

Las Vegas Wash

- Primary drainage channel for ~1600 sq. mile Las Vegas Valley watershed:
 - Discharges urban flows (primarily treated wastewater) to Lake Mead that exceed the inflows of the Muddy & Virgin rivers
 - Once ephemeral; perennial since the 1950s
 - Increasing flows created wetlands, but then incised the channel and eroded them away

Las Vegas Wash Coordination Committee

- Stakeholder group formed in 1998 to stabilize and enhance the Las Vegas Wash; SNWA is lead agency
- Developed the Comprehensive Adaptive Management Plan, with 44 action items, to achieve goals:
 - Erosion control structures (14 out of 22 complete)
 - Revegetation
 - Biological resource surveys

Changing Hydrology & Habitat

- Calico Weir Impoundment site, 2000, 2005 & 2009



Point Count Surveys

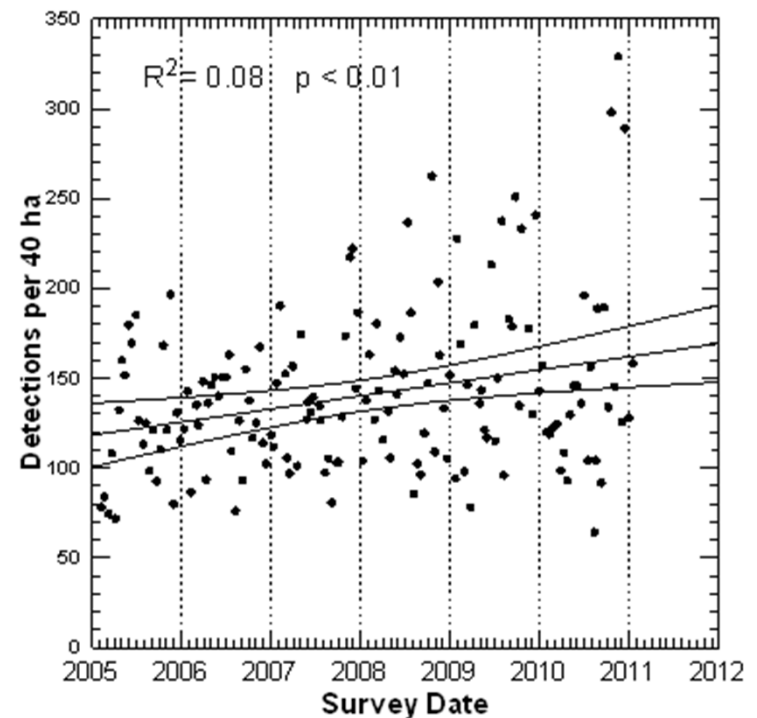
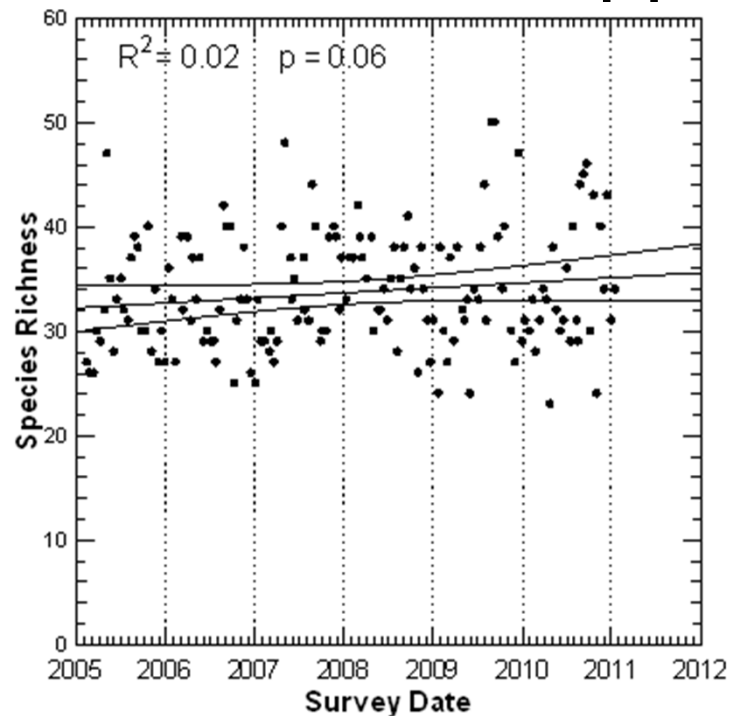
- 6-year study (2005-2011)
- ~30 points
 - Various habitats/treatments
- 5-minute counts
 - 100-m radius



- Data collected by:
 - SBCM – years 1-4
 - GBBO – years 5-6

PC Results (GBBO 2011)

- 185 species
- Avg. richness – ~32 – 35 spp.
- Avg. abundance – 125 - 160 birds/40 ha.



