

Lake Mead Zooplankton Selenium Bioassessment Study

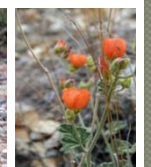
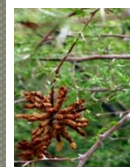


January 11-12, 2012

Las Vegas Wash
Coordination
Committee



www.lvwash.org



Acknowledgements

- US Bureau of Reclamation
- City of Las Vegas
- Nevada Dept of Wildlife
- Bio-West, Inc.



Las Vegas Wash
Coordination
Committee

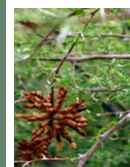
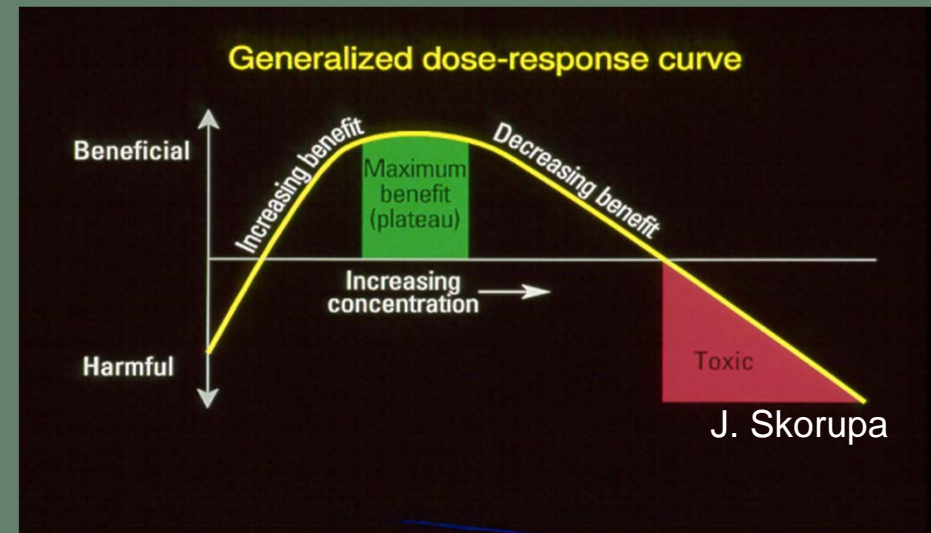


