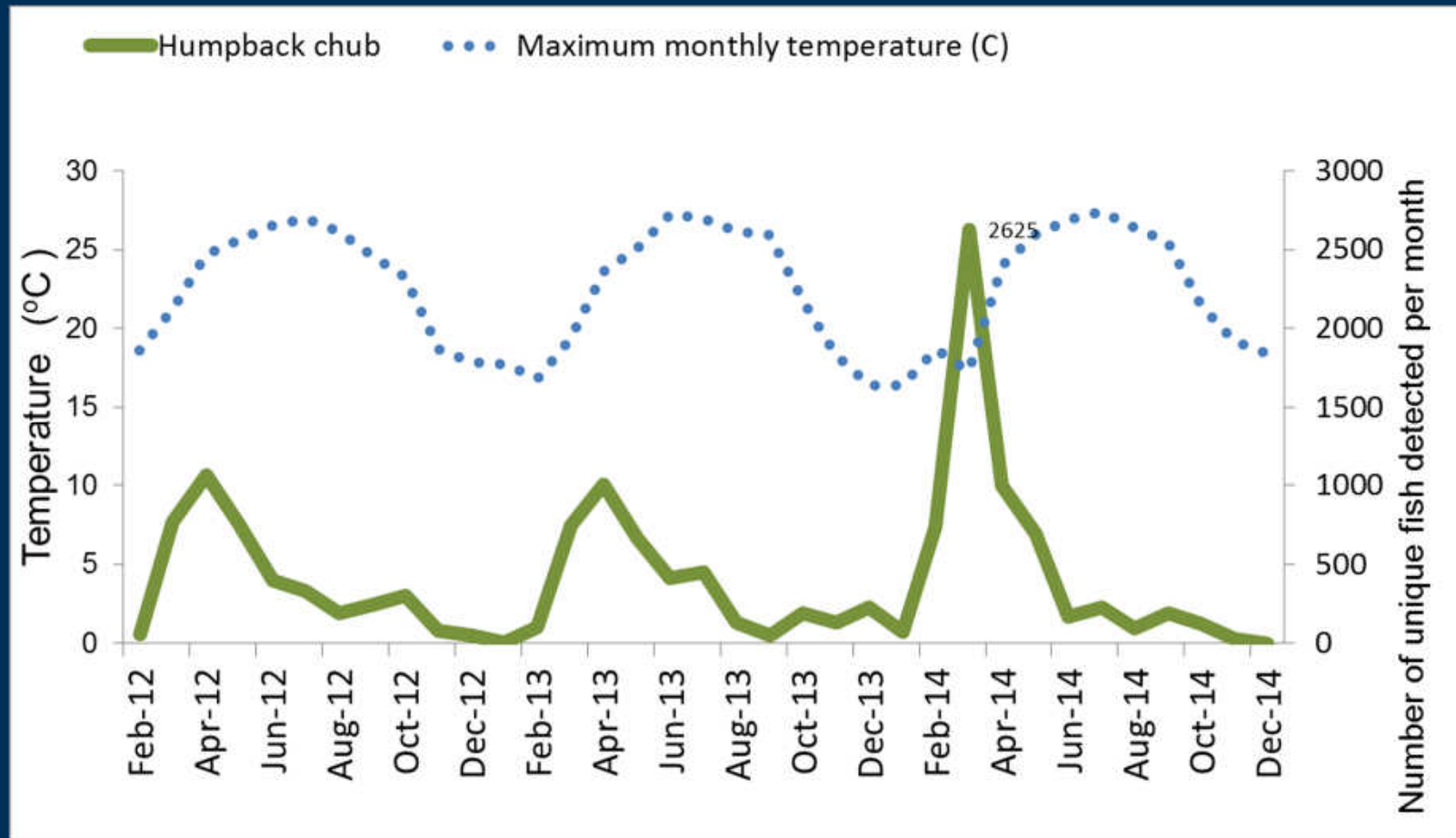


PRELIMINARY DATA, SUBJECT TO REVISION, DO NOT CITE

