Lake Mohave Habitat Enhancement Project

Mitch Urban
Lake Mohave Biologist
2015 C.R.A.B. Meeting
2014 Accomplishments

- Placed 18 PVC structures, 19 poly shrubs and 50 brush bundles
  - Total To Date
    - 173 assorted brush bundles
    - 96 PVC Structures
    - 88 pallet and brush A-frames
    - 24 pallet structures
    - 24 Poly Shrubs
    - 25 loads of Christmas trees Approx. 625 trees
- 54 SCUBA surveys and 21 snorkel surveys
  - SCUBA surveys every month
  - Snorkel surveys June - Nov
- Electro-shocked 3 habitat sites and 2 non-habitat sites in the fall
SCUBA Survey Results

Habitat Vs. No Habitat

Year

2008 2009 2010 2011 2013 2014

Fish/Minute

Habitat No Habitat

Experience Nevada's Wildlife
SCUBA Survey Results

Habitat Use Vs. No Habitat Use By Species

- Largemouth Bass
- Smallmouth Bass
- Sunfish

Fish/Minute

<table>
<thead>
<tr>
<th>Year</th>
<th>Habitat</th>
<th>No Habitat</th>
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<tbody>
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SCUBA Survey Results

Fish Use by Habitat Type

- PVC
- Pallet
- Brush
- Poly Shrub
- No Habitat

Poly Shrubs
SCUBA Survey Results

Sunfish Use by Habitat Type

- PVC
- Pallet
- Brush
- Poly Shrub

Fish/Minute

- 2009
- 2010
- 2011
- 2013
- 2014
Is there a preference over habitat type by species?

Largemouth Bass and Smallmouth Bass Use by Habitat Type

<table>
<thead>
<tr>
<th>Year</th>
<th>PVC</th>
<th>Pallet</th>
<th>Brush</th>
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Largemouth Bass

Smallmouth Bass
SCUBA Survey Results

Black Bass Use by Month in 2014

- **Fingerling**
- **Juvenile**
- **Adult**

Habitat Coves

- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

Fish/Minute

0 2 4 6 8 10 12

EXPERIENCE NEVADA'S WILDLIFE
SCUBA Survey Results

Black Bass Use by Month in 2014

- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

Fish/Minute

Fingerling | Juvenile | Adult

No Habitat Coves
SCUBA Survey Results

Sunfish Use by Month in 2014

- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

Fish/Minute

Habitat

No Habitat
Snorkel Survey Results

Fish Counts in Habitat Coves Vs. No Habitat Coves In 2014 From Snorkeling

- Largemouth Bass
- Smallmouth Bass
- Sunfish

- Habitat
- No Habitat
Electro-shocking Survey Results

2014 Electro-shocking Comparison of Catch Rates

- Blugill
- Green Sunfish
- Largemouth Bass
- Smallmouth Bass
- Striped Bass
- Channel Catfish
- Yellow Bullhead
- Carp
- Threadfin Shad
- Gizzard Shad

Habitat vs. No Habitat

Fish/Minute
Electro-shocking Survey Results

Electro-shocking Comparison of Catch Rates

- Blugill
- Green Sunfish
- Largemouth Bass
- Smallmouth Bass

EXPERIENCE NEVADA’S WILDLIFE
Electro-shocking Survey Results

Electro-shocking Comparison of Catch Rates

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Fish/Minute

- Striped Bass
- Channel Catfish
- Yellow Bullhead
- Carp
- Threadfin Shad
- Gizzard Shad

EXPERIENCE NEVADA'S WILDLIFE
Observations from surveys

- When there is a thermocline present fish only use habitat that is above it not below
- Water visibility never cleared up from fall algae spike
- Striped bass observed and captured during surveys
- Gizzard and threadfin shad present in the lake
Acknowledgements

- Arizona Game and Fish
- National Park Service
- Bureau of Reclamation
  - MSCP Fisheries Group
- Arizona State Prison
- Numerous Volunteers
Lake Mohave Annual Sport Fish Surveys

Mitch Urban
Lake Mohave Biologist
2015 C.R.A.B. Meeting
2014 Accomplishments

- Cooperation by NDOW, AGF, NPS, USBR, and USFWS
- 11th year using AGF protocols
- Gill Netting
  - 49 net-nights
  - 758 hours of netting
- Electroshocking
  - 16 coves
  - 243 minutes of switch time
Gill Netting Results

Total Catch Per Unit Effort

Fish/Net Night


Razorback Sucker
Common Carp
Channel Catfish
Striped Bass
Smallmouth Bass
Largemouth Bass
Other
Gill Netting Results

Catch Rates by Species

- Largemouth Bass
- Smallmouth Bass
- Striped Bass
- Channel Catfish
- Common Carp

Fish/Net Night

Years: 2004 to 2014
Gill Netting Results

Striped Bass Proportional Stock Density (PSD) and Percentage of fish caught greater than 15 inches

- % > 15 inches
- PSD (Stock 12 in., Quality 20 in.)
Electro-shocking Results

Catch Rates for Bass

- Largemouth Bass
- Smallmouth Bass
- Striped Bass

EXPERIENCE NEVADA'S WILDLIFE
Electro-shocking Results

Sunfish and Carp Catch Rates

Fish Per Minute

- Bluegill
- Green Sunfish
- Carp

Experiencing Nevada’s Wildlife