www.lvwash.org

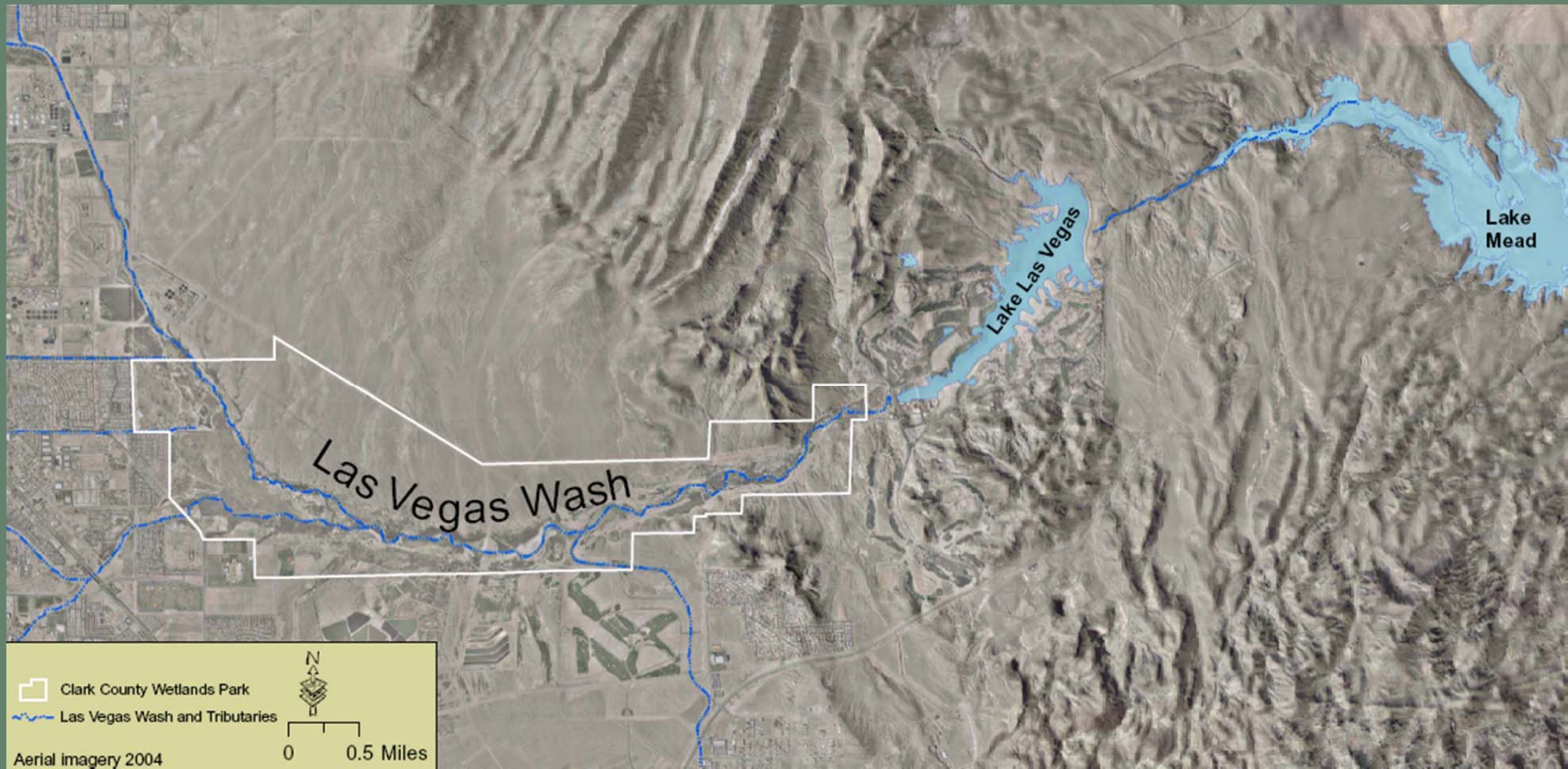


Background-Selenium

- Inorganic that occurs naturally in soil
- Leaches easily
- Is essential for bodily function in small quantities
- Toxic effects in larger quantities