PC Results (GBBO 2011)

- Species-specific abundances
 - 15 increased – E.g., GAQU, MAWR
 - 9 decreased – E.g., ABTO, LUWA
 - Breeding season differences from other Mojave riparian sites:
 - Lower YWAR (0.7x), BEVI (0.03x), GAQU (0.4x)
 - Also lower MODO, HOFI
 - Higher ABTO (3x), SOSP (2x), COYE (4x)
 - Also higher BHCO

PC Results (GBBO 2011)

- Treatment impacts

SPECIES	Treatment				ANOVA	
	No Treatm.	Cleared	New Reveg.	Old Reveg.	R ² - Value	p- value
<i>Bird Species Richness</i>	34.0	26.0	37.2	39.9	0.29	0.03
<i>Total Abundance</i>	121.5	104.3	154.0	183.7	0.28	0.03
Say's Phoebe	1.05	0.73	2.94	0.60	0.71	<0.01
Yellow Warbler	0.59	0.50	0.97	4.03	0.39	<0.01
Ruby-crowned Kinglet	1.44	0.85	1.18	4.07	0.38	<0.01

PC Discussion

- The Wash stabilization and enhancement program appears to be benefiting birds:
 - Richness & abundance stable to increasing despite widescale clearing at points
 - More species increased in abundance than decreased
 - Differences between sites raise some questions
 - Older reveg sites have higher richness and abundance overall and higher YWAR than other treatments

Marsh Bird Monitoring

- Surveys initiated in 2007 (YCRA in 2008)
- North American Marsh Bird Monitoring Protocol (Conway 2005, 2008) - modified
 - Breeding season – April/May – 4 replicates
 - 3 routes, ~25 total points, direction reverses
 - Start 30 minutes before sunrise & last ~3 hrs
 - 5 minutes passive; then 1 min./species broadcast
 - BLRA, LEBI, SORA, VIRA, YCRA, AMBI

MBM Results

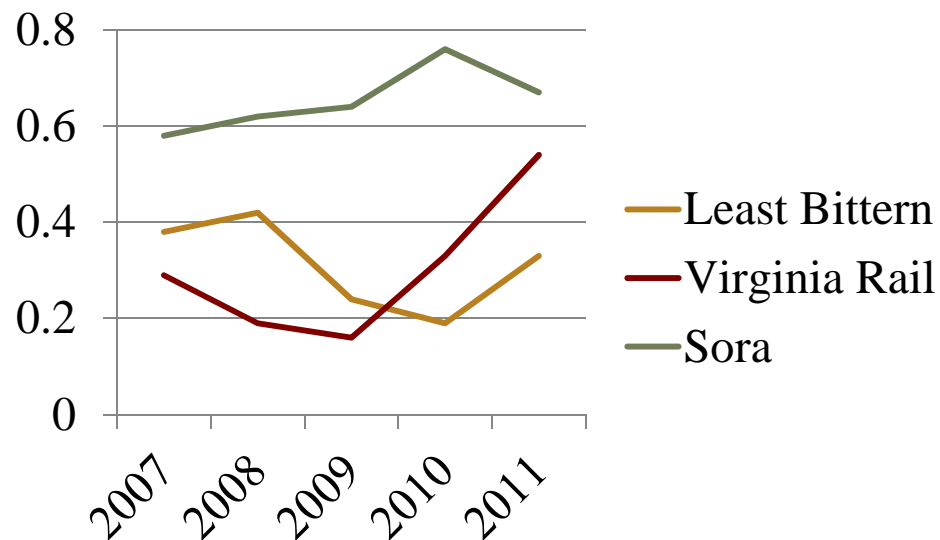


Chart: Per point abundances

- 3 target species and 3 non-target species – all years
 - LEBI, VIRA, SORA
 - PBGR, AMCO, COGA
- No YCRA or BLRA
- 1 AMBI - 2010

MBM Discussion

- LEBI & VIRA annual abundances fluctuate; mitigation pond habitat benefiting VIRA
- SORA abundances stable, no brdg conf.
- Lack of YCRA & BLRA not surprising
 - Only a few detections of YCRA since 1998; all in late May/mid June
 - BLRA considered hypothetical for study area
- AMBI – primarily winter resident/migrant

Southwestern Willow Flycatcher

- Annual surveys since 1998
 - SWCA – 1998-2009
 - SNWA – 2010+
- Conducted using federal protocol (Sogge et al. 2010)



SWFL Results

Year	Migrants	Residents
1998	2	0
1999	0	0
2000	7	0
2001	0	0
2002	2	0
2003	2	0
2004	18	0
2005	0	0
2006	2	0
2007	0	1
2008	7	1
2009	3	0
2010	1	0
2011	15	1

Table: Detections

- 2011- A big year
 - 25% resighted, no bands
- All Years
 - Mostly migrants
 - Some “waves”
 - Residents
 - 2007, 2011 – singles >June 24
 - 2008 - on territory

SWFL Resident Discussion



- 2008
 - 34 days
 - Mature reveg site
 - Banded by SWCA
 - Post-hatch year male
 - Resighted at Overton in 2009
- 2011
 - Single detection; but...

SWFL Habitat Discussion

- Resident detections – all >2006
 - First revegetation sites planted in 2001; maturing reveg sites = improving habitat?
- Potentially suitable habitat
 - 1998 – unstabilized, dominated by tamarisk
 - 2011 – stabilized, dominated by natives
- Tamarisk beetle implications
 - Will the Las Vegas Wash become more appealing to willow flycatchers?

