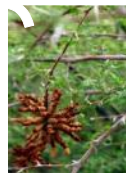


Las Vegas Wash Revegetation Program 2000-2010

January 25th, 2010



Jason R. Eckberg
Las Vegas Wash Coordination Committee
Southern Nevada Water Authority

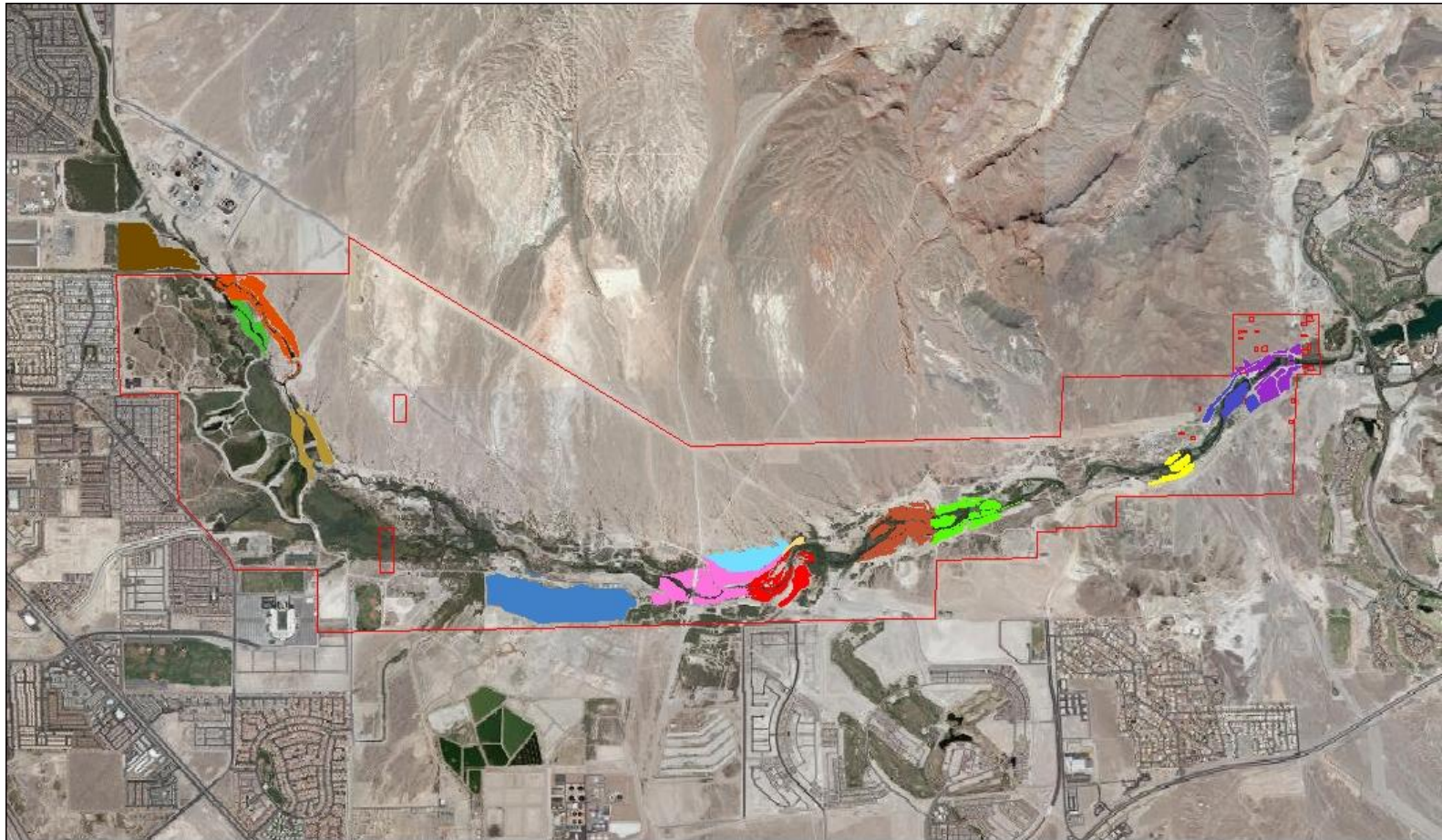


Why Revegetate the Las Vegas Wash?