Las Vegas Wash Watershed



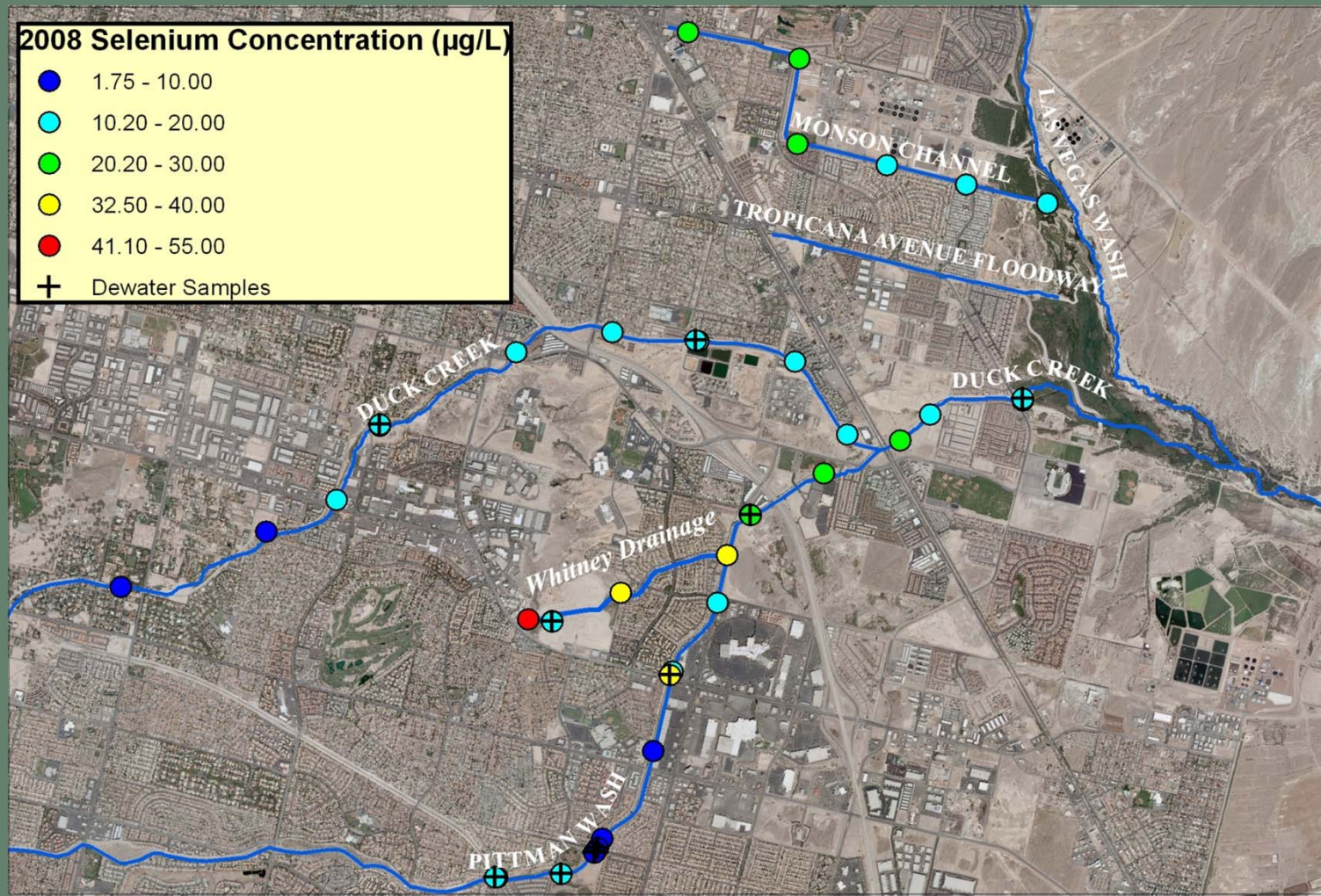
Las Vegas Wash
Coordination
Committee



www.lvwash.org



Background-2003-2009 Se Source Study



January 2008 Selenium Sample Locations

Las Vegas Wash
Coordination
Committee



www.lvwash.org

0 0.3 0.6 1.2 1.8 2.4 Miles

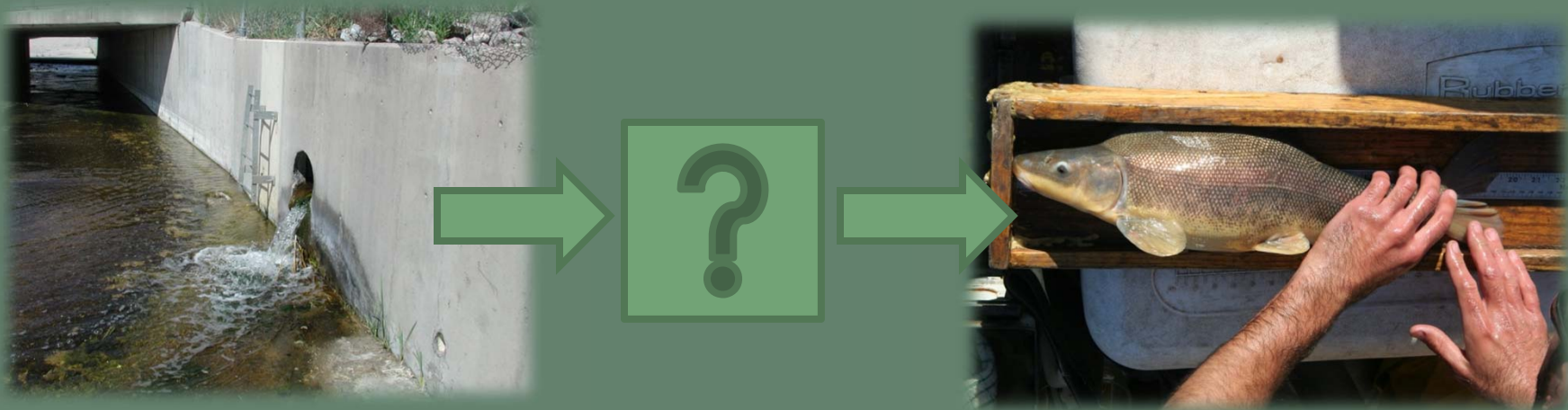


Bioassessment Fish Tissue Study

- Fish Collected in: 2003, 2005, 2007, 2010
- Three locations
- EPA chronic criterion value: $7.91 \mu\text{g/g}$



