



NOTICE OF MEETING

LAS VEGAS WASH COORDINATION COMMITTEE Tuesday, January 25, 2022 8:30 a.m.

MEETING TO BE HELD VIRTUALLY VIA MICROSOFT TEAMS
Call-in Information: 1-323-776-6758 ID: 733-611-782#

The Las Vegas Wash Coordination Committee makes reasonable efforts to assist and accommodate persons with physical disabilities who desire to attend the meeting. For assistance, please contact Keiba Crear at (702) 822-3388 at least 48 hours in advance of the meeting.

Visit our website at www.lvwash.org for Las Vegas Wash Coordination Committee agenda postings, copies of supporting material and approved minutes. To receive meeting information, including supporting material, contact the Agenda Coordinator at (702) 258-3277 or agendas@snwa.com.

This meeting will be held via remote technology only pursuant to NRS 241.023, as amended by assembly bill 253 of the 81st legislative session, effective May 31, 2021. There will be no physical location for the meeting. Members of the public may hear, observe and participate in the meeting via the meeting link or telephone number identified above. If a member of the public is interested in viewing this meeting online or providing public comment, please e-mail jason.bailey@lvvwd.com no later than 5 p.m. on January 24, 2022 to receive remote access.

Any Committee member may combine two or more agenda items for consideration, consider an item out of order, remove an item from the agenda or delay discussions relating to an item on the agenda at any time.

COMMENTS BY THE GENERAL PUBLIC

No Action May Be Taken: This is a period devoted to comments by the general public pertaining to items on this agenda. If you wish to speak to the Committee about items within its jurisdiction, but not appearing on this agenda, you must wait until the "Comments by the General Public" period listed at the end of this agenda. Please limit your comments to three minutes or less. No action may be taken upon a matter not listed on the posted agenda.

ITEM NO.

- I. *For Information Only:* Welcome/Call to Order
- II. *For Information Only:* Introductions
- III. *For Possible Action:* Approve October 26, 2021 Meeting Summary
- IV. *For Information Only:* Receive Presentation on the Cadence Master Planned Community
- V. *For Information Only:* Receive Presentation on the Lower Colorado River Multi-Species Conservation Program
- VI. *For Information Only:* Receive Update on Recent Activities
 - a. Las Vegas Wash Project Coordination Team
 - b. Clark County Wetlands Park
 - c. Lake Mead
 - d. Las Vegas Valley Watershed Advisory Committee
 - e. Emerging Issues
- VII. *For Possible Action:* Set Next Meeting Date/Time and Propose Items for the Next Meeting's Agenda

COMMENTS BY THE GENERAL PUBLIC

No Action May Be Taken: At this time, the Committee will hear general comments from the public on matters under the jurisdiction of the Las Vegas Wash Coordination Committee. Please limit your comments to three minutes or less.

THIS MEETING HAS BEEN PROPERLY NOTICED AND POSTED IN THE FOLLOWING LOCATIONS:

City of Boulder City, City Hall
401 California Avenue
Boulder City, NV 89005

City of Henderson, City Hall
240 Water Street
Henderson, NV 89015

Las Vegas Valley Water District
1001 S. Valley View Boulevard
Las Vegas, NV 89153

Clark County Water Reclamation District
5857 E. Flamingo Road
Las Vegas, NV 89122

City of North Las Vegas, City Hall
2250 Las Vegas Boulevard North
North Las Vegas, NV 89030

Clark County Government Center
500 S. Grand Central Parkway
Las Vegas, NV 89106

Southern Nevada Water Authority
100 City Parkway, Ste. 700
Las Vegas, NV 89106

City of Las Vegas, City Hall
495 S. Main Street
Las Vegas, NV 89106



Community Development & Services Department January 2022



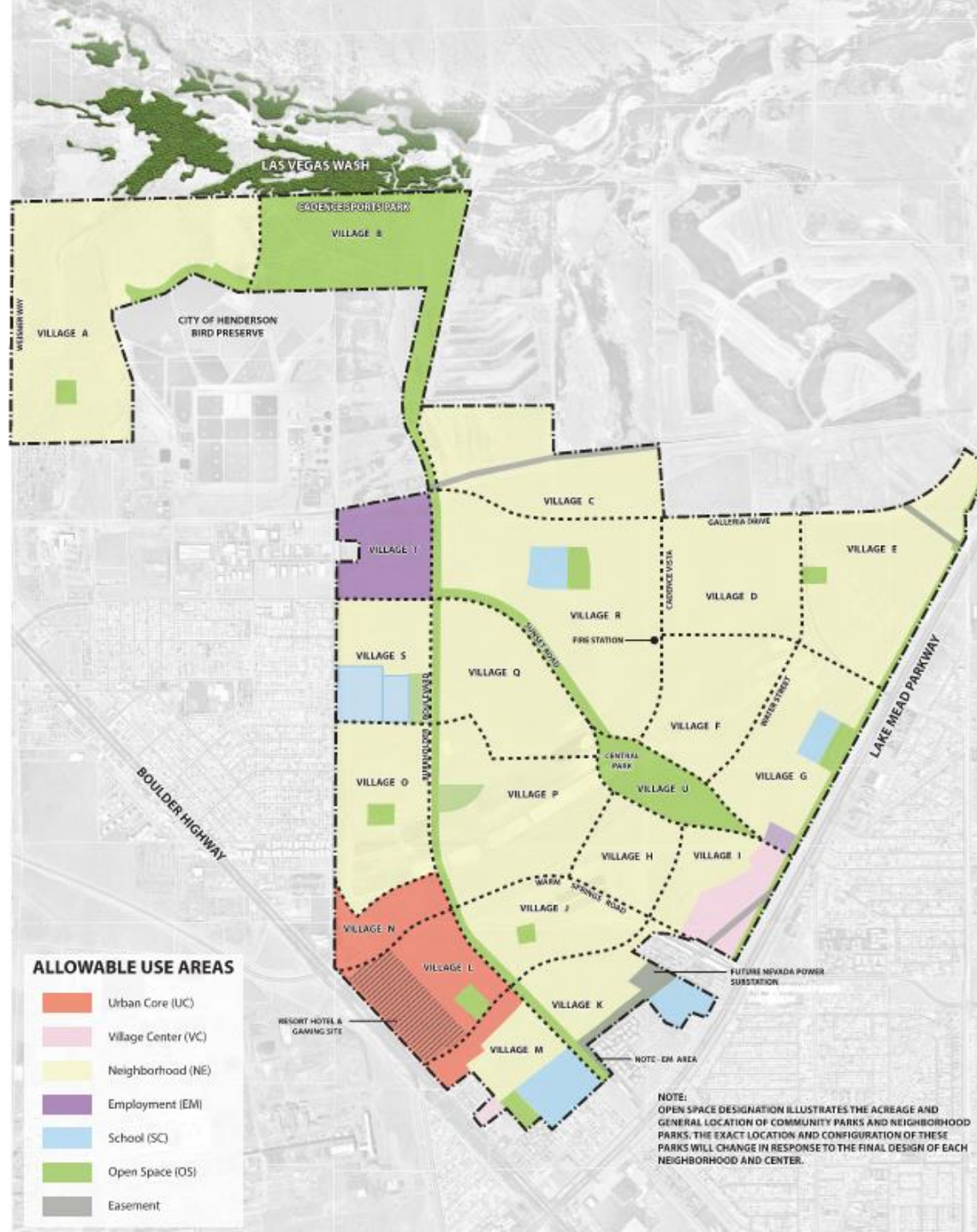
Cadence and projects near Las Vegas Wash/Wetlands Area update

Cadence





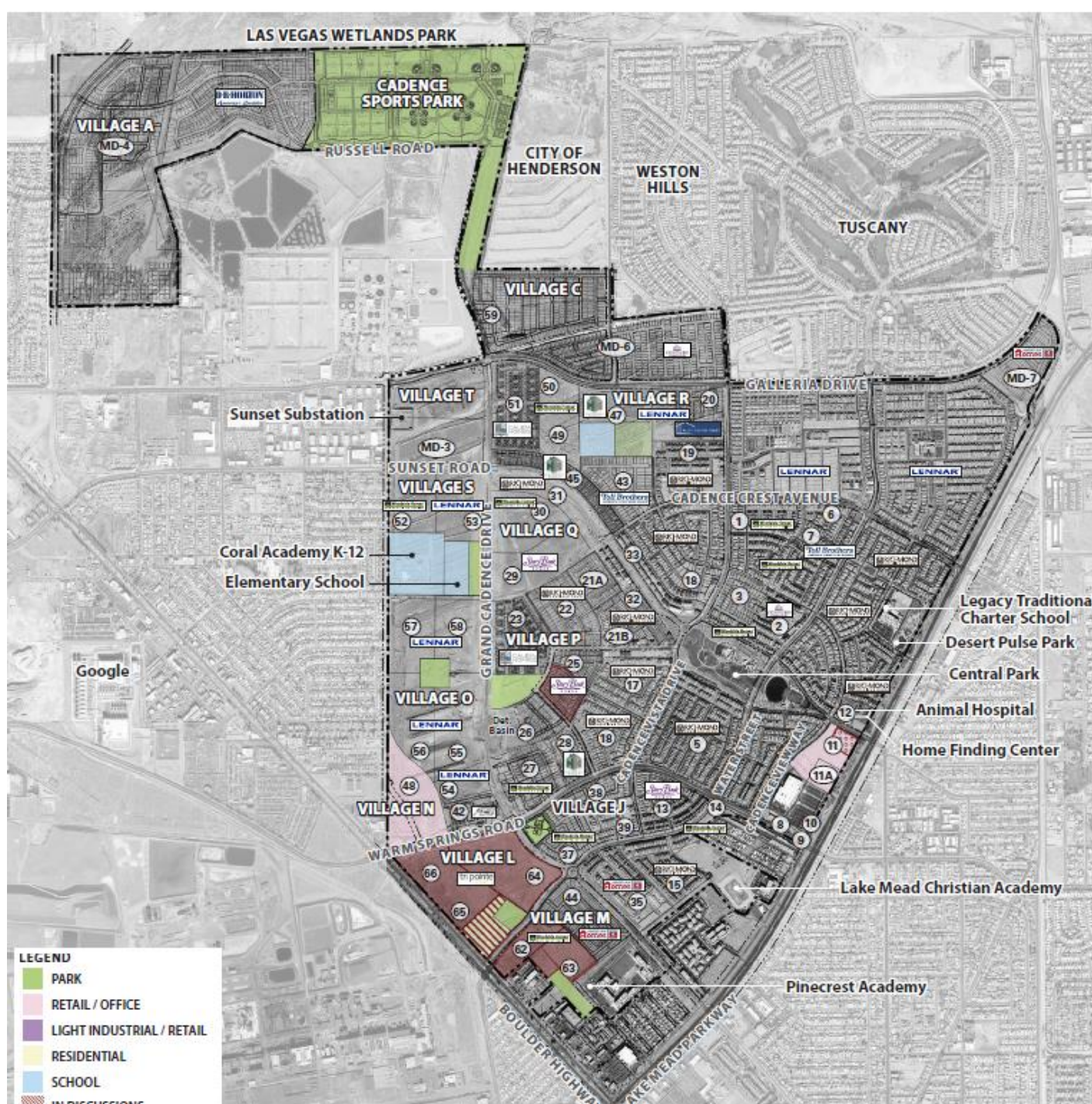
- Size: **2,197** acres
- Max dwelling units: **13,250**
- Min dwelling units: **11,250**
- Density: ~**6.4** dwelling units per acre
- 21 Planning Parcels which are further divided into a series of smaller Neighborhood Parcels
- Schools: **6** (3 charter and 1 private currently)
- Firehouse: **1**
- No gated developments (except Active Adult area)
- Open Space: **420** acres
 - Landwell Sports Park: **100** acre community park
 - Central Park: **42** acres
 - Neighborhood Parks: **10** parks ranging in size
- Total Permits issued – **3,591**



ALLOWABLE USE AREAS

- Urban Core (UC)
- Village Center (VC)
- Neighborhood (NE)
- Employment (EM)
- School (SC)
- Open Space (OS)
- Easement

NOTE:
OPEN SPACE DESIGNATION ILLUSTRATES THE ACREAGE AND
GENERAL LOCATION OF COMMUNITY PARKS AND NEIGHBORHOOD
PARKS. THE EXACT LOCATION AND CONFIGURATION OF THESE
PARKS WILL CHANGE IN RESPONSE TO THE FINAL DESIGN OF EACH
NEIGHBORHOOD AND CENTER.



Central Park



CENTRAL PARK







**RICHMOND
LAND SALE 19
LEGATO**

**TOLL BROTHERS
LAND SALE 43
EVERLEIGH**

**HARMONY
LAND SALE 45
SERENITY PLACE**

**RICHMOND
LAND SALE 32
ARIOSO**



**CORAL ACADEMY OF SCIENCE LAS VEGAS
CADENCE CAMPUS**



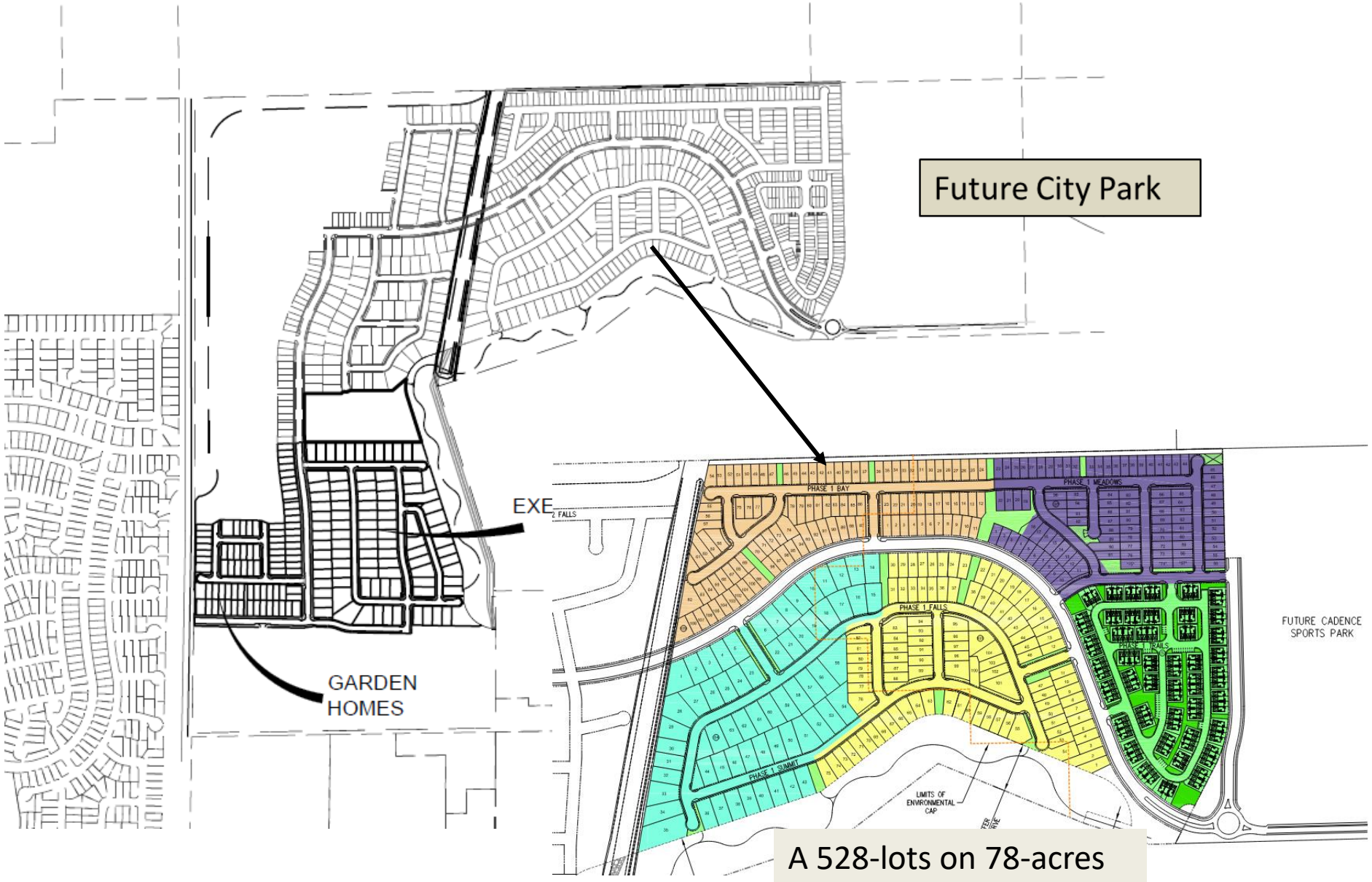
**TOLL BROTHERS
LAND SALE 43
EVERLEIGH**