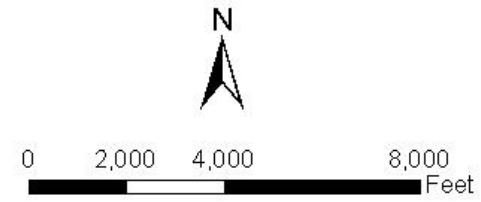
- **Stakeholder vision (LVWCC CAMP)**
 - Improve ecosystem to a self-sustaining state
- **Mitigation**
 - Wetland impact from construction of erosion control structures (US Army Corps of Engineers)
 - Stormwater permits (Nevada Division of Environmental Protection)
- **Grant Obligation**
 - Multiple grants received to help pay for erosion control structure construction require revegetation components



Clark County Wetlands Park



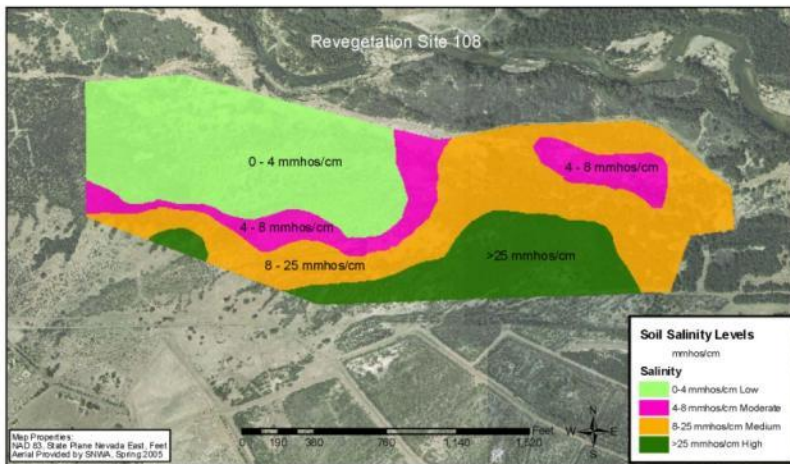
2010 Revegetation Areas	
	Bostick Weir
	Calico Ridge Weir
	Clark County Water Reclamation District
	Cottonwood Cells
	DU Wetlands No. 2 Weir
	Demonstration Weir
	Historic Lateral Weir
	Monson and Visitor Center Weirs
	Pabco Road Weir
	Powerline Crossing Weir
	Rainbow Gardens Weir
	Site 108
	Site 111
	Upper Diversion Weir
	Clark County Wetlands Park and private property boundaries



For planning purposes only
 Prepared by the Southern Nevada Water Authority
 Aerial Image taken September, 2009

Revegetation Planning

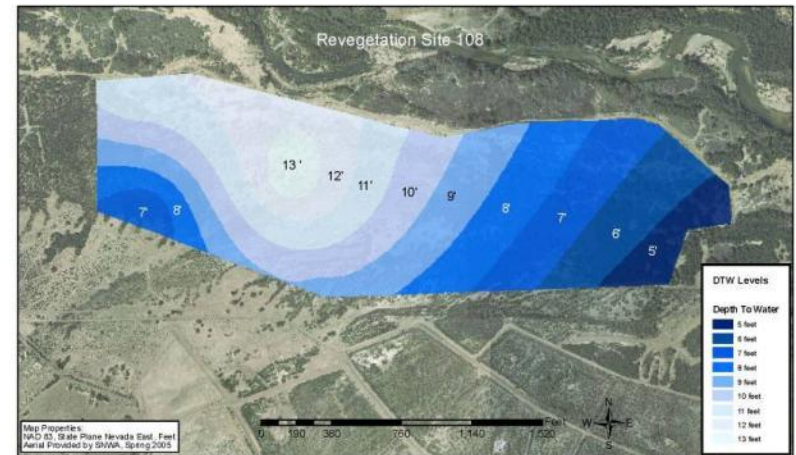
- Most areas dominated by salt cedar
 - Majority of sites cleared as part of construction process
- Soil sampling
 - Salinity
 - Texture
- Depth to Water