Zooplankton Study



Hamilton, et al. 2004 targeted larvae stage as most at risk of Se detrimental effects



Methods

- Monthly collections/
24 months
- Spawning Sites
 - Las Vegas Bay
 - Overton Arm



Las Vegas Wash
Coordination
Committee

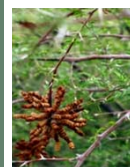
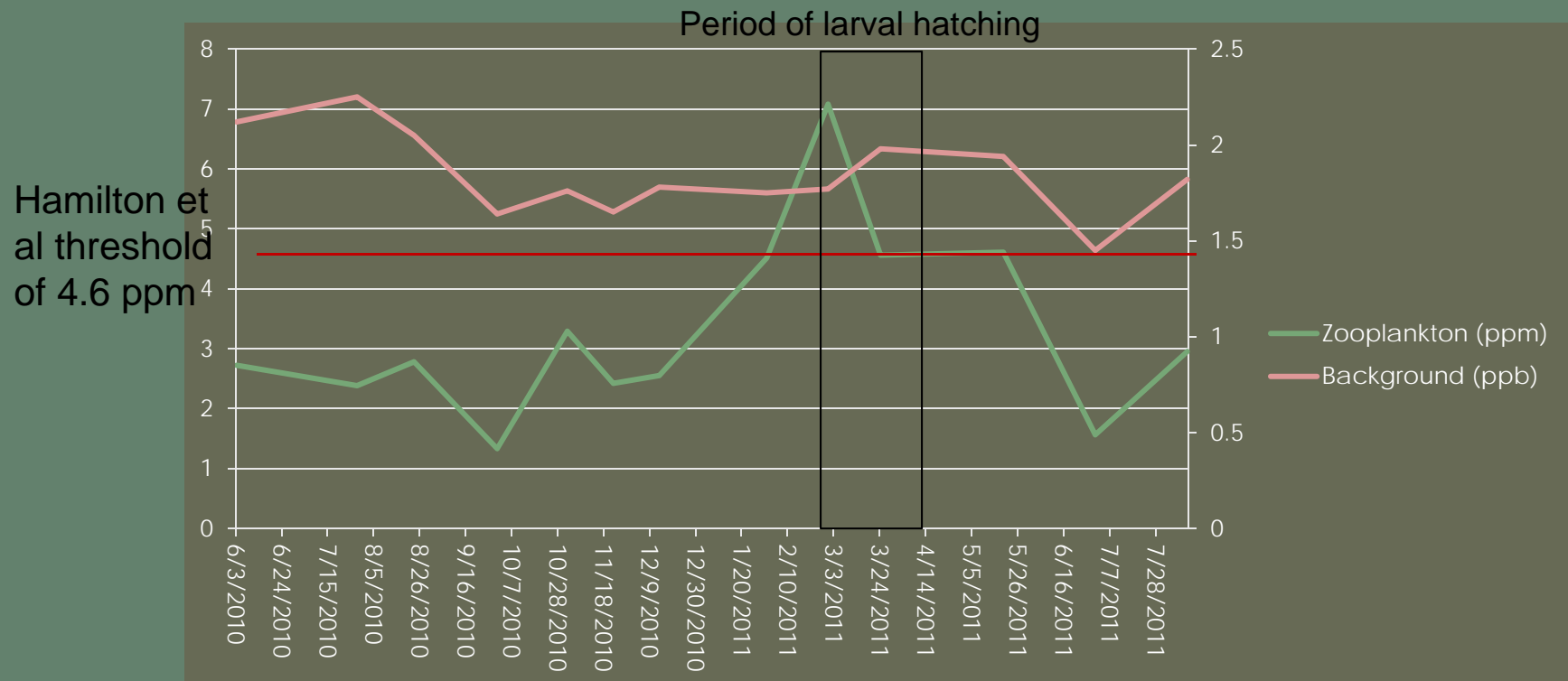