**RICHMOND
LANDSALE 19
LEGATO**

LAND SALE 20

CADENCE FIREHOUSE 87 SITE





Future City Park

EXE
FALLS

GARDEN
HOMES

FUTURE CADENCE
SPORTS PARK

LIMITS OF
ENVIRONMENTAL
CAP

0 100
FEET

A 528-lots on 78-acres

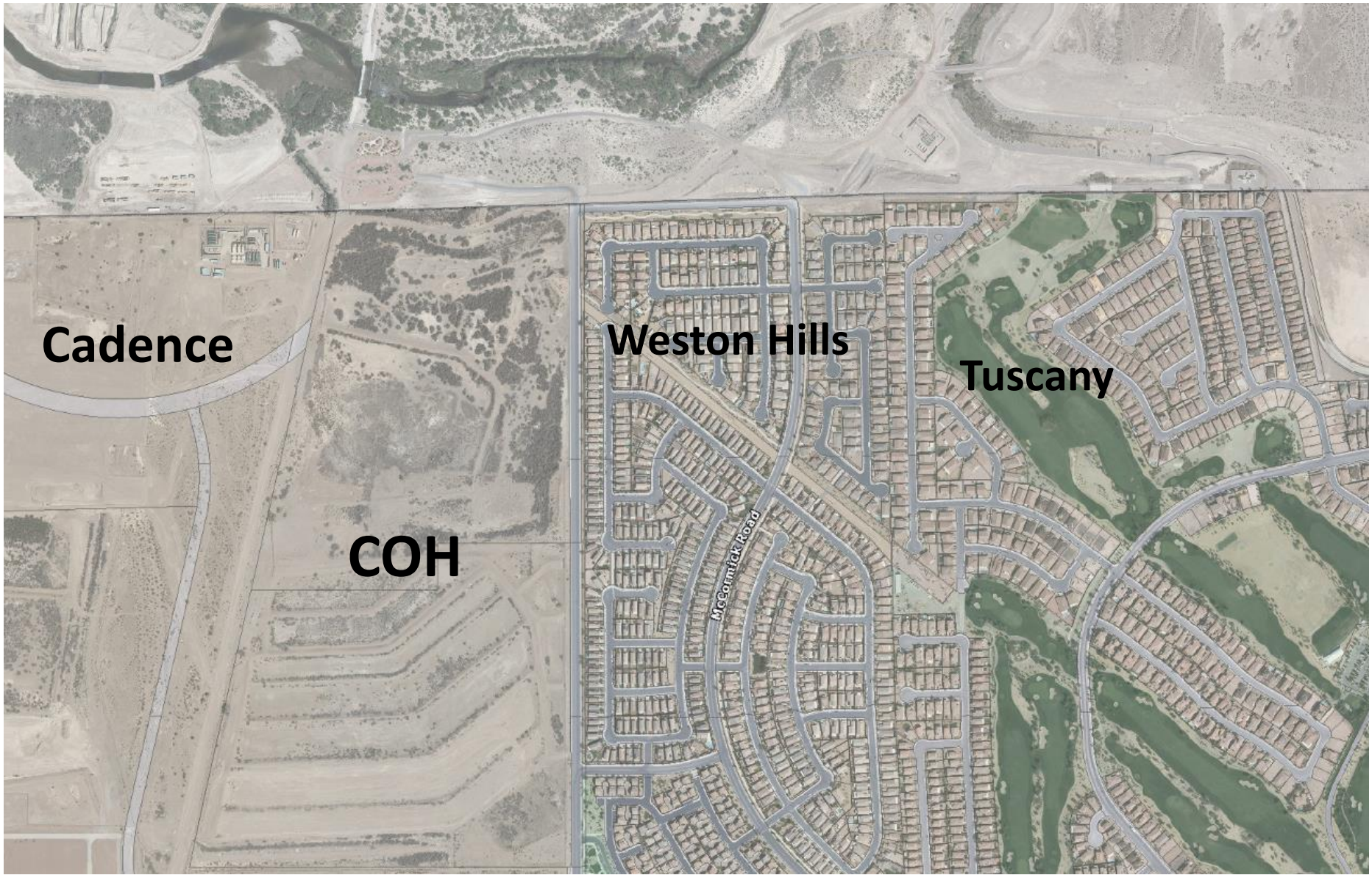
An aerial photograph of a park area. The park itself is a green, irregularly shaped area with several ponds and a central building. It is surrounded by a brown, hatched buffer zone. To the north of the buffer is a residential neighborhood with many small houses. To the south is a large, flat, brown area, possibly a field or parking lot. To the east is a road and some industrial or commercial buildings. A label 'Future City Park' is in the top right, and a label '200' Buffer' with an arrow points to the buffer zone.

Future City Park

200' Buffer

**DR HORTON
LAND SALE MD4**





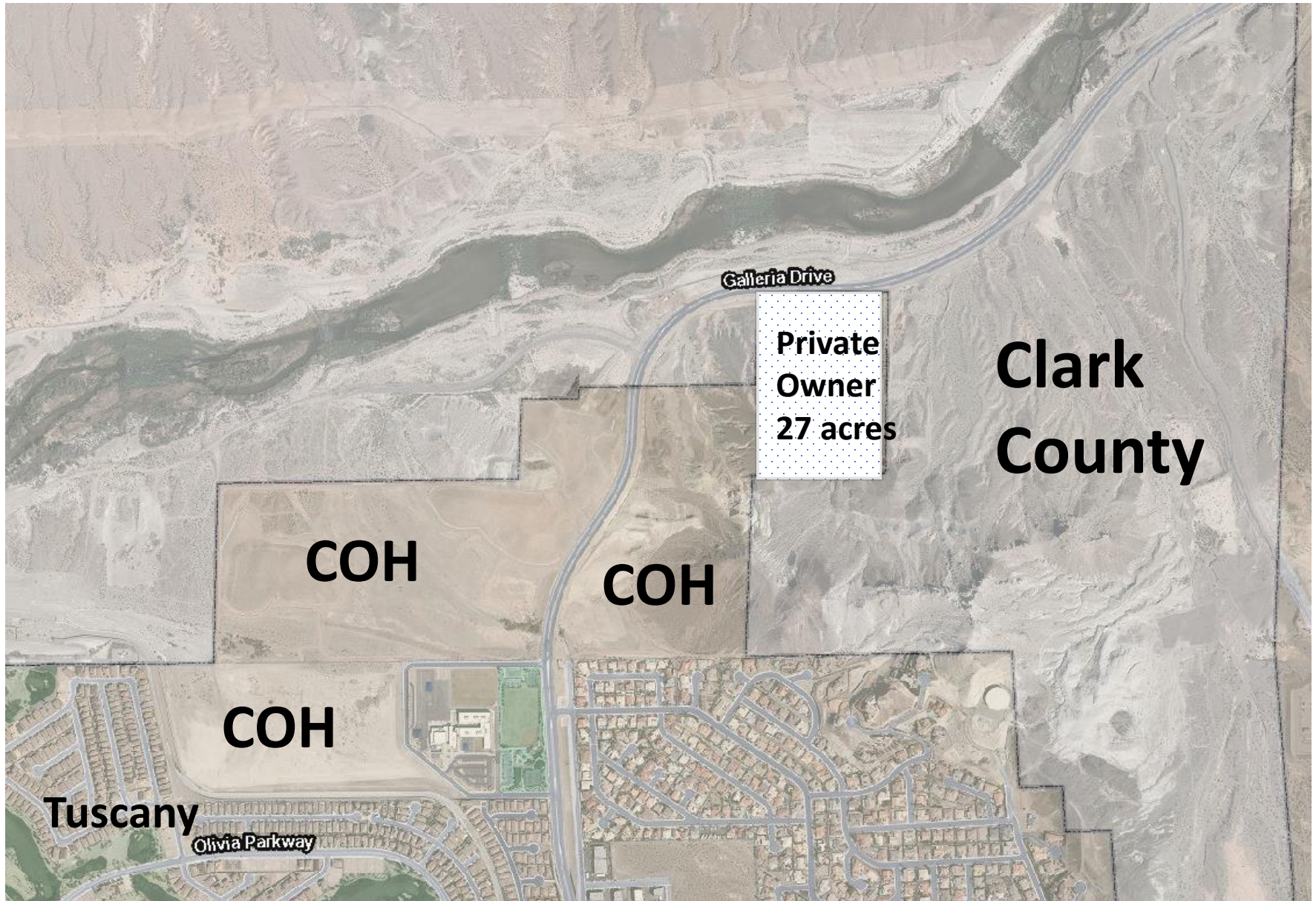
Cadence

COH

Weston Hills

Tuscany

McCormick Road



Galleria Drive

Private
Owner
27 acres

Clark
County

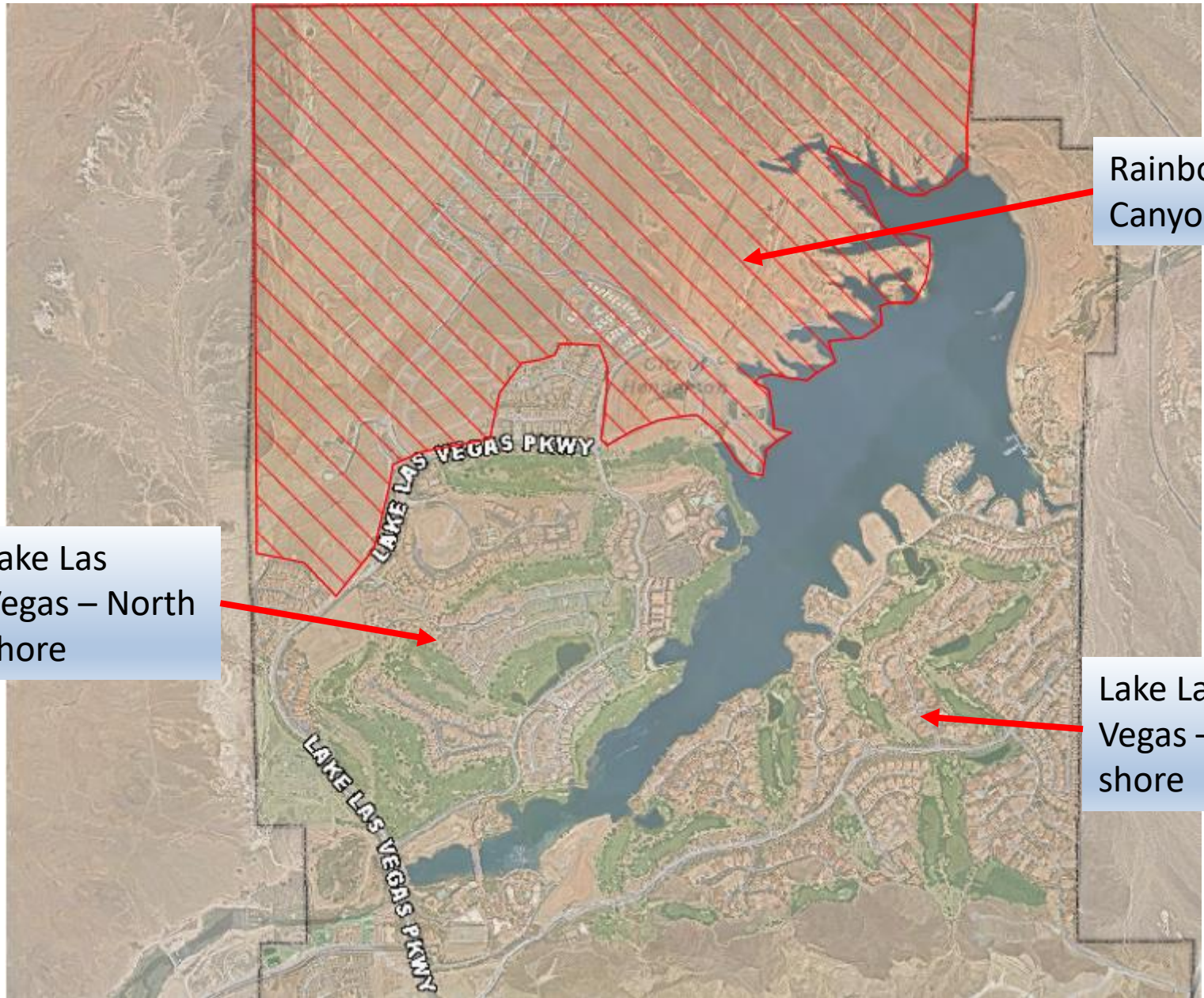
COH

COH

COH

Tuscany

Olivia Parkway



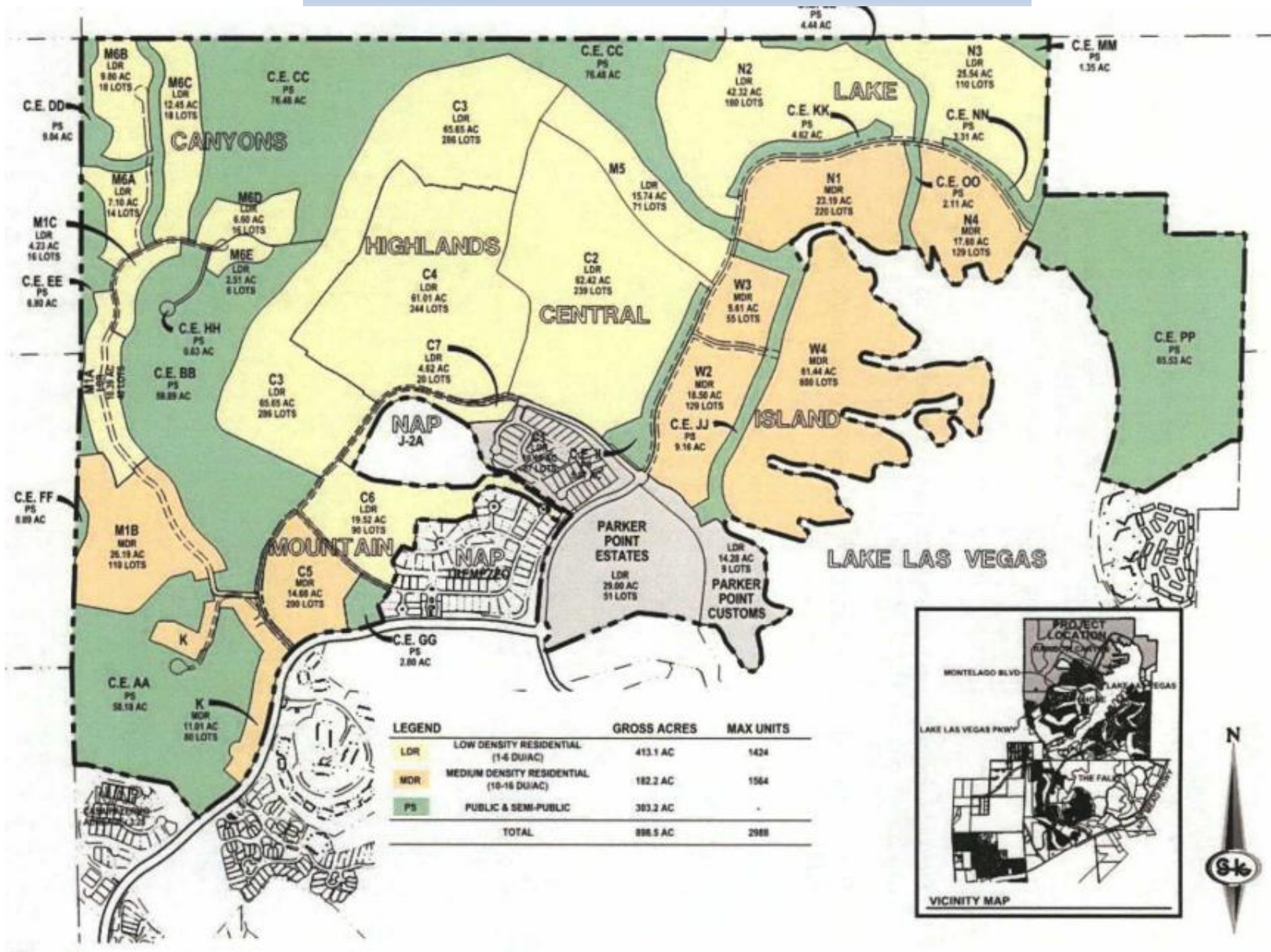
Rainbow
Canyon

Lake Las
Vegas – North
shore

Lake Las
Vegas – South
shore

Rainbow Canyon at Lake Las Vegas

3,500 max units; anticipated 2,988 units



Rainbow Canyon



Eddie Dichter

Assistant Director

Community Development & Services

T 702-267-1534

E Edward.Dichter@cityofhenderson.com

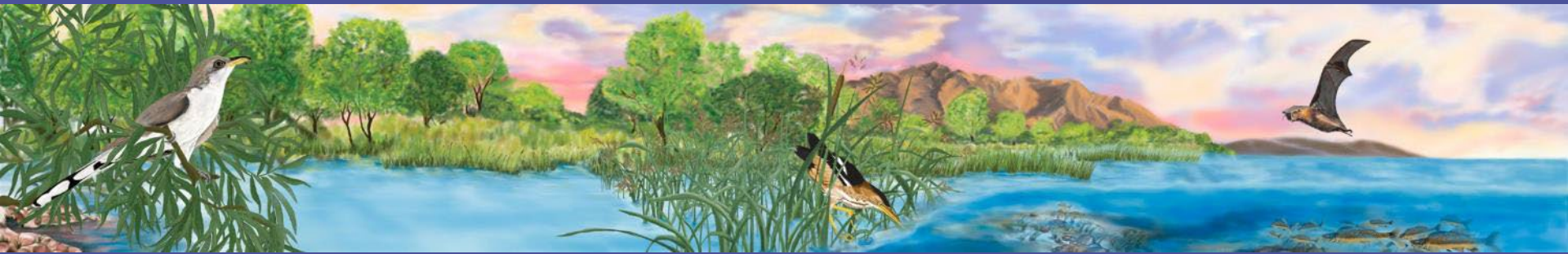


That's all Folks!