Prepared By:
Fred Phillips Consulting, LLC
928-773-1530

Southern Nevada Water Authority
Las Vegas Wash Revegetation Design

April 1, 2006
Soil Salinity Map



Prepared By:
Fred Phillips Consulting, LLC
928-773-1530

Southern Nevada Water Authority
Las Vegas Wash Revegetation Design

April 1, 2006
Surface To Water
Table Depth Map



Revegetation Implementation

- **Planting**
 - Out-planting majority of effort
 - Seeding
 - Pole planting & Transplants



Revegetation Implementation

- **Volunteer Events**
 - 17 semi-annual Green-Ups so far
 - Average about 600 volunteers
 - Creates ownership



Revegetation Implementation

- Pole planting
 - Cottonwoods
 - Willows
 - Arrowweed
 - Seep willow



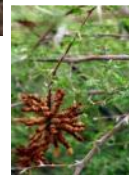
Revegetation Implementation

- **Transplants**
 - **Bulrush (*Schoenoplectus* spp.)**
 - **Saltgrass**



Revegetation Implementation

- Irrigation
 - Spray
 - Certa-lok irrigation pipe
 - Mobile pump
 - Drip



Revegetation Maintenance

- **Invasive species control**
 - Chemical, biological, physical
- **Plant/site protection**
 - Herbivores
 - People