www.lvwash.org



Results

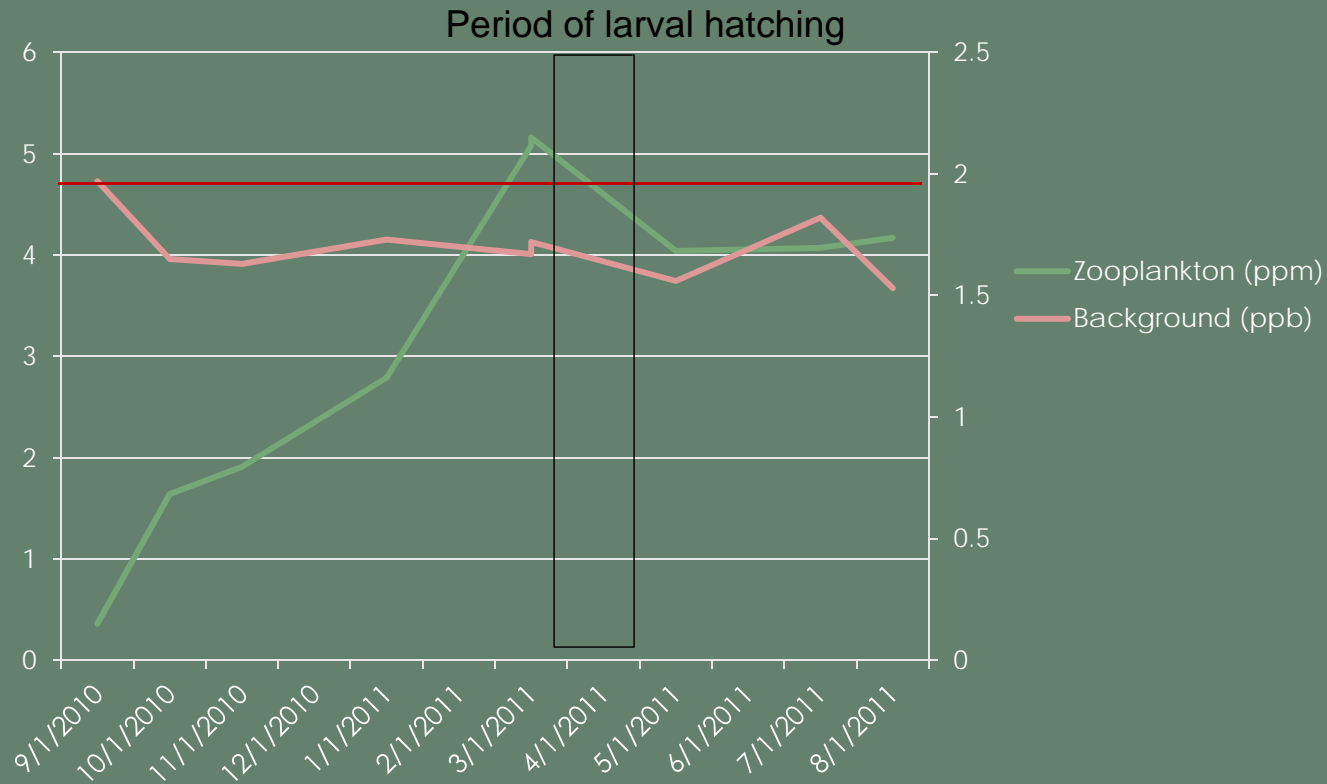
Las Vegas Bay



Results

Overton Arm

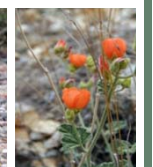
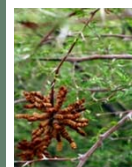
Hamilton et al threshold of 4.6 ppm