Lower Colorado River Multi-Species Conservation Program



Balancing Resource Use and Conservation



Carolyn Ronning, Wildlife Group Manager
Bureau of Reclamation
Boulder City, Nevada

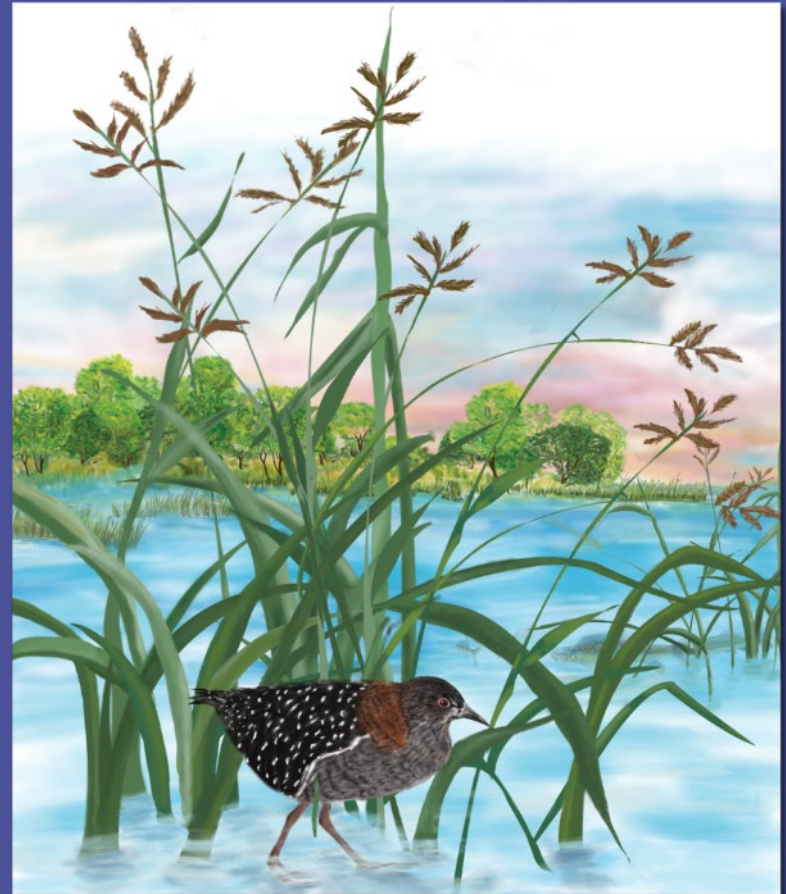
Lower Colorado River Multi-Species Conservation Program



Balancing Resource Use and Conservation

PURPOSE

Multi-stakeholder Federal and non-Federal partnership responding to the need to balance the use of lower Colorado River water resources and the conservation of native species and their habitats in compliance with the Endangered Species Act.



Lower Colorado River Multi-Species Conservation Program



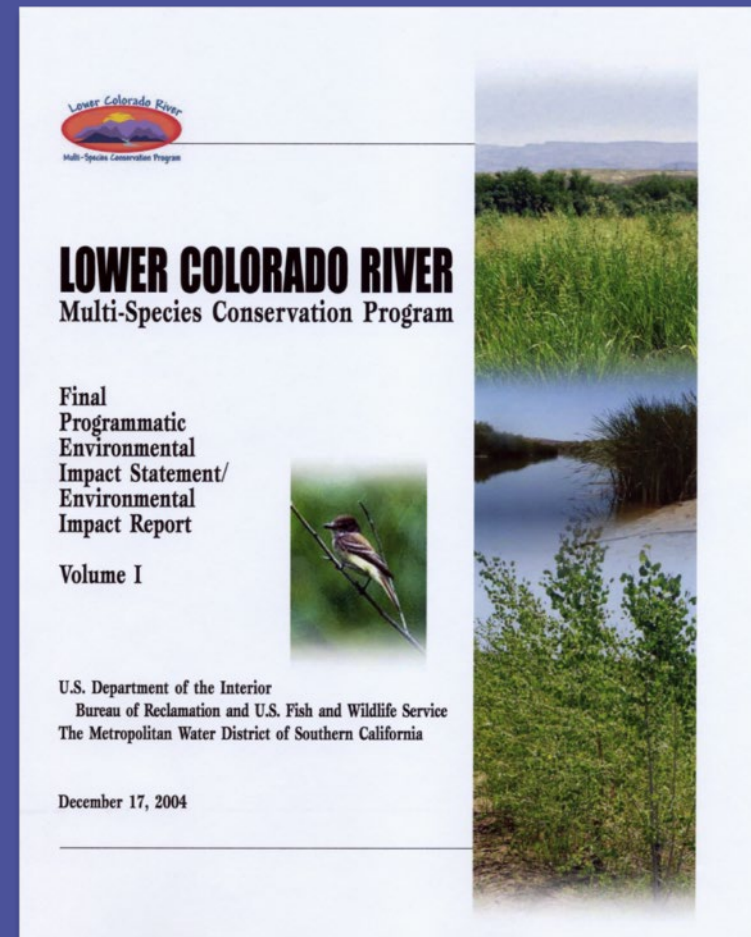
Balancing Resource Use and Conservation

50-Years of ESA and CESA Compliance

- Section 7 and Section 10 HCP

Covered Actions

- Delivery and Diversion of 9 MAF
- Maintenance Activities
- Movement of 1.574 MAF



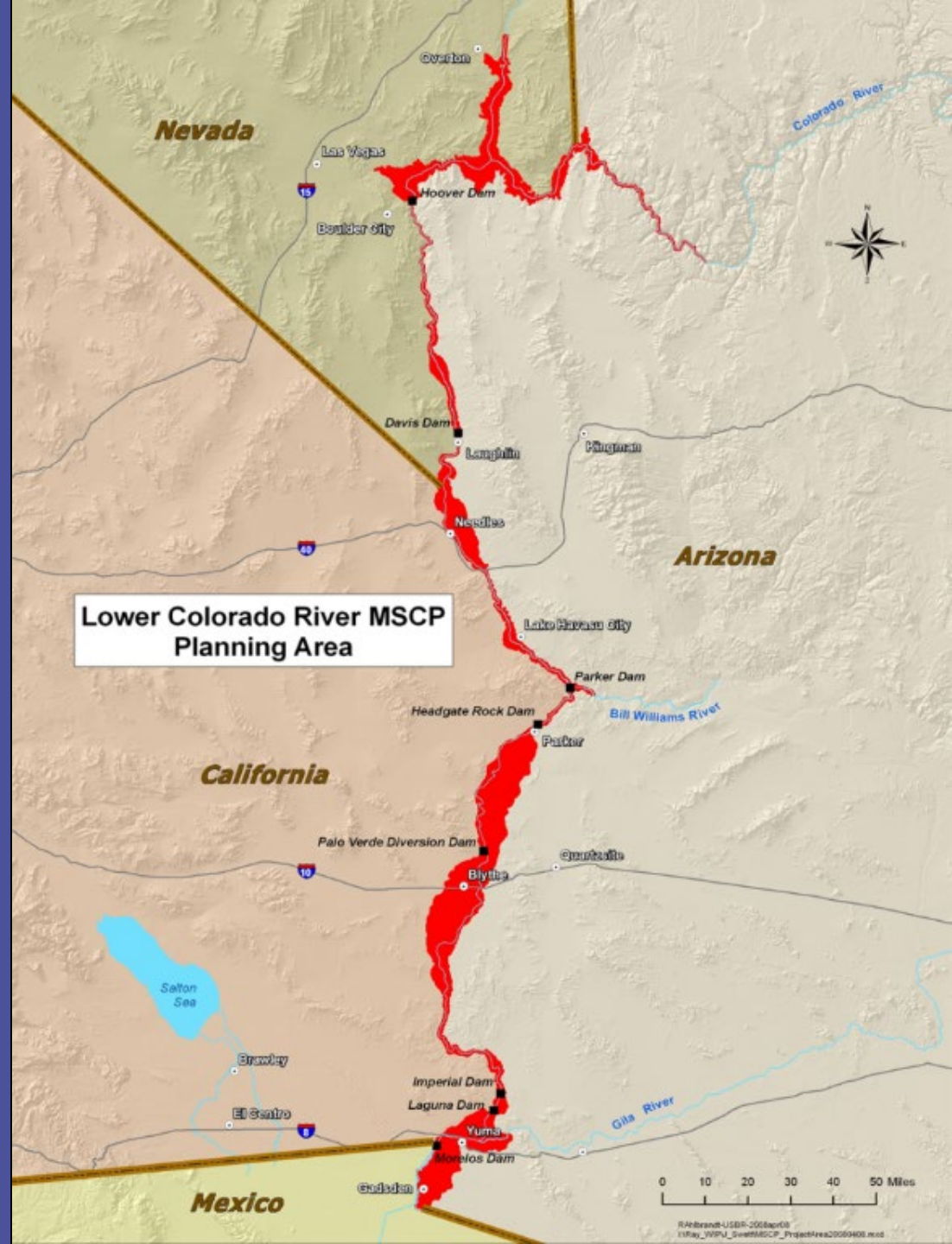
LOWER COLORADO RIVER MSCP

Planning Area

Extends over 400 miles from Lake Mead to the southernmost border with Mexico.

Includes:

- Lake Mead
- Lake Mohave
- Lake Havasu
- the historic 100-year floodplain



Lower Colorado River Multi-Species Conservation Program



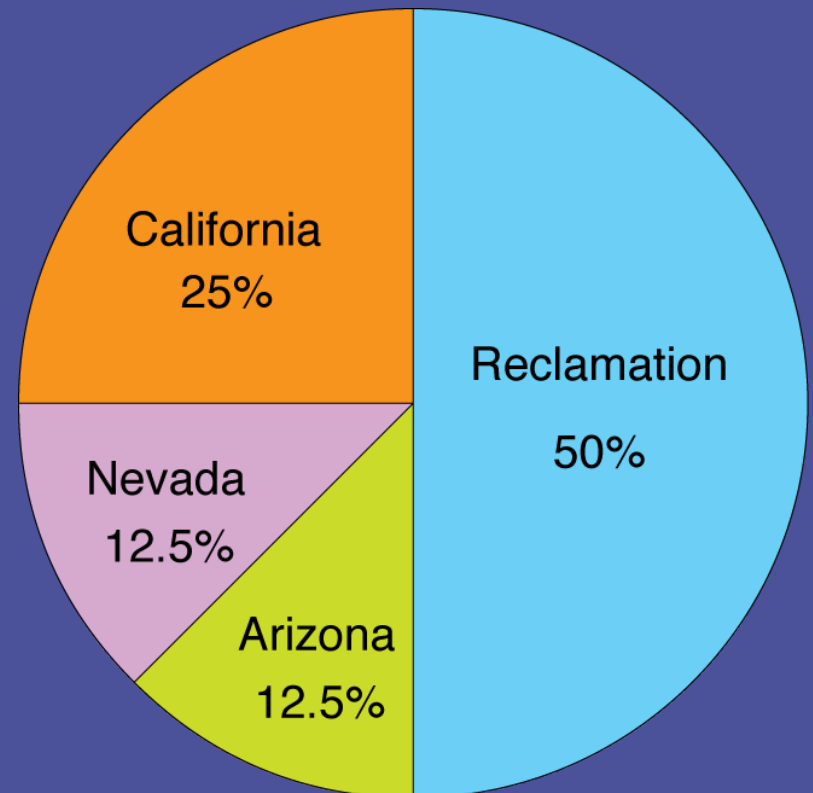
Balancing Resource Use and Conservation

COST SHARING

- **Total Program Cost**
\$626 million (2003 dollars and adjusted annually for inflation)
- **Federal / State Cost Share**
Split 50/50

2021 = \$30,332,676

2022 = \$31,271,830



Lower Colorado River Multi-Species Conservation Program



Balancing Resource Use and Conservation

COVERED SPECIES

- 8 threatened and endangered species
 - 3 birds, 3 fish, 2 reptiles



Yuma Ridgway's rail
(Yuma clapper rail)



southwestern willow flycatcher



yellow-billed cuckoo

Lower Colorado River Multi-Species Conservation Program



Balancing Resource Use and Conservation

COVERED SPECIES

- 8 threatened and endangered species
 - 3 birds, 3 fish, 2 reptiles



bonytail



humpback chub



razorback sucker

Lower Colorado River Multi-Species Conservation Program



Balancing Resource Use and Conservation

COVERED SPECIES

- 8 threatened and endangered species
 - 3 birds, 3 fish, 2 reptiles



desert tortoise



northern Mexican gartersnake

Lower Colorado River Multi-Species Conservation Program



Balancing Resource Use and Conservation

COVERED SPECIES

- 19 other species
 - 4 mammals, 9 birds, 1 reptile, 1 amphibian, 1 fish, 1 insect, 2 plants
- 5 “evaluation species”*
 - 3 mammals, 2 amphibians

** Evaluation species are those which would qualify as covered species except sufficient information on their biology, habitat use, and occurrence within the project area are not sufficient at the time the HCP was completed*

Lower Colorado River Multi-Species Conservation Program



Balancing Resource Use and Conservation

CONSERVATION AREA DEVELOPMENT AND MANAGEMENT GOALS

- Cottonwood-willow 5,940 acres
- Mesquite 1,320 acres
- Marsh 512 acres
- Backwaters 360 acres