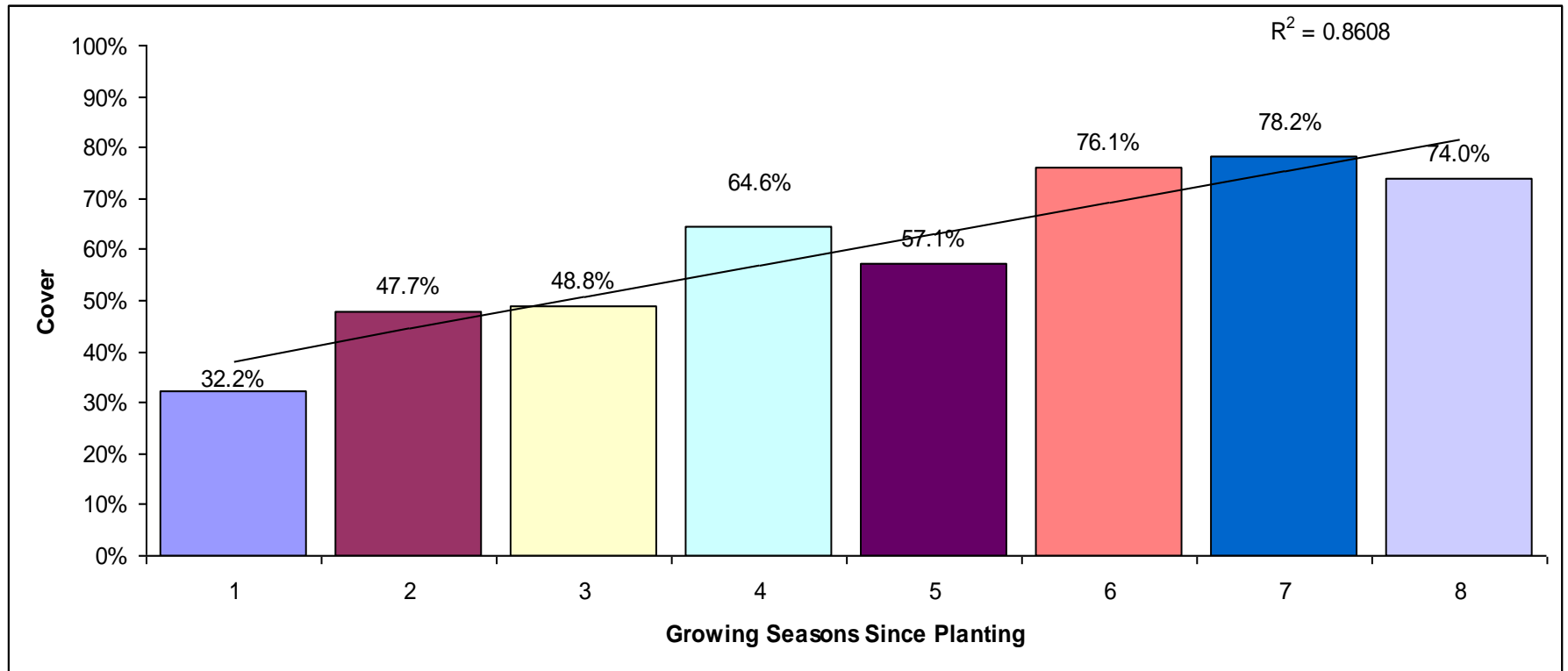
Revegetation Monitoring

- **Criteria**
 - Cover
 - Survivorship
 - Invasive species cover
 - Species richness
- **Techniques**
 - Line-intercept
 - Cover Class
- **Additional Data**
 - Wildlife usage
 - Site changes

Cover Rank	Value Range	Midpoint
R	<<1%	0.1%
T	<1%	0.5%
1	1-5%	2.5%
2	5-25%	15.0%
3	25-50%	37.5%
4	50-75%	62.5%
5	75-100%	87.5%