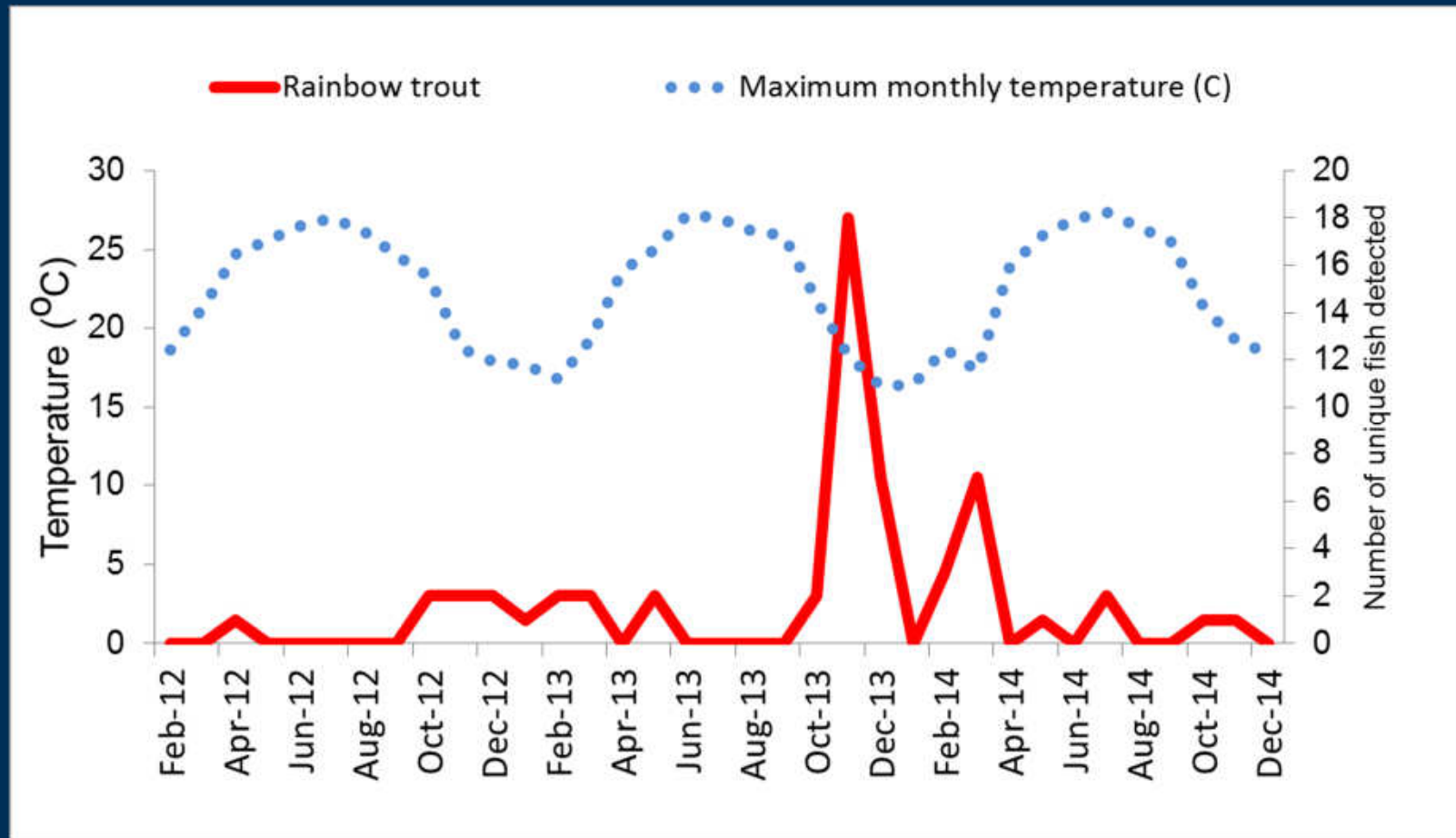
Direction of movement, humpback chub 2014