Lower Colorado River Multi-Species Conservation Program



Balancing Resource Use and Conservation

FISH AUGMENTATION GOALS

- 660,000 razorback suckers
- 620,000 bonytail



Lower Colorado River Multi-Species Conservation Program



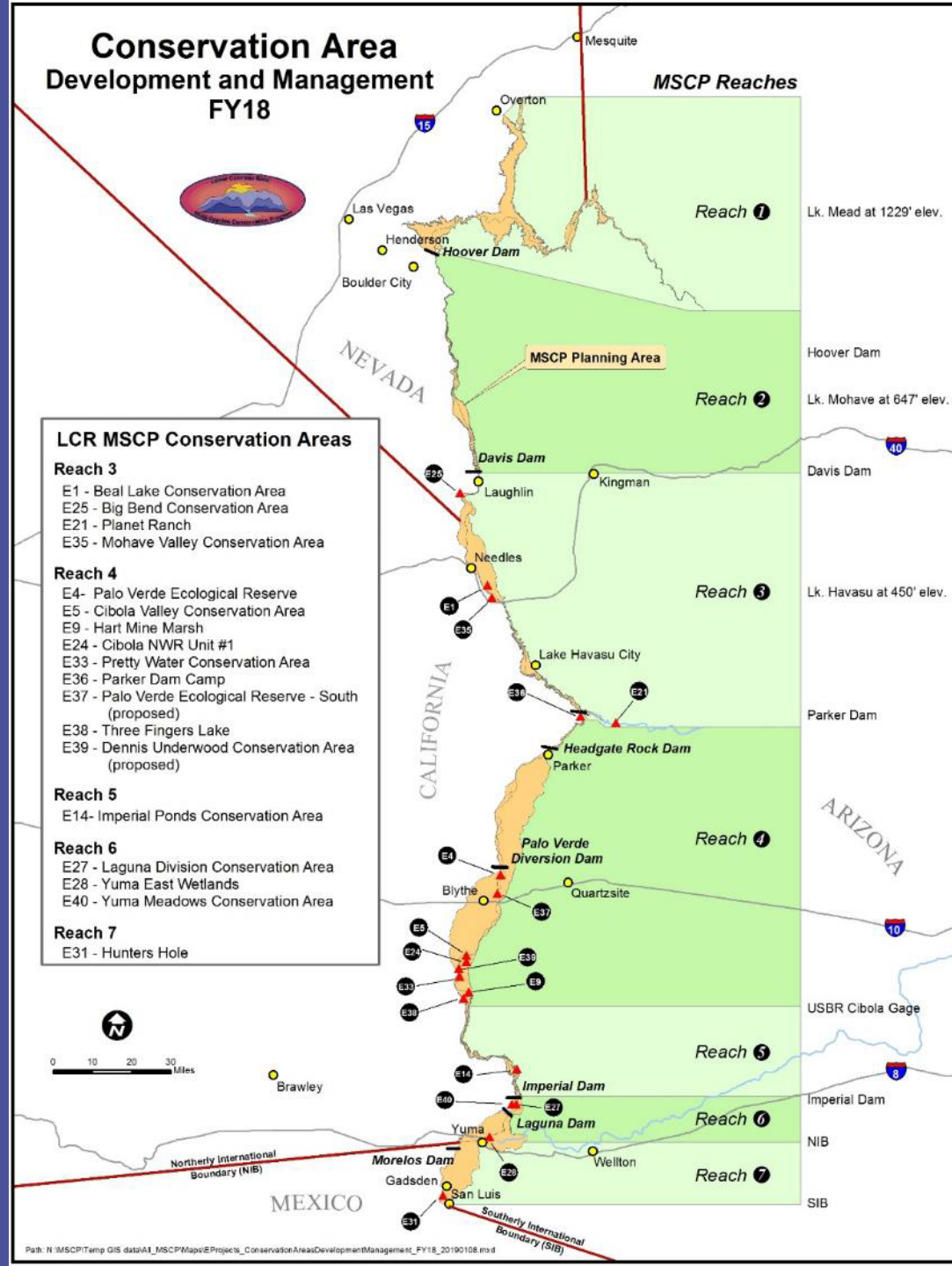
Balancing Resource Use and Conservation

PROGRAM COMPONENTS

- Conservation Area Development & Management
- Fish Augmentation
- Species Research
- System-wide Monitoring
- Existing Habitat Maintenance

Conservation Areas

- 17 conservation areas
 - 13 complete
 - 2 in planning stage
 - 2 under construction
 - plus 2 completed conservation areas will be expanded
- Over 6,500 acres of habitat has been created





Cottonwood-willow

Goal: 5,940 acres

Created: 4,122 acres



Honey Mesquite

Goal: 1,329 acres

Created: 1,901 acres



Marsh Goal: 512 acres Created: 362 acres



Backwaters

Goal: 360 acres

Created: 158 acres

HABITAT CREATION ACCOMPLISHMENTS

- LCR MSCP has established sufficient acres of habitat to complete conservation measures for:
 - western red bat (765 ac)
 - Colorado River cotton rat (125 ac)
 - elf owl (1,784 ac)
 - summer tanager (602 ac)
 - western yellow bat (765 ac)
 - Yuma hispid cotton rat (76 ac)
 - Gila woodpecker (1,702 ac)
 - MacNeill's sootywing (222 ac)

Conservation Area	Count of LCR MSCP Species Detected At Least Once Between 2005-2019
Beal Lake Conservation Area	20
Big Bend Conservation Area	8
Cibola National Wildlife Refuge Unit #1	12
Cibola Valley Conservation Area	11
Hart Mine Marsh	5
Hunters Hole	8
Imperial Ponds Conservation Area	5
Laguna Division Conservation Area	7
Mohave Valley Conservation Area	2
Palo Verde Ecological Reserve	13
Parker Dam Camp	1
Planet Ranch	12
Pretty Water Conservation Area	1
Yuma East Wetlands	13

Conservation Area	Yuma Ridgway’s rail	Yellow-billed cuckoo
Beal Lake Conservation Area	X	X
Big Bend Conservation Area		-
Cibola National Wildlife Refuge Unit #1	-	X
Cibola Valley Conservation Area	-	X
Hart Mine Marsh	X	-
Hunters Hole	-	X
Imperial Ponds Conservation Area	X	-
Laguna Division Conservation Area	X	X
Mohave Valley Conservation Area		-
Palo Verde Ecological Reserve	-	X
Parker Dam Camp	-	
Planet Ranch		X
Pretty Water Conservation Area	-	
Yuma East Wetlands	X	X



Cibola Valley Conservation Area



One innovation was use of a mass transplanter

Southwestern Willow Flycatchers

- Five surveys conducted May 15 to July 15
- Migrants only, no territorial SWFLs observed





Detections of YBCU on the BWR NWR 2006-2019



Yellow-billed Cuckoos

By 2015:

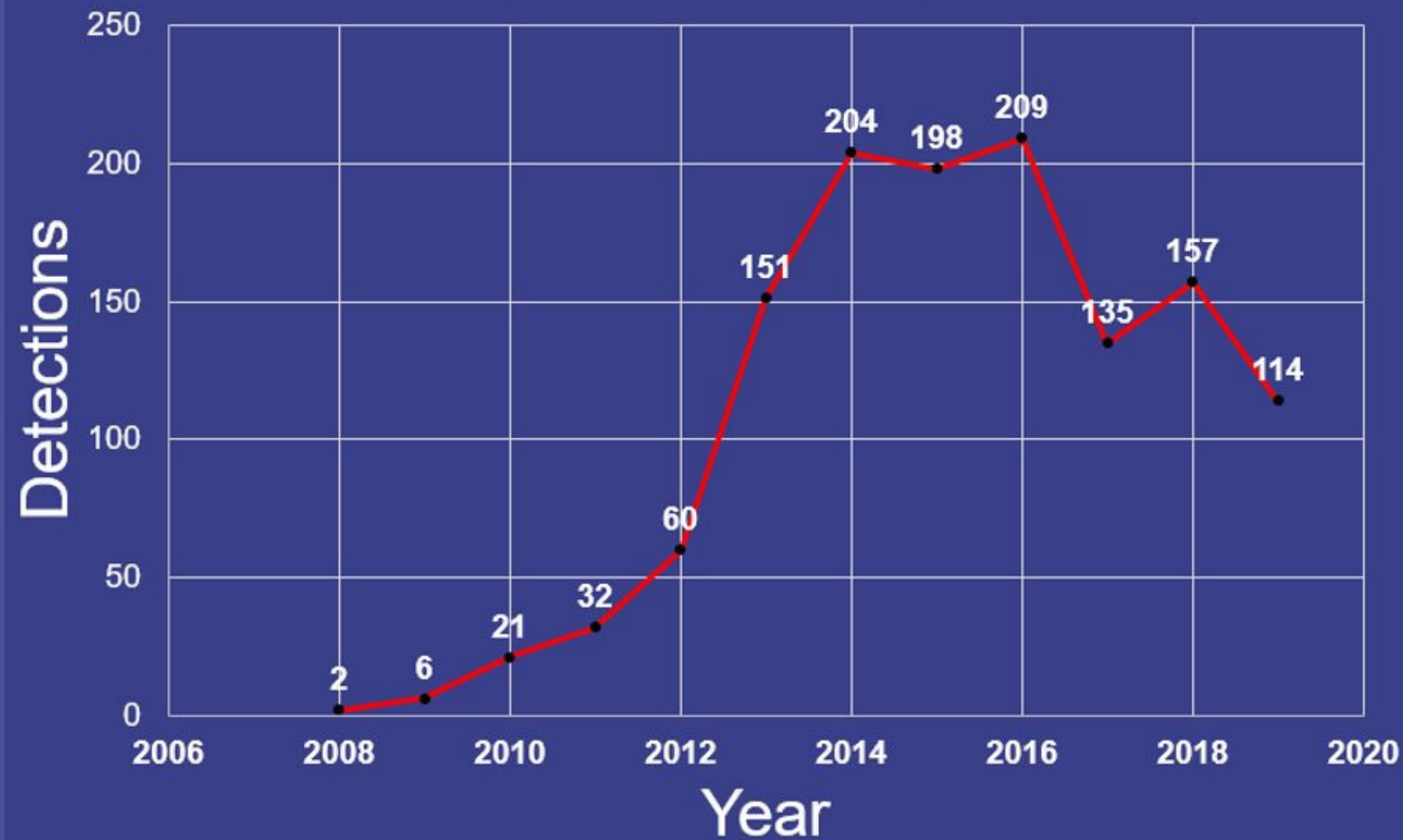
- 96% the 414 ha planted at PVER was occupied by YBCU
- Up to 80 YBCU breeding territories (at least 2 birds per territory) were estimated



Yellow-billed Cuckoos

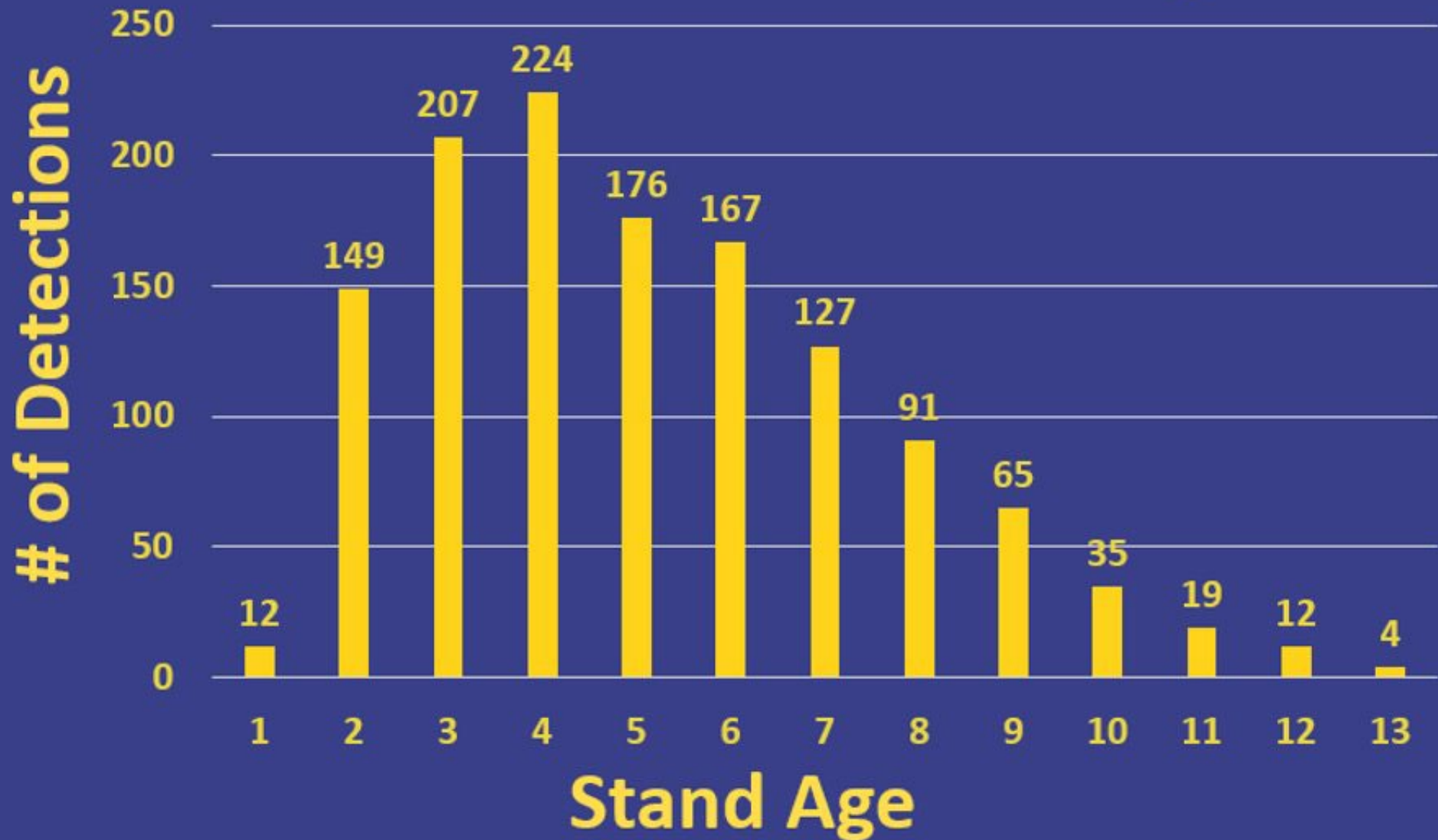
- YBCUs detected within 2 years after planting, some within 1 year
- Management Concern: By year 5 after planting, detections begin to decline, with cuckoos moving into more recently planted areas.

PVER: Year X Detections (2008-2019)



PVER Surveys 2008-2019

YBCU Detections x Stand Age



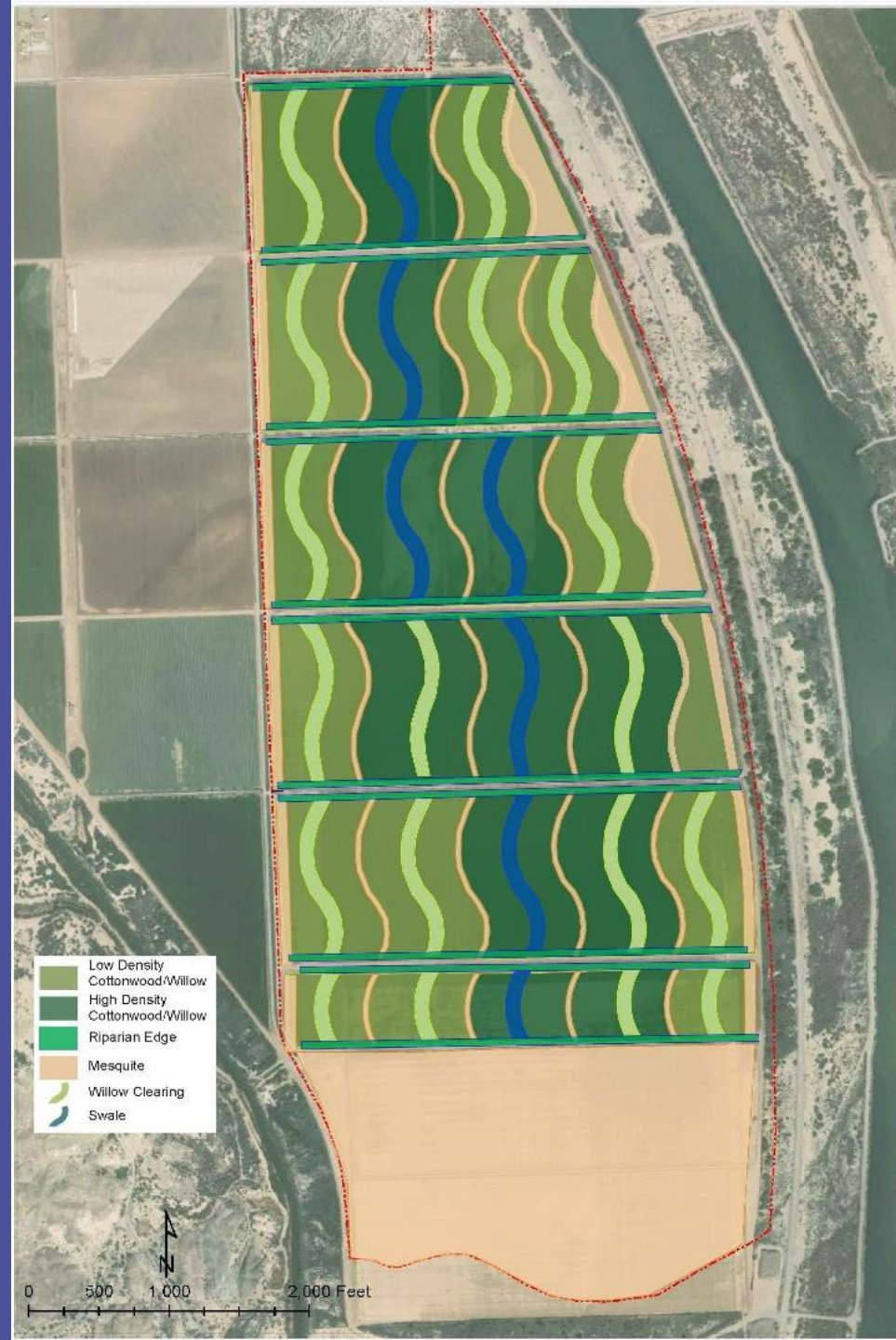
Results: Detections by age + size + age*size



Predicted survey detections by site age for sites 20, 50, and 80 ha.
95% predictive intervals are shown by grey shading around each line.