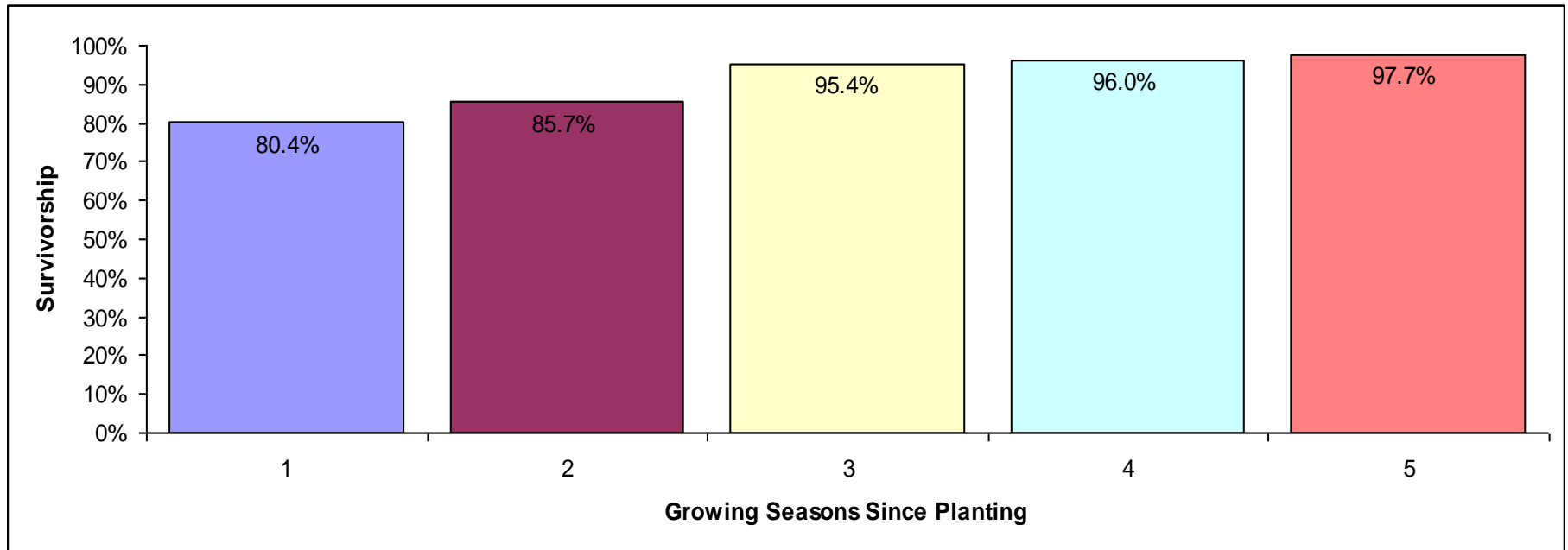
Revegetation Monitoring

- Site Cover Trend



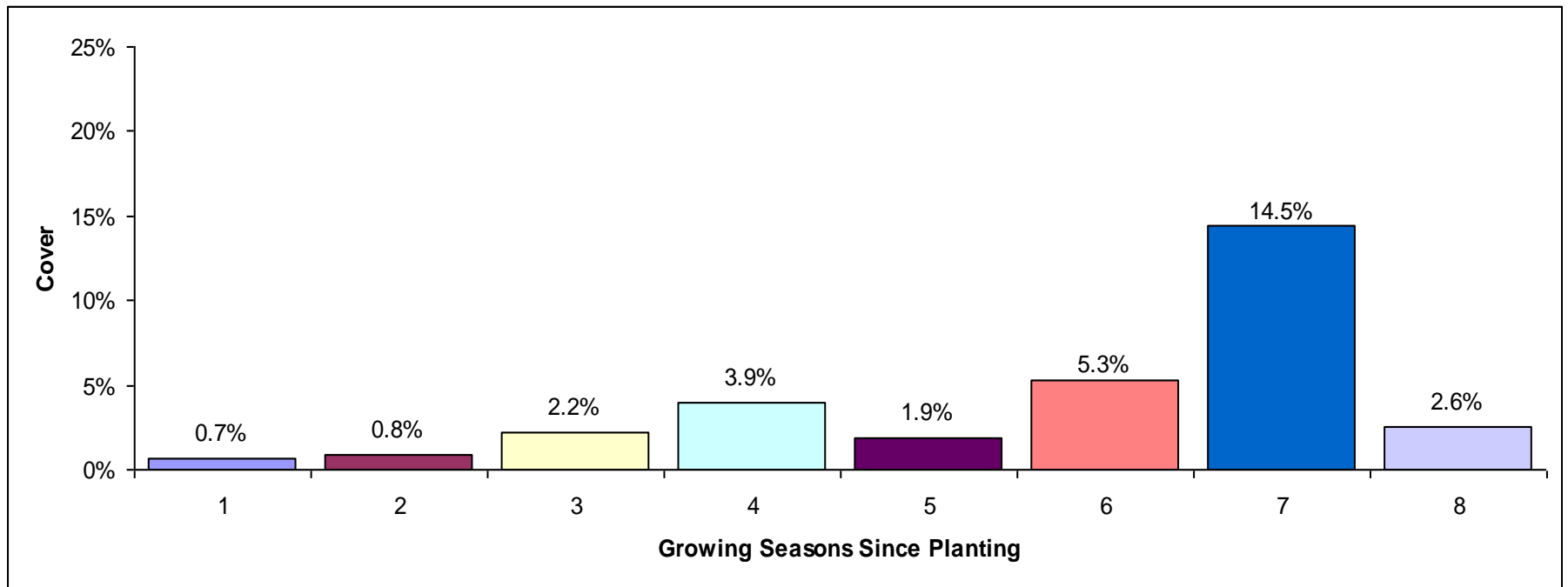
Revegetation Monitoring

- Survivorship of planted plants



Revegetation Monitoring

- Invasive species cover remains low



Upland Example

- **Site 108**
 - Non-wetland revegetation site
 - Not associated with Weir
 - Provides important buffer to Wash and increases wildlife habitat



April, 2006



April, 2009

Passive Wetland Example

- **Upper Diversion Weir**
 - Pond located upstream of Weir completed in summer of 2008
 - Passive establishment of large cattail community
 - Provides food and shelter to a wide variety of bird species



July, 2008



December, 2010

Active / Passive Wetland Example

- **Rainbow Gardens Island**
 - Located upstream of Rainbow Gardens Weir
 - Area continues to grow as sediment gets deposited
 - Planted in 2005 when less than 2 acres, now approximately 4 acres



August, 2005



December, 2010

Active Revegetation Site Example – 2004-2010



Active Revegetation Site Example – March 2008-March 2010



QUESTIONS?

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