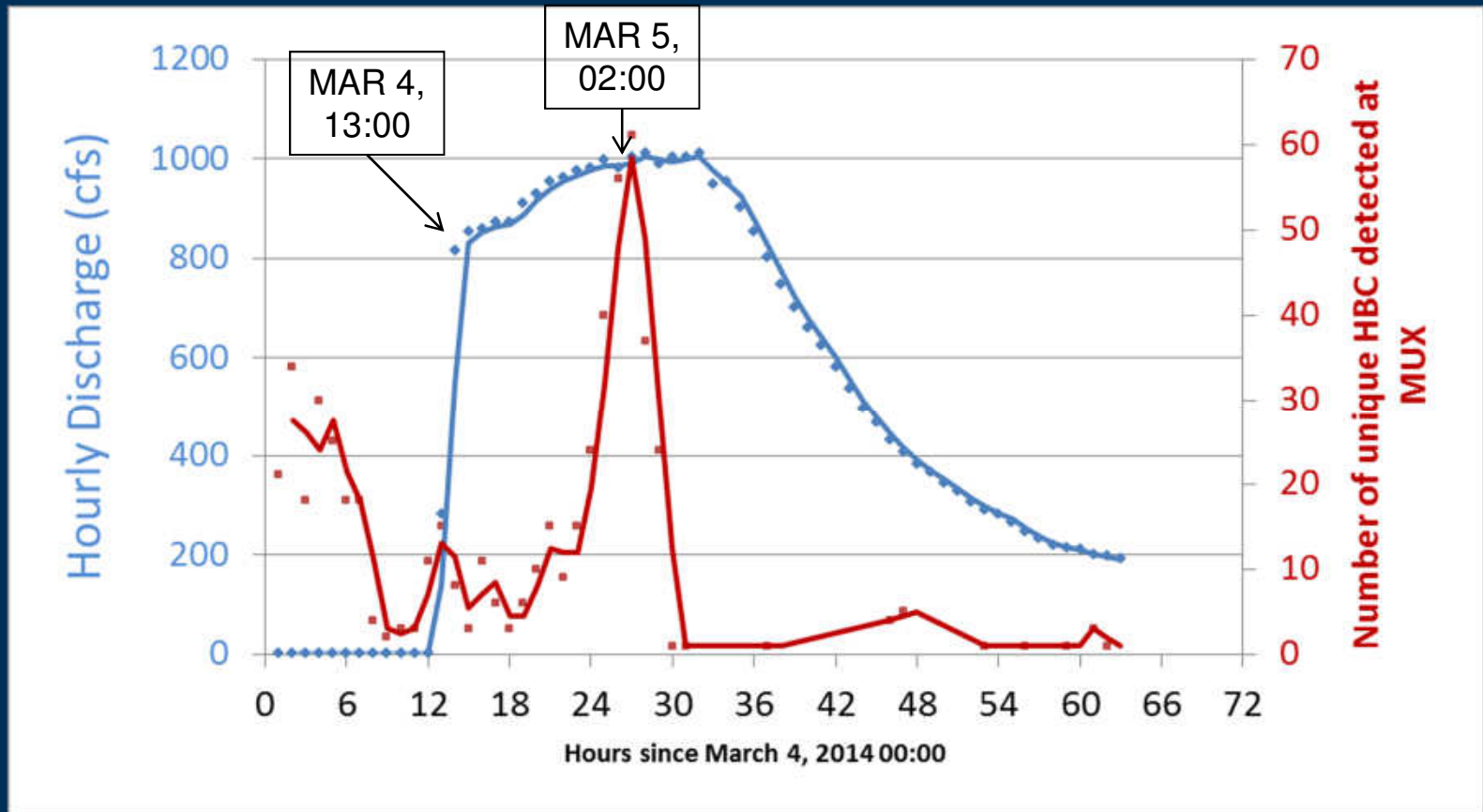
March/April Humpback Chub



Winter Rainbow Trout