Dennis Underwood Conservation Area

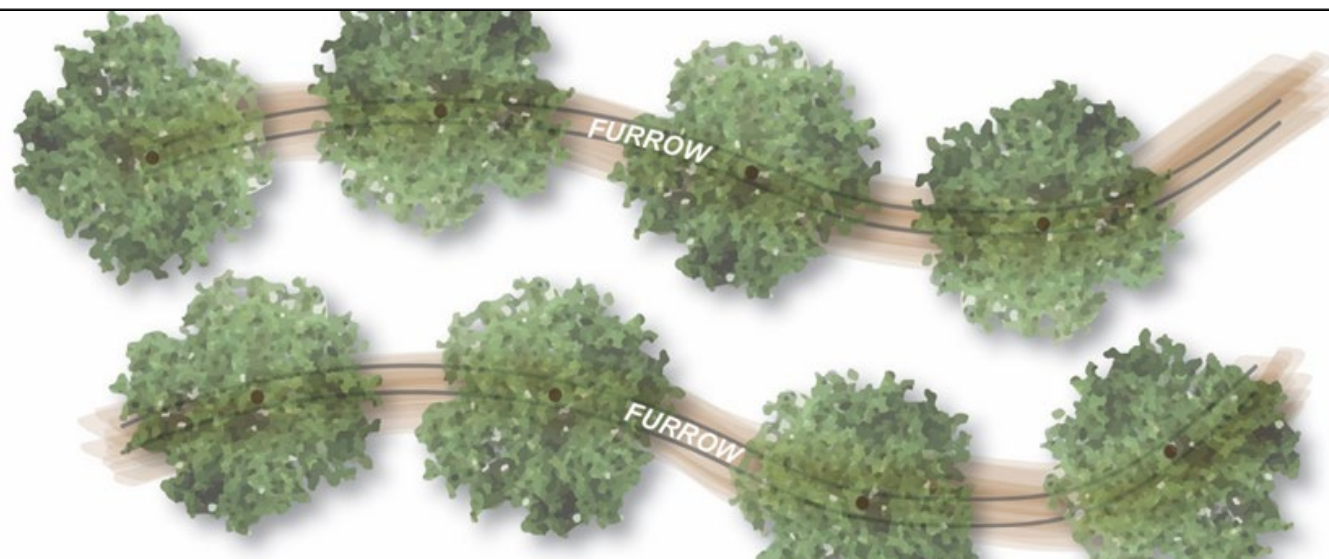
- 635 acres
- The habitat creation concept includes establishing approximately 506 acres of cottonwood-willow and 122 acres of honey mesquite land cover types.





- 1. Mesquite
- 2. Low density Cottonwood-coyote willow
- 3. Willow clearing

- 4. High Density Cottonwood, coyote, Gooding's Willow
- 5. Swale
- 6. High Density Cottonwood-Gooding's Willow







FISH AUGMENTATION ACCOMPLISHMENTS THROUGH FY20

Reach	Razorback Total FY05 - 20	Bonytail Total FY05 - 20
2	*	2,330
3	104,068	61,081
4/5	123,077	51,075

* 139,591 razorback were released into Reach 2 to maintain a genetically diverse broodstock. These fish don't count towards LCR MSCP augmentation goals



Fisheries Monitoring

Scanning Summary

North Scanner			
	BONY	FLSU	RASU
Quarter 1	0	0	1265
Quarter 2	0	0	2134
Quarter 3	0	1	1523
Quarter 4	0	0	1110
Total	0	0	6032

FLSU - Released 3/10/22 Trampas Cove, detected on 4/14/21 at North and South scanners

South Scanner			
	BONY	FLSU	RASU
Quarter 1	1	0	325
Quarter 2	0	0	1432
Quarter 3	1	1	1535
Quarter 4	0	0	694
Total	2	1	3986

BONY - Release 10/6/20 Laughlin Lagoon, detected twice at South Scanner 10/25 and 11/17

BONY - Release 5/27/20 Laughlin Lagoon, detected 3 times on south scanner over 9 months

FLSU - Same as above

Contacted fish from 80+ stocking/release events

FISHERIES RESEARCH

- Evaluation of immediate post-stocking survival of razorback and bonytail



FUTURE MONITORING PRIORITIES

- Conduct monitoring to evaluate whether the restoration sites meet the conservation measures for credit determination, where appropriate, and to determine whether the sites are meeting the management guidelines to adaptively manage the site.
- Conduct covered species-specific monitoring to determine presence at restoration sites to assist in adaptively managing the sites.



FUTURE TERRESTRIAL RESEARCH PRIORITIES

- Continue to assess the hydrology at restoration sites and then, if necessary, conduct hydrology studies and/or demonstrations to determine the appropriate water regime for breeding southwestern willow flycatcher habitat. Test varying irrigation regimes to determine the appropriate regime to create and/or maintain breeding flycatcher habitat.



FUTURE TERRESTRIAL RESEARCH PRIORITIES

- Look into habitat management actions that could add habitat structure back into conservation areas that have matured and lost the suitable structure.



FUTURE TERRESTRIAL RESEARCH PRIORITIES

- Analyze the vegetation at LCR MSCP conservation areas and system-wide monitoring sites used by covered species. Determine if there are any further habitat characteristics in common between utilized sites that can be used to improve created habitat for these species.



Lower Colorado River Multi-Species Conservation Program



Balancing Resource Use and Conservation

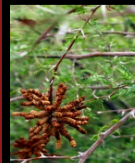
www.lcrmscp.gov

LAS VEGAS WASH COORDINATION COMMITTEE ENVIRONMENTAL RESOURCES AND OUTREACH UPDATE



January 25, 2022

www.lvwash.org



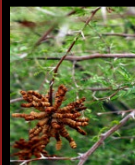
WILDLIFE MANAGEMENT PLAN (WMP): BIRD SURVEYS

- Annual T&E surveys
 - Yuma Ridgway's rail (E) – Since 2000
 - Southwestern willow flycatcher (E) – Since 1998
 - Yellow-billed cuckoo (T) - 2002-2004; 2013-
- Biweekly point counts year round at >30 points
 - 2005-09 – SBCM
 - 2009-11; 2014-present – GBBO



January 2022

www.lvwash.org



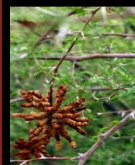
THREATENED AND ENDANGERED BIRD SURVEYS – 2022 SCHEDULE

- Marsh birds/Yuma Ridgway's rail
 - 2022 - early April through early May
- Southwestern willow flycatcher
 - 2022 – mid-May through June
- Yellow-billed cuckoo
 - 2022 - late June through early August