Las Vegas Wash
Coordination
Committee

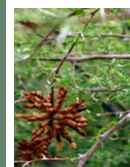
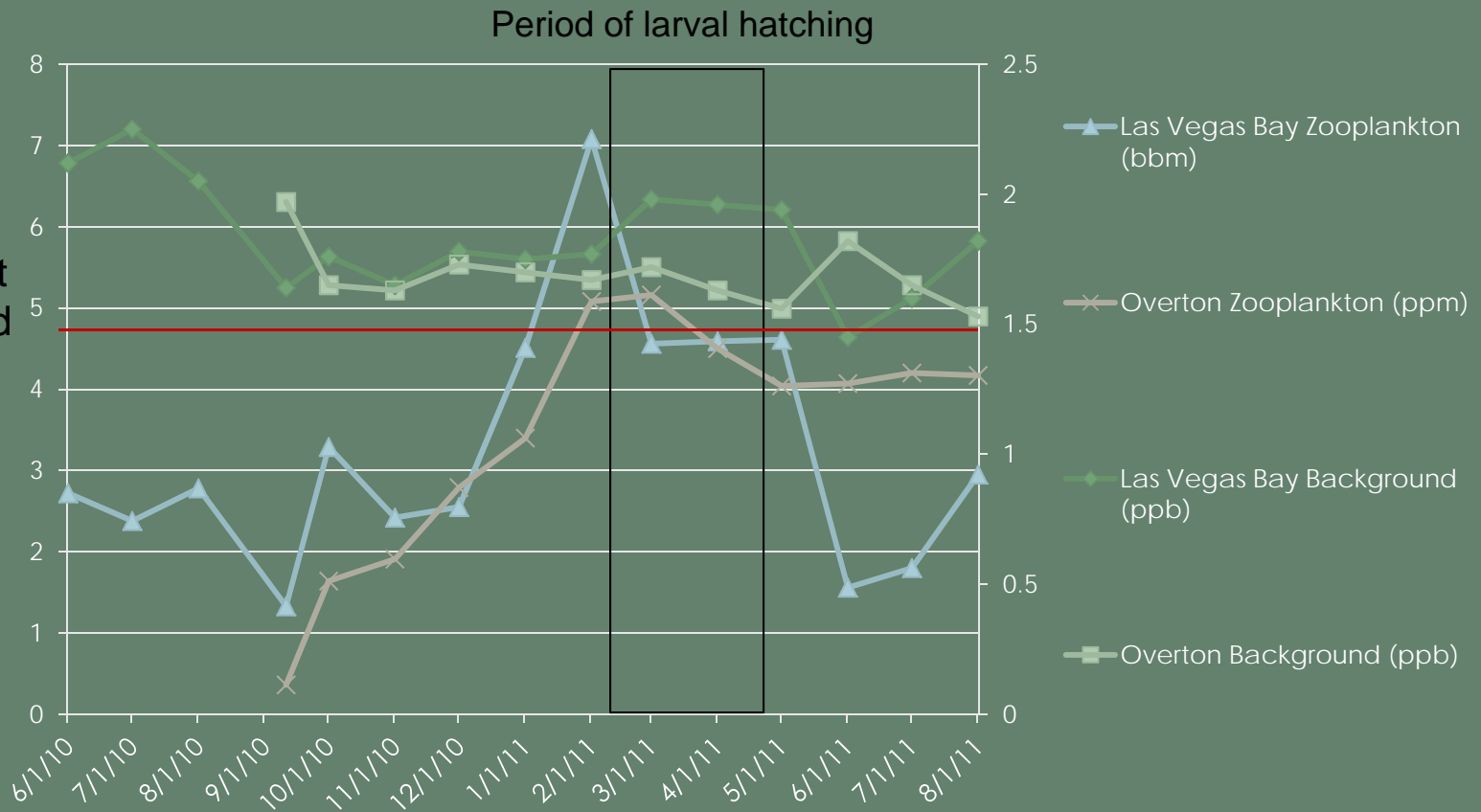


www.lvwash.org



Results

Hamilton et al threshold of 4.6 ppm



Questions?



Las Vegas Wash
Coordination
Committee



www.lvwash.org