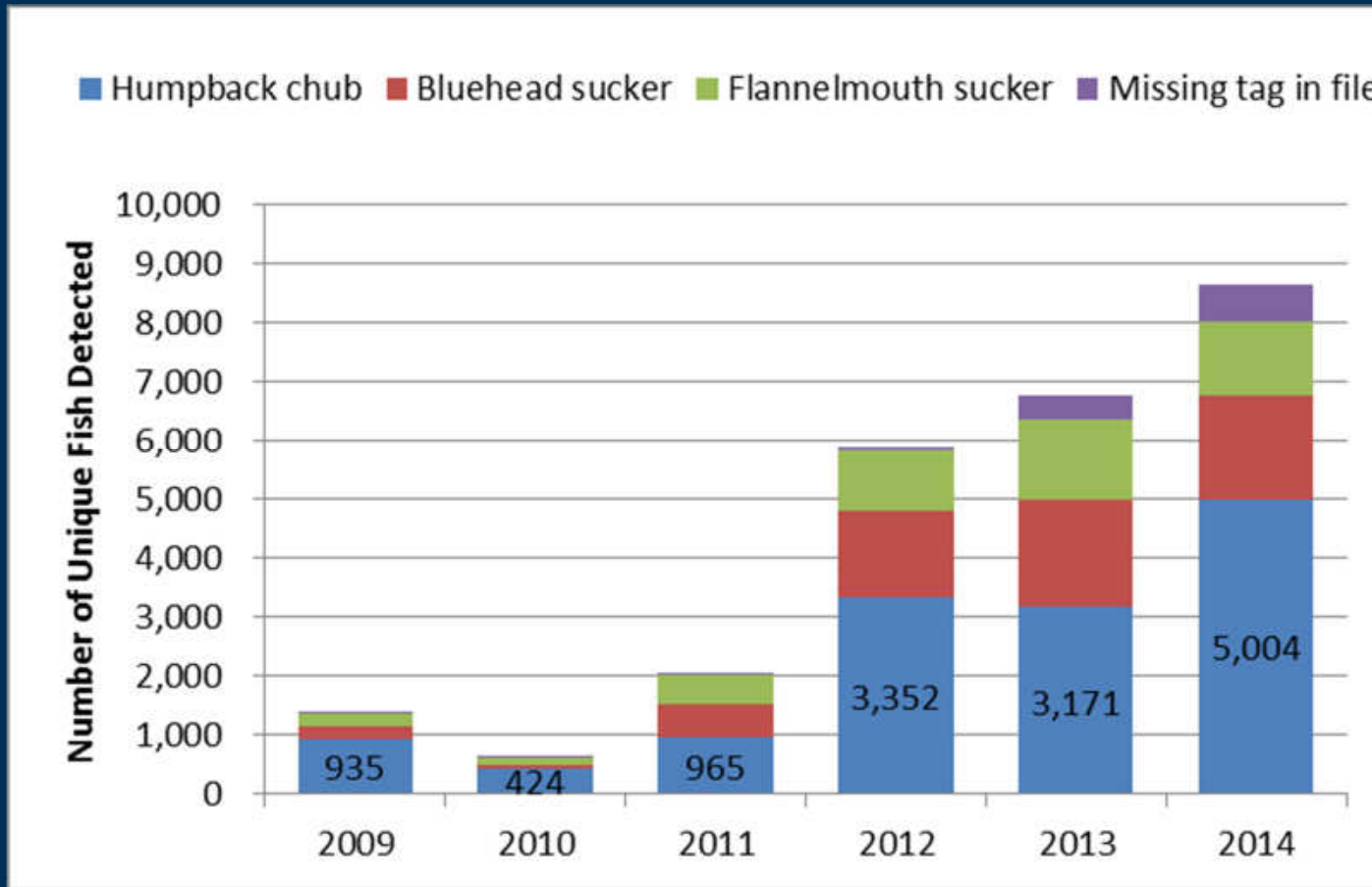


Hourly unique humpback chub detections following increase in discharge March 4-5, 2014