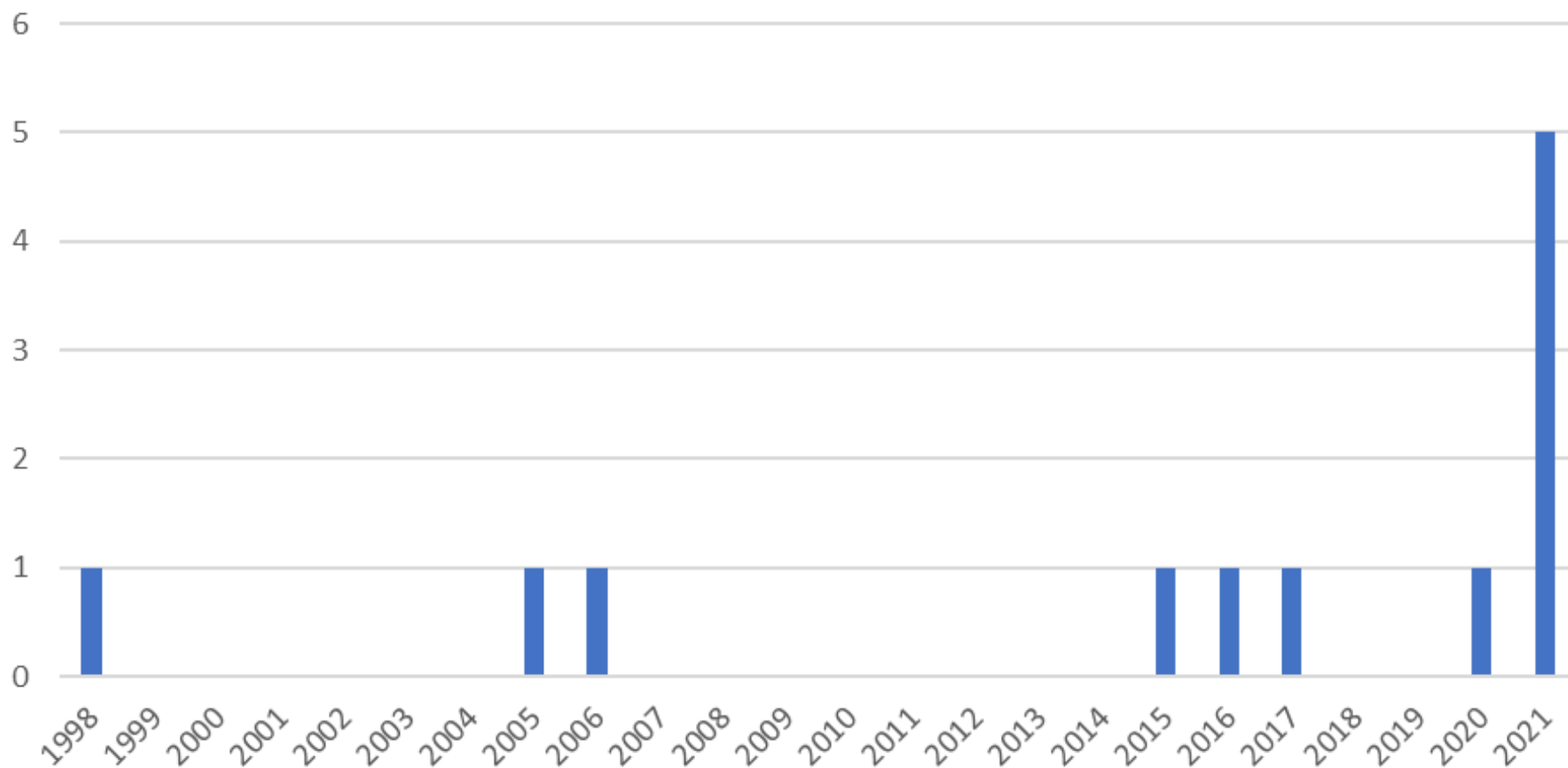
January 2022

www.lvwash.org



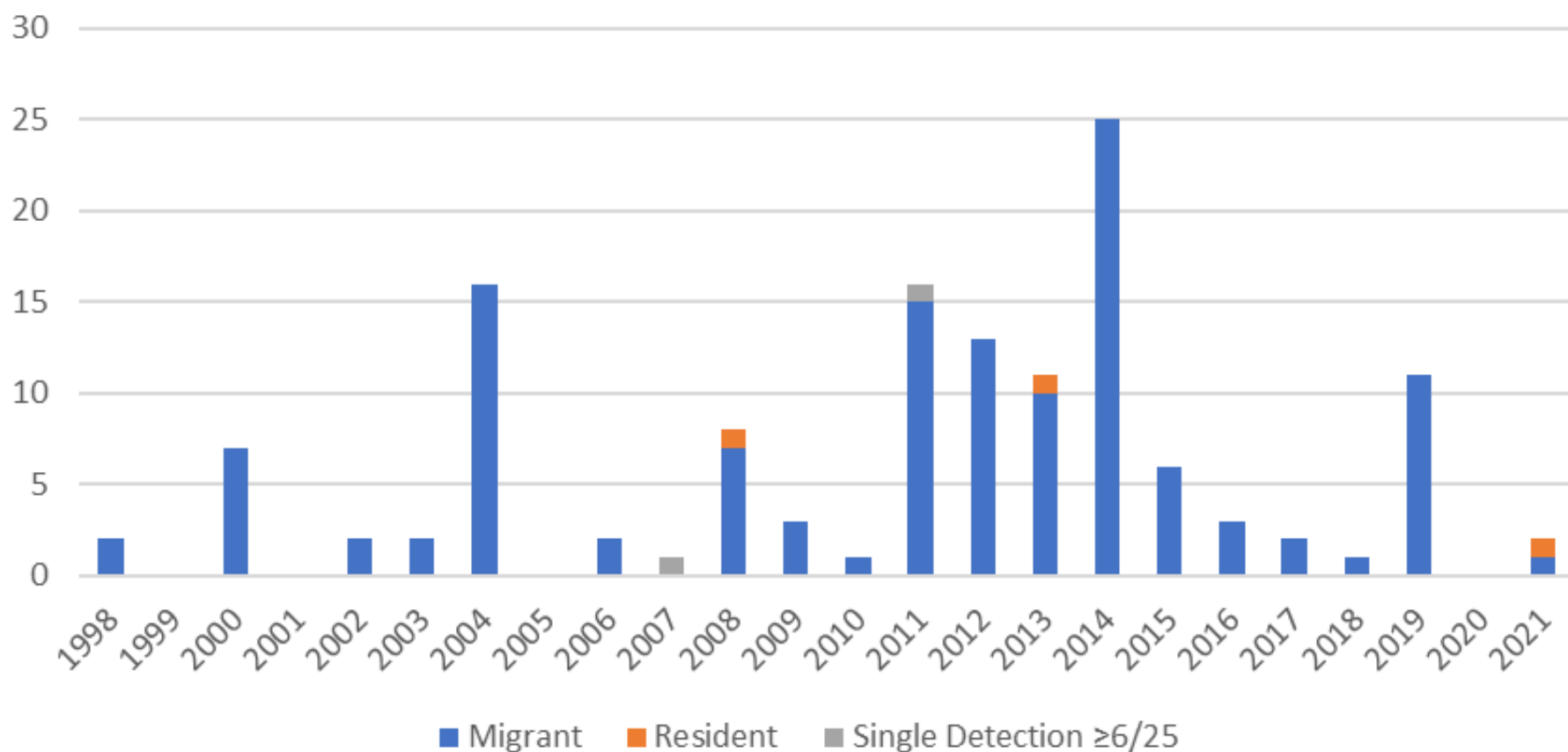
INDIVIDUALS DETECTED – 1998-2021

Yuma Ridgway's Rail



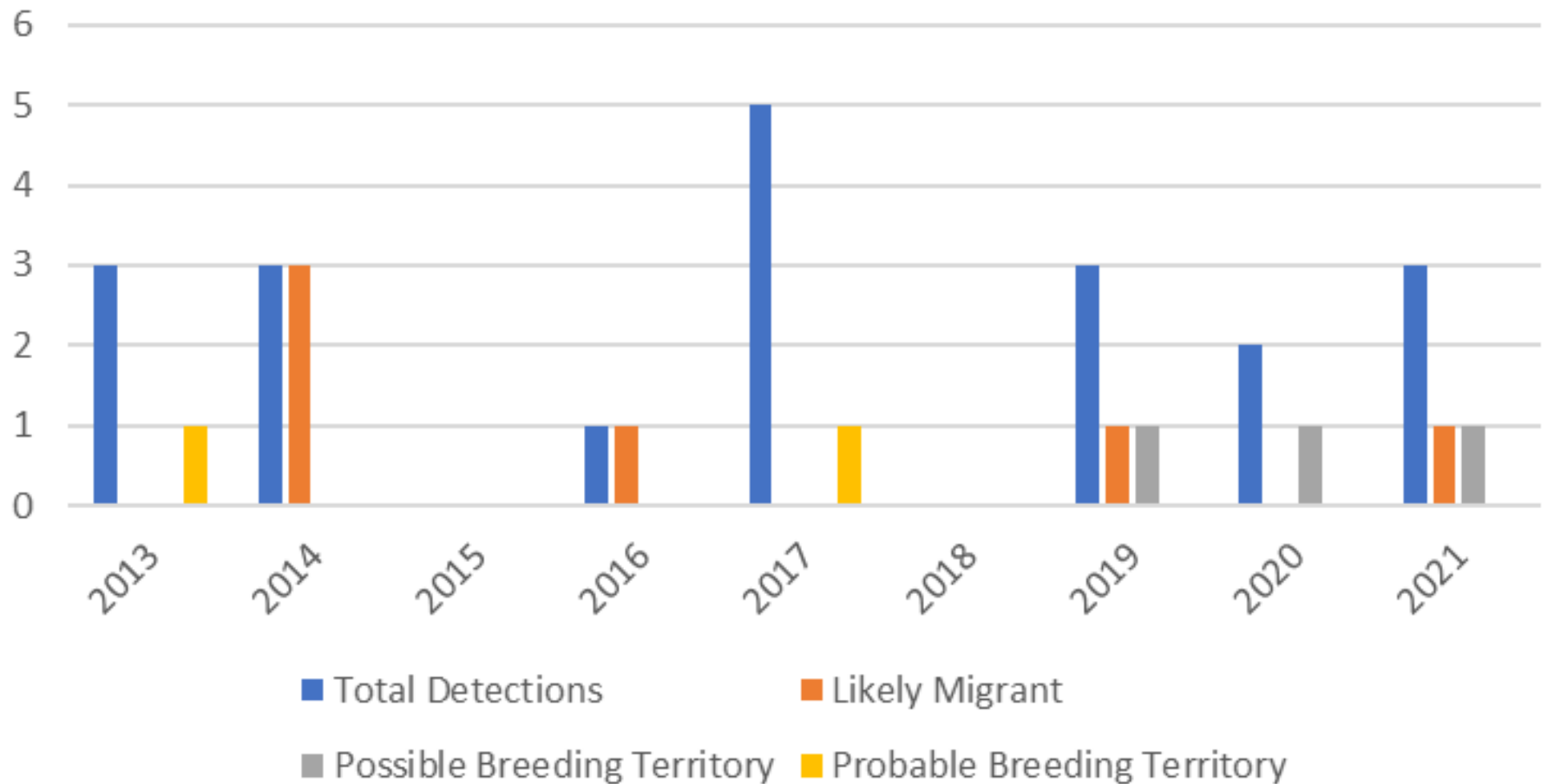
INDIVIDUALS DETECTED – 1998-2021

Willow Flycatcher



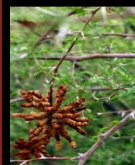
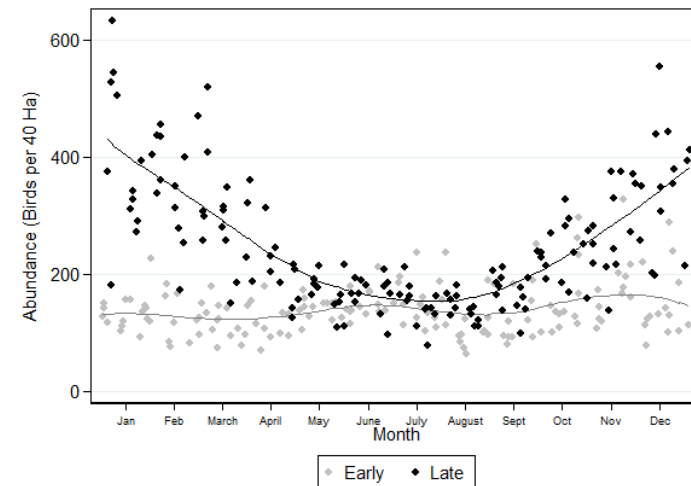
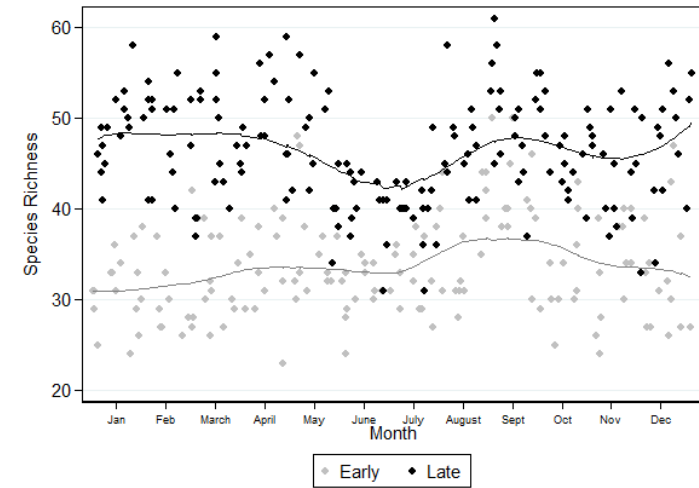
SURVEY RESULTS – 2013-2021

Yellow-billed Cuckoo



AVIAN POINT COUNT STUDY

- Biweekly counts by GBBO
- >170 species detected in 2020/2021 study year (Sep-Aug)
- 2005-2021
 - ~245 species
- Draft 2005-2021 GBBO report documents significant increases in richness and abundance
 - See figures
 - Show seasonal changes in number of species and individuals detected in the early (2005-2011) versus late (2014-2021) period



WMP: OTHER SURVEYS

- 2022 surveys
 - Rodent and shrew survey
 - Staff drafting study proposal
 - March – October
 - Utilize pit and Sherman traps
- Bats postponed to 2023 due to current COVID19 permitting restrictions



Cactus mouse



California leaf-nosed bat



SELENIUM FISH COLLECTION

- Fish collections took place in October and November
- 15 common carp and 1 green sunfish collected from Wash
 - Three Kids Weir
 - Pabco Weir
 - Tropicana Weir
- 15 common carp collected from Nature Preserve
- Samples shipped to lab for analysis
- Collections were made for CCRFCD who is managing the project



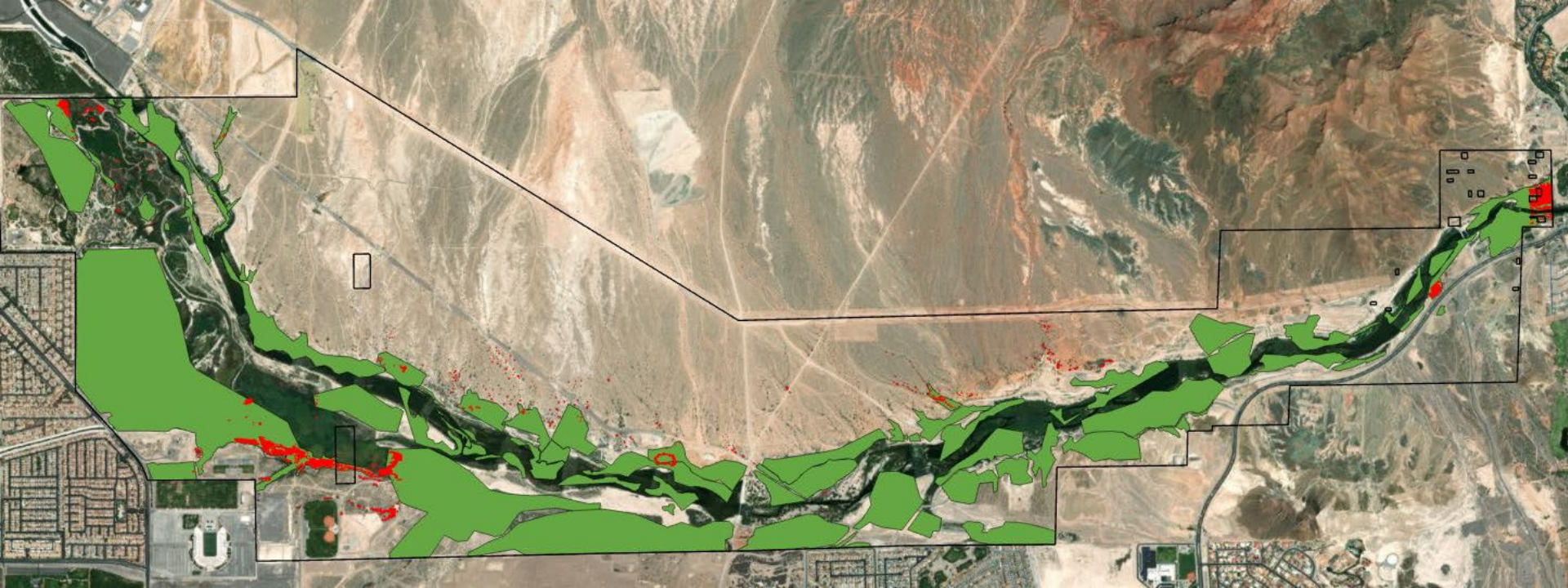
Common carp



January 2022

www.lvwash.org



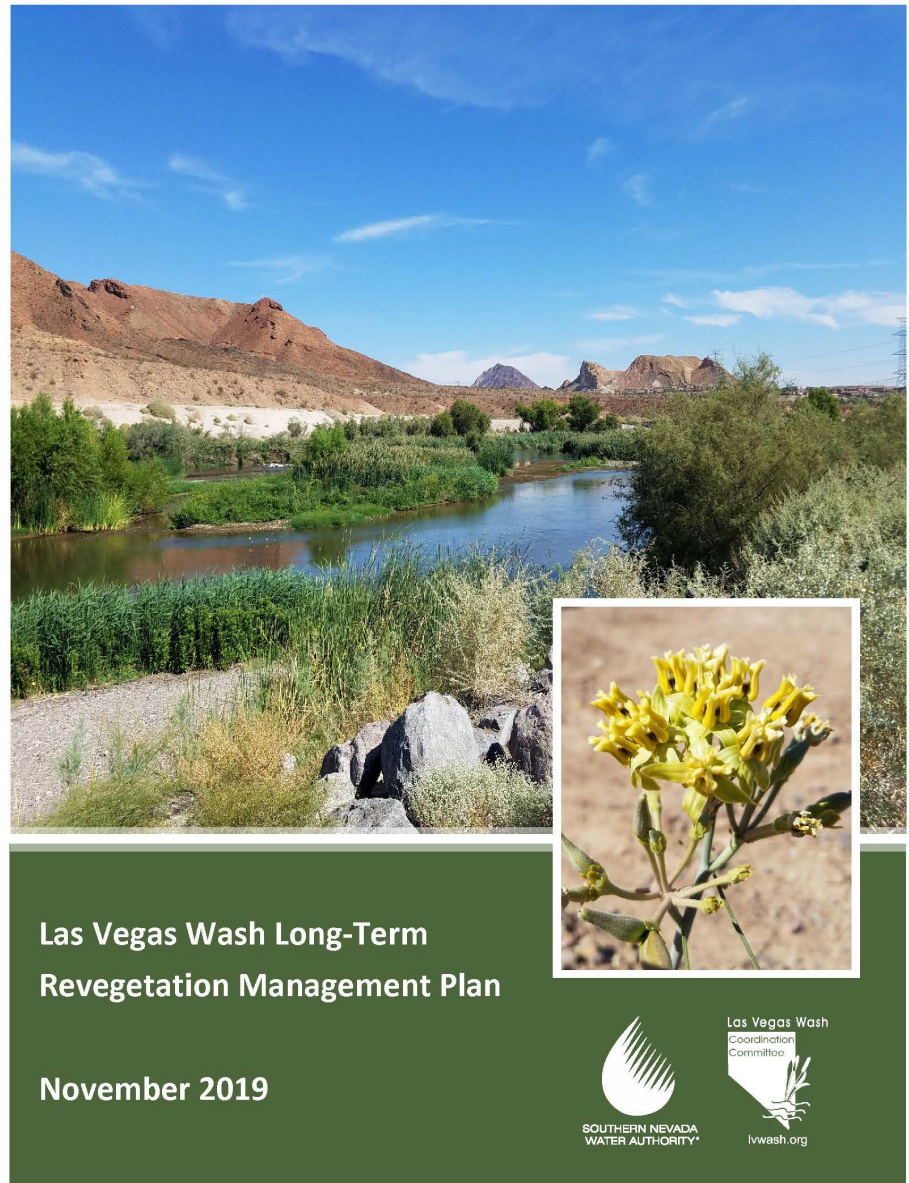


INVASIVE WEED MANAGEMENT

- Tamarisk reduced to ~25 acres
- SNWA's contractor Soil-Tech is currently removing noxious and non-native weeds from recently planted revegetation sites

REVEGETATION

- 570 acres have been revegetated
- 2020 vegetation monitoring report being drafted
- 2021 vegetation monitoring completed
- Long-term revegetation management plan to start implementation in FY22-23
 - Additional plantings
 - Enhancements for wildlife



REVEGETATION

- 2020 data:
 - 150 sites monitored
 - 12 new
 - 98 had same cover as 2019 (71.0%)
 - 13 increased in cover (9.4%)
 - 27 decreased in cover (19.6%)
- Two new sites at Historic Lateral and Tropicana Weirs had survivorship of 75.9% and 77.7%



Historic Lateral Expansion South revegetation site in 2021



January 2022

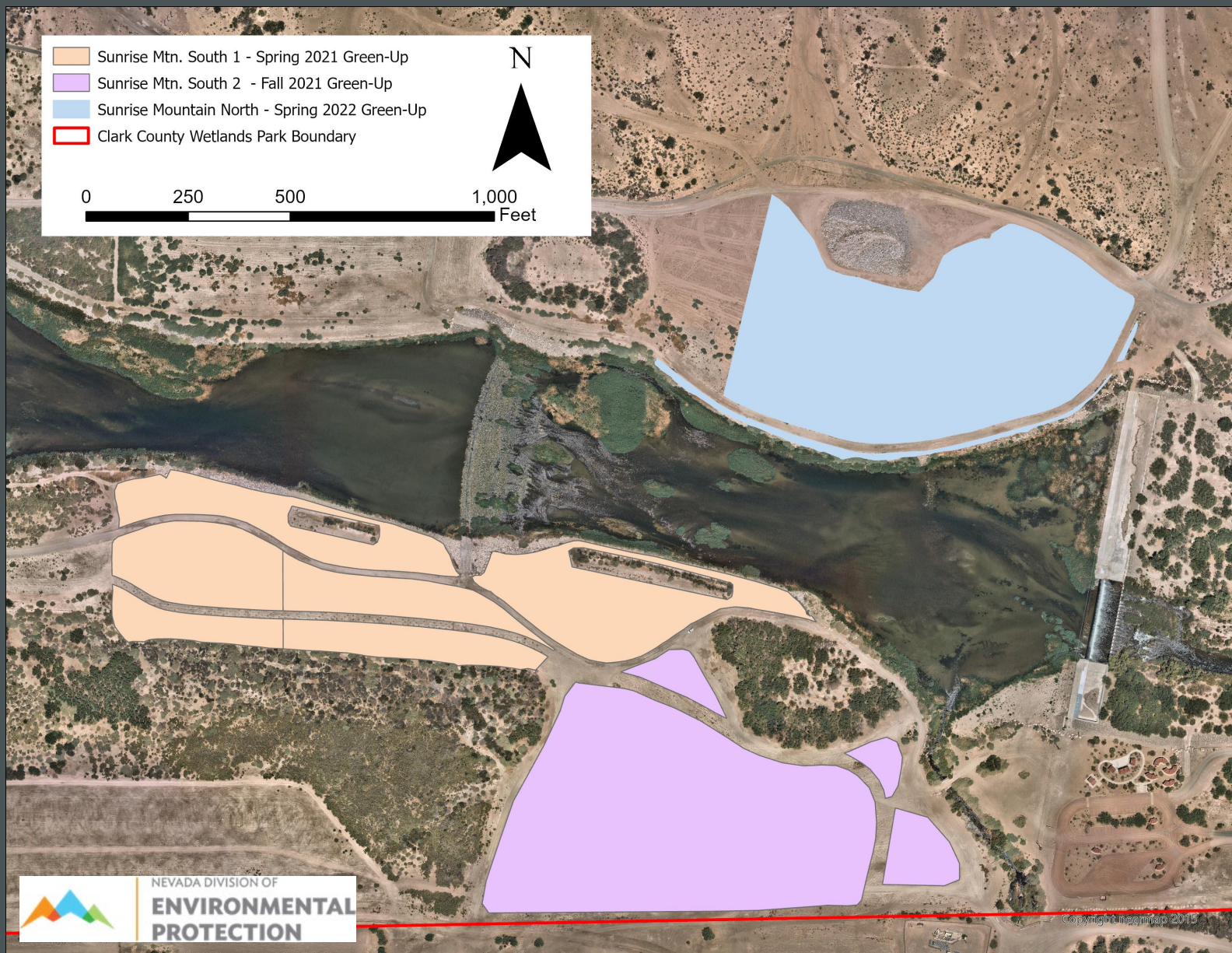
www.lvwash.org





WASH GREEN-UPS

- Spring 2022 – March 12
 - Sunrise Mtn. North
 - 9.3 acres
 - Cap at 400 participants
 - CIP revegetation complete
- Green-Up Totals
 - 37 Events
 - 12,949 volunteers
 - 149,096 plants
 - 313 acres



2021-2022 WASH GREEN-UP SITES

WEBSITE

Redesigned lvwash.org

- Reduced # of pages by nearly 90%
- More visual
- Improved navigation
- Mobile device friendly
- ADA compliant
- Increased user engagement since rollout in late October with visitors spending more time on site and viewing more pages and a greater % of site



STAKEHOLDER COORDINATION

Basecamp

- Replaces Members website
- Each committee and study team will have its own specific group for communication
- Meeting agendas, summaries and presentations posted
- Reports for review
- Meeting announcements and other calendar items
- Look for upcoming email invitation to set up account



January 2022

www.lvwash.org



UPCOMING OUTREACH – RESCHEDULING DUE TO OMICRON

Mabel Hoggard 5th Graders

- Virtual pre and post trips
- Field trips in-person
 - February 17, March 3 & 10

World Wetlands Day

- Were expecting 150-175 students from 9 high schools February 2-3
- Received \$3k in sponsorship from Cox Communications and a \$1k Get Outdoors Nevada microgrant

Springs Preserve Springboard

- January 6
- Las Vegas Wash virtual visit with 5th grade class from Tomiyasu E.S.

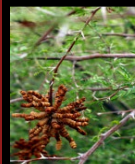
Minorities and Birding

- 3 classroom visits, 2 field trips (1 to Wash); was planned for February-March
- Awarded \$400 microgrant funding from Get Outdoors Nevada to help with busing



January 2022

www.lvwash.org



GRANTS

Bureau of Reclamation

- \$150k in obligated funding for FY21
- Revegetation, water quality monitoring, WMP implementation and LVWCC program management

Nevada Division of Environmental Protection

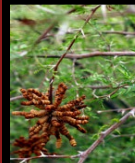
- \$67.5k for FY 21-22
 - Mabel Hoggard
 - Wash Green-Ups
- \$42.5k for FY 22-23
 - Mabel Hoggard
 - Wash Green-Ups



LAS VEGAS WASH LONG-TERM OPERATING PLAN (LTOP)



Long-term operations for
the Wash program will
begin in **FY22-23 (July 1)**



QUESTIONS?



Water Quality Monitoring Update

January 25, 2022

2021 Water Quality Sampling Schedule

[illegible]

Las Vegas Valley

Mainstream Wash Water Quality

- 10 sample sites and quarterly
- Environmental impacts from ECS
- WQ improvement by wetlands
- Database for water management (Wash and Lake)

Tributary Water Quality & Flow

- 6 major tributaries and quarterly
- Dry-weather WQ from urban runoff
- Impacts on the Wash and Lake Mead
- Data for the CCRFCD MS-4 permit

Las Vegas Valley

Real-time Water Quality Monitoring

- 3 stations in the Wash & tributaries
- Real-time WQ data (every 15-mins)
- Key WQ data during storm events
- Useful tools for public outreaches and education

TSS and Perchlorate Study

- 10 sample sites and monthly
- Data helped NDEP to remove TSS from 303 (d) list in the Wash
- Good indicator on WQ improvements with ECS and wetland systems
- For perchlorate remediation & modeling

Las Vegas Valley

Shallow Groundwater Water Quality

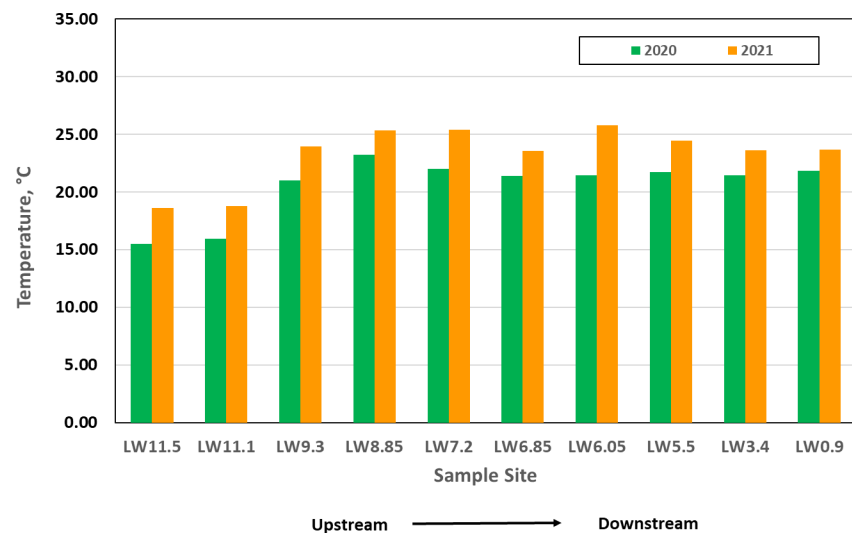
- 16 shallow GW wells along the Wash and quarterly
- Surface / groundwater interaction near the Wash
- Support perchlorate remediation & modeling

Selenium (Se) in the Wash & Tributaries

- Various locations and monthly
- Se baseline information in the Valley
- Se sources & hot spots
- Se mass loading quantifications
- Key data for Se management

Water Quality in the Mainstream Wash (2020 vs. 2021)

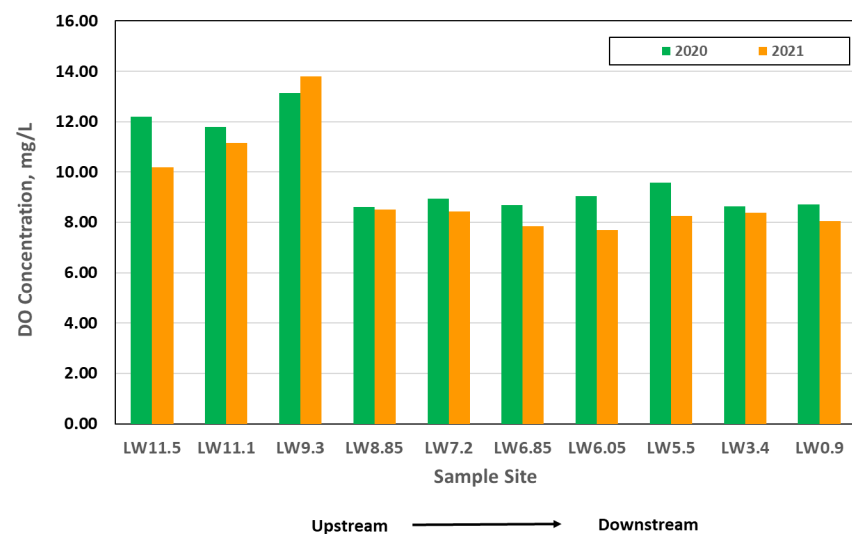
Yearly Average Temperature in the Wash (2020 vs. 2021)



Yearly Average pH Values in the Wash (2020 vs. 2021)



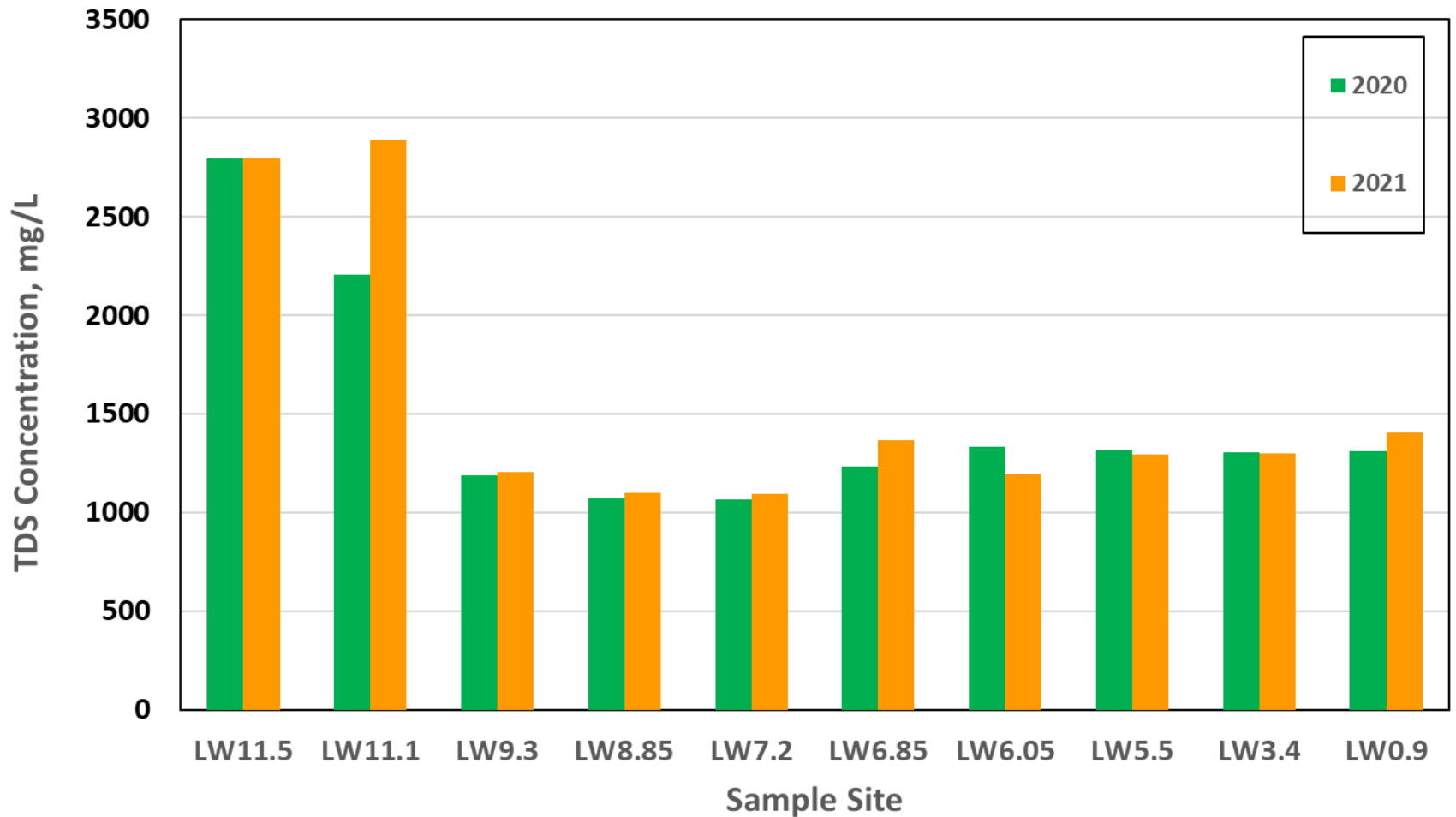
Yearly Average Dissolved Oxygen (DO) in the Wash (2020 vs. 2021)



Yearly Average Conductance in the Wash (2020 vs. 2021)



Yearly Average Total Dissolved Solids (TDS) in the Wash (2020 vs. 2021)