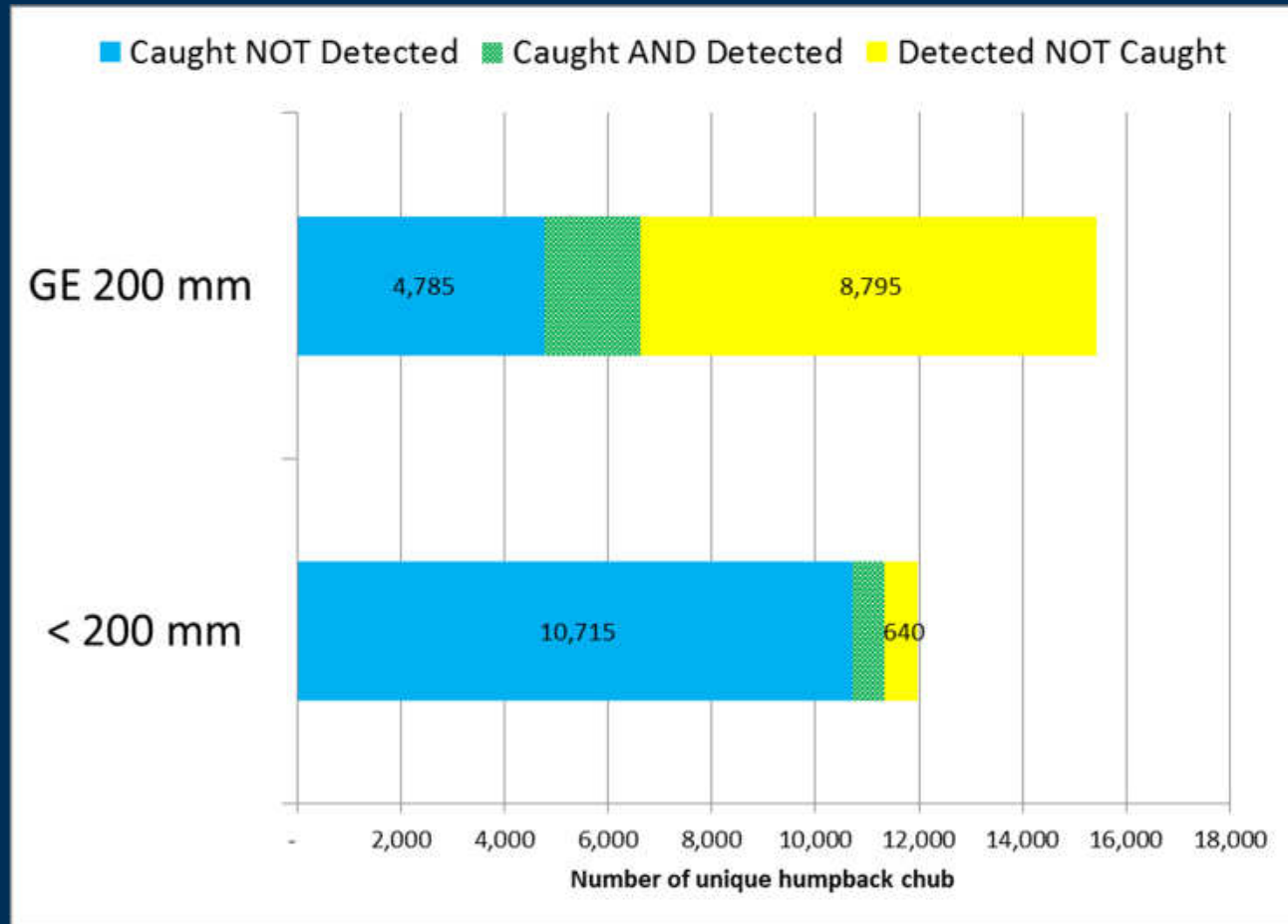
PRELIMINARY DATA, SUBJECT TO REVISION, DO NOT CITE

Number of unique fish detected by year, 2009-2014



PRELIMINARY DATA, SUBJECT TO REVISION, DO NOT CITE

Number of humpback chub caught by FWS hoopnet sampling and detected by antenna, by size of fish, 2012-2014.



Next steps



Acknowledgements

- Scott Vanderkooi, Tim Andrews, Luke Avery, Glenn Bennett, Seth Felder, Dave Foster, Tom Gushue, Ron Griffiths, Tom Sabol, Bob Tusso, Meagan Polino, Kara Hilwig, Matthew Andersen –GCMRC
- Patrick Connolly, Ian Jezorek, Cari Mausling USGS Columbia River Research Lab
- Dana Winkelman, Kristen Pearson, CSU
- Randy VanHaverbeke, Mike Pillow, Jim Walters, USFWS
- John Luepke, Ed Jahrke, Mike Kuhns, Brian Clark, AZGFD