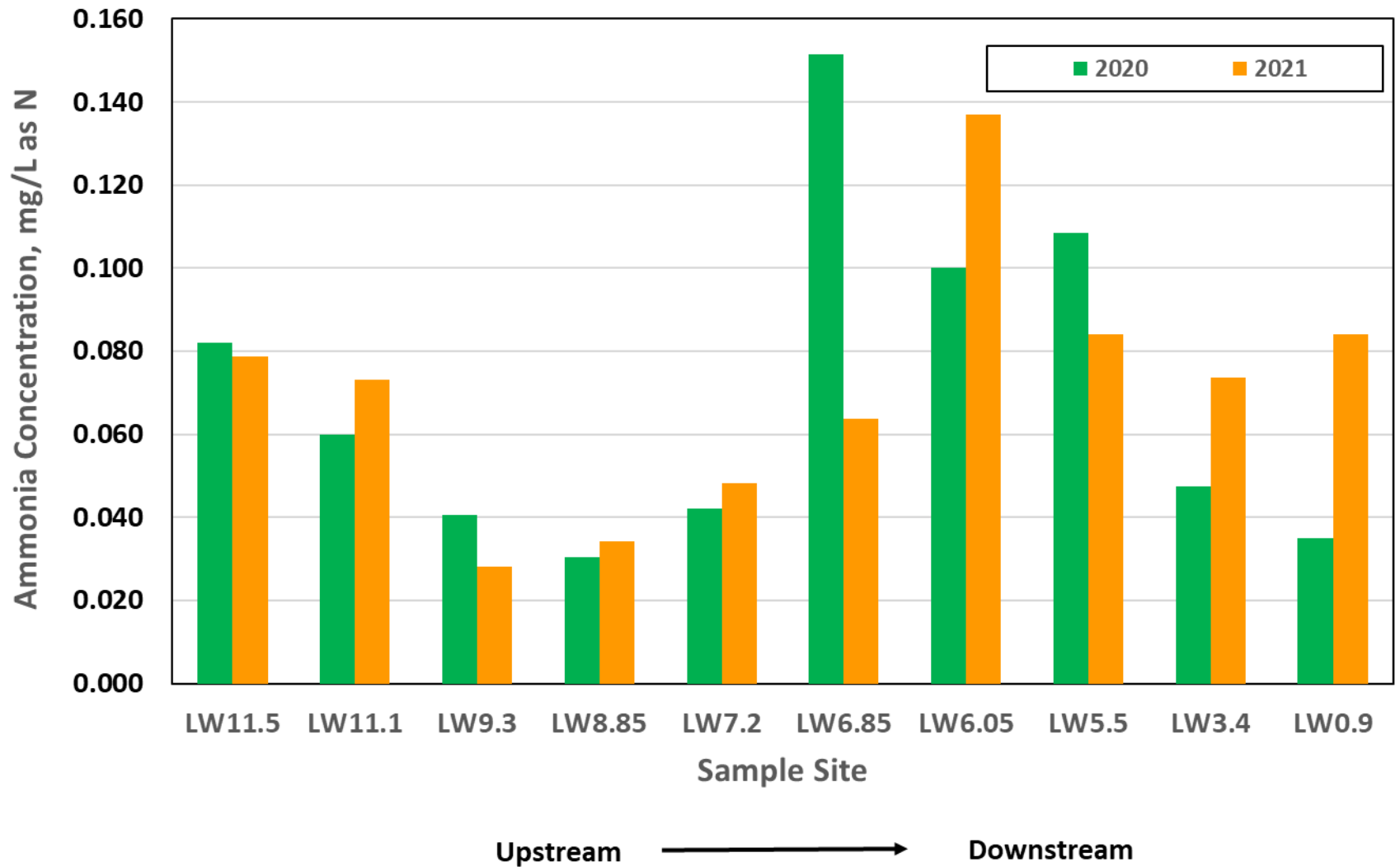


Upstream

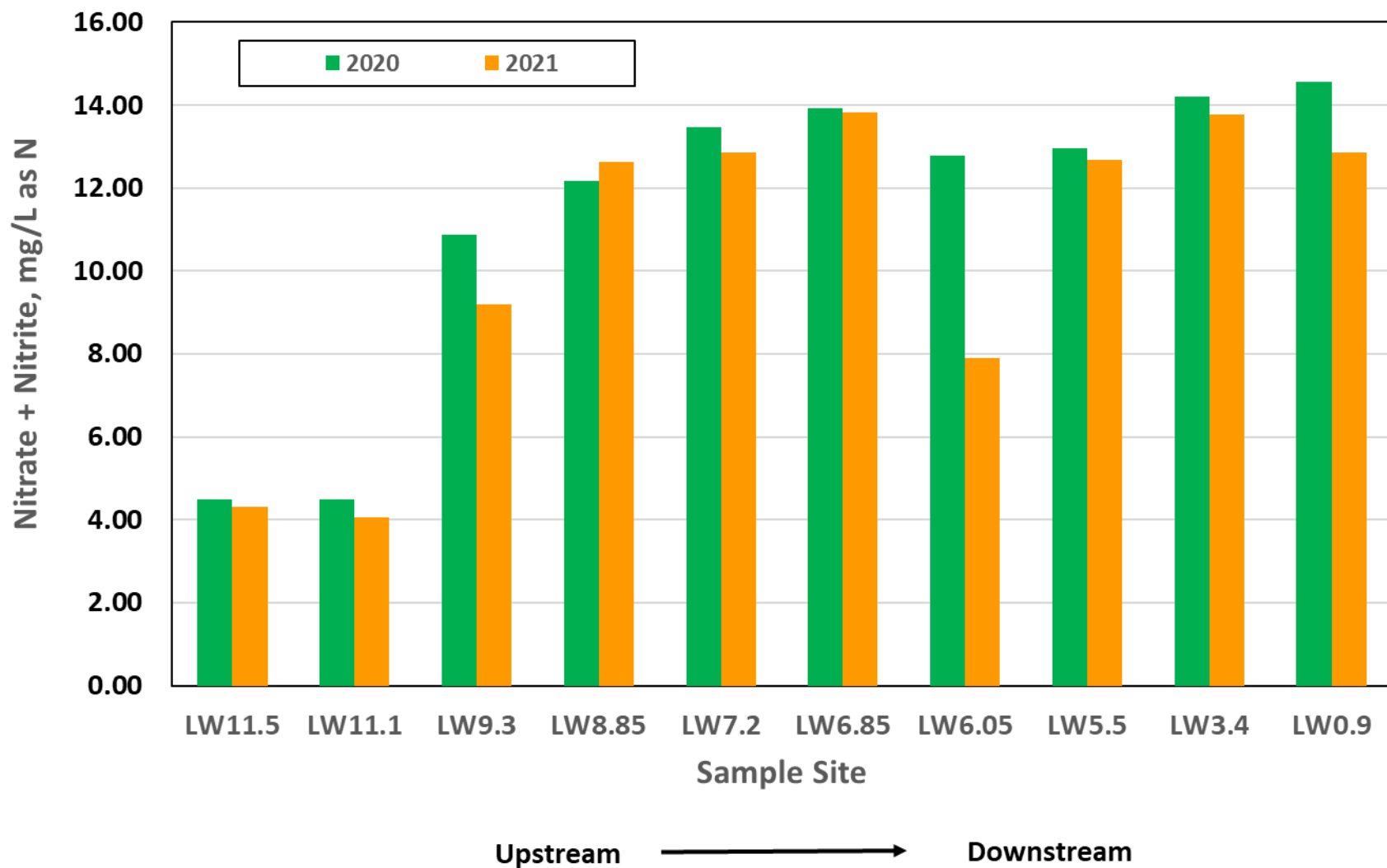


Downstream

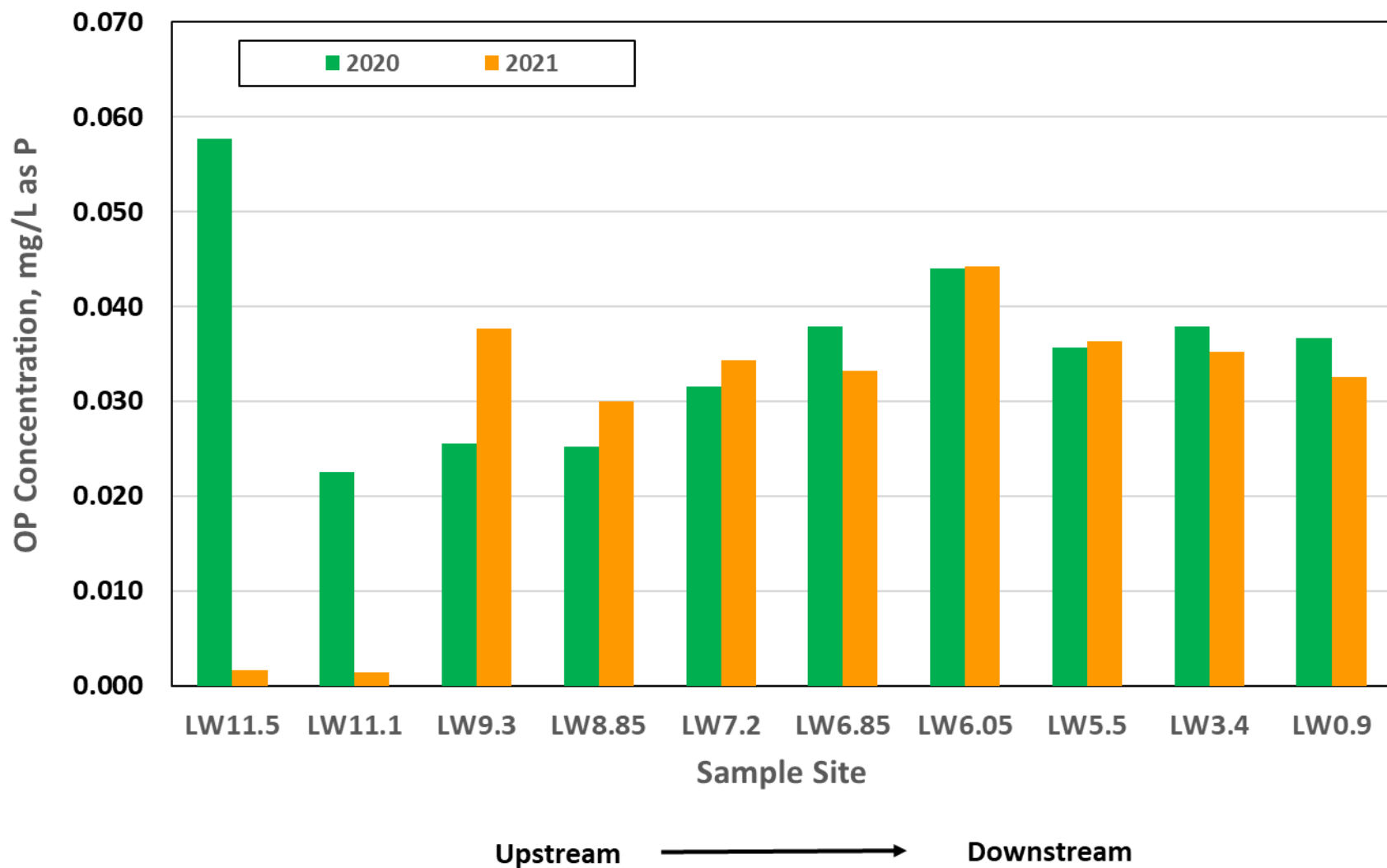
Yearly Average Ammonia Concentrations in the Wash (2020 vs. 2021)



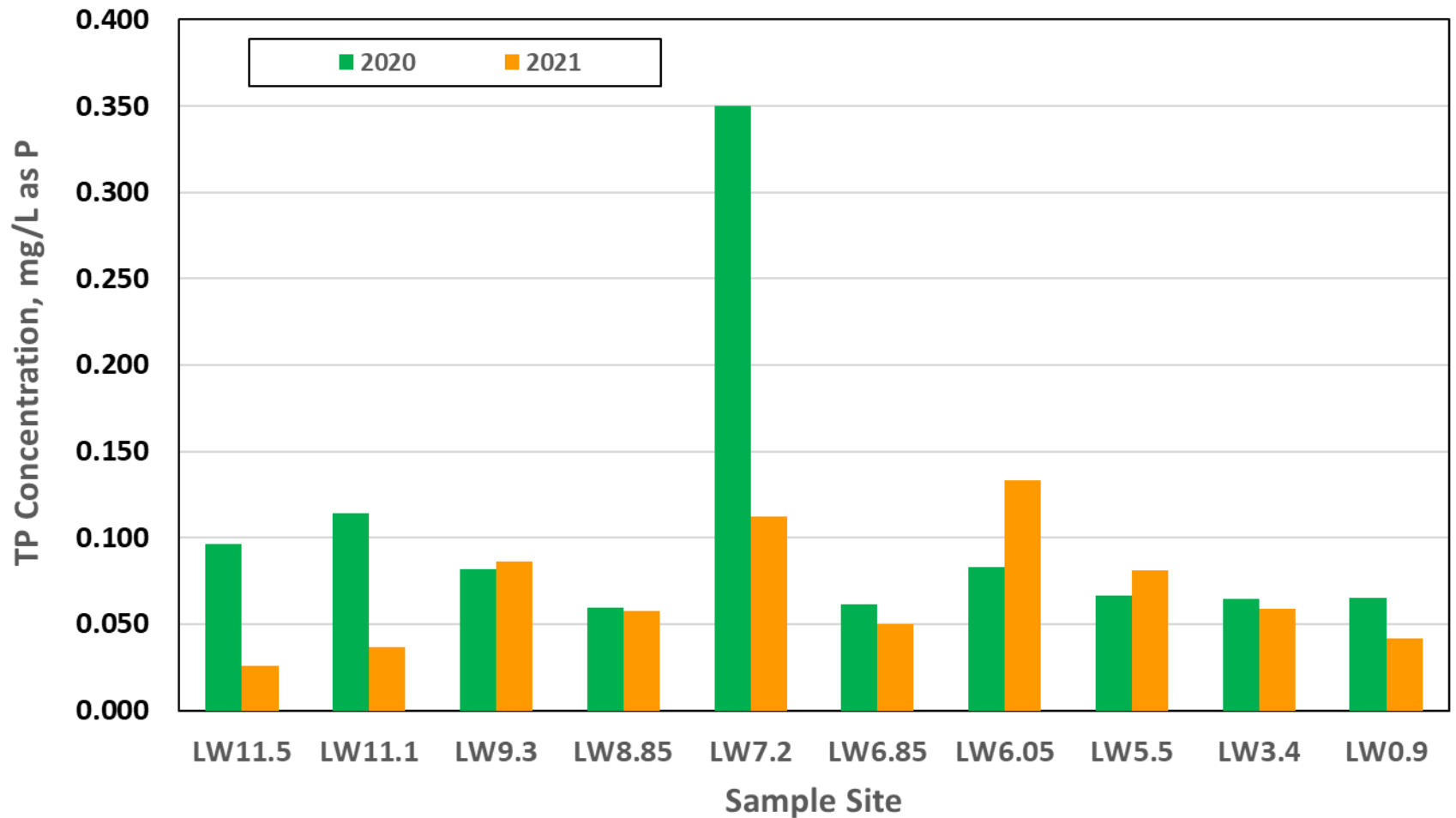
Yearly Average Nitrate + Nitrite Concentrations in the Wash (2020 vs. 2021)



Yearly Average Orthophosphate (OP) Concentrations in the Wash (2020 vs. 2021)



Yearly Average Total Phosphorus (TP) Concentrations in the Wash (2020 vs. 2021)

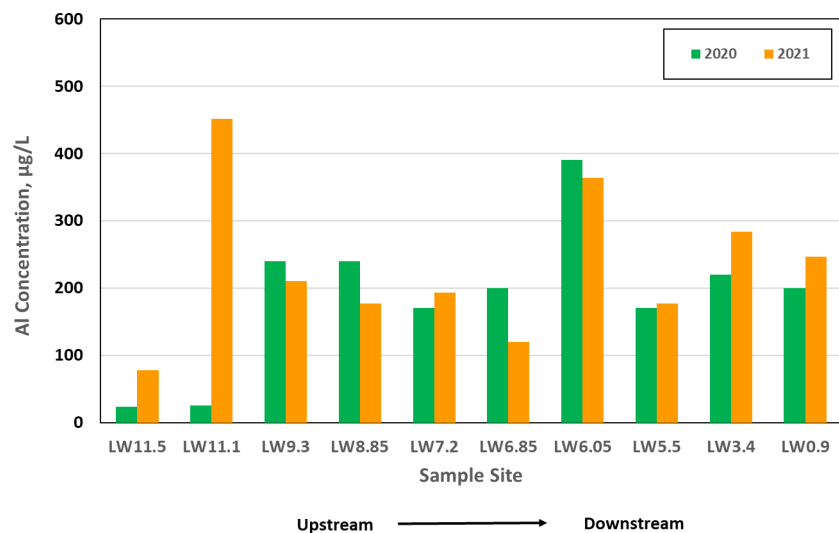


Upstream



Downstream

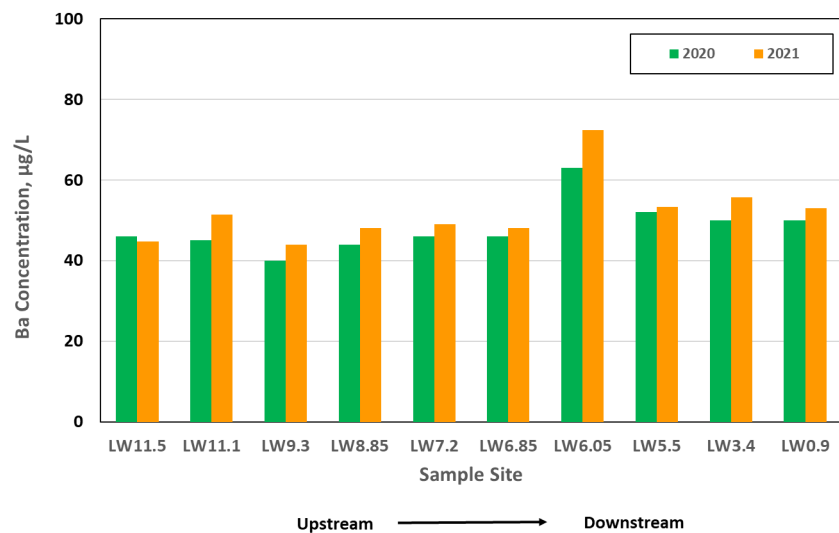
Yearly Average Aluminum (Al) Concentrations in the Wash (2020 vs. 2021)



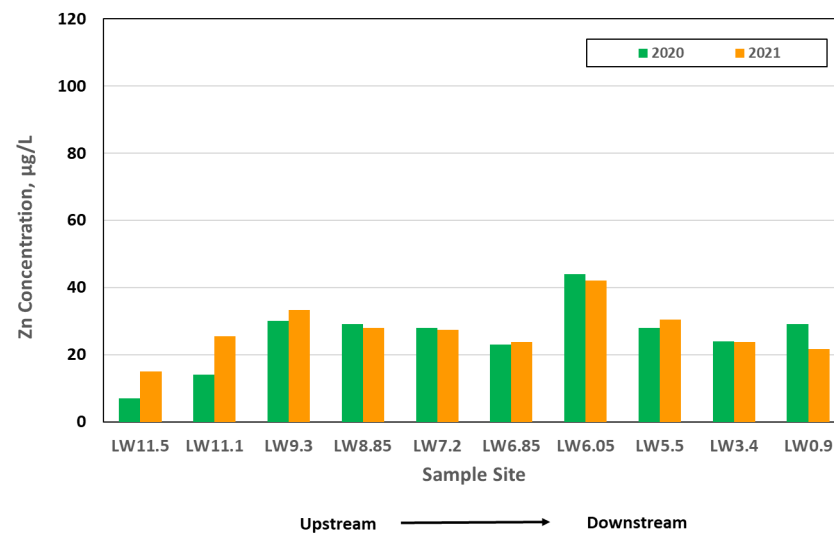
Yearly Average Iron (Fe) Concentrations in the Wash (2020 vs. 2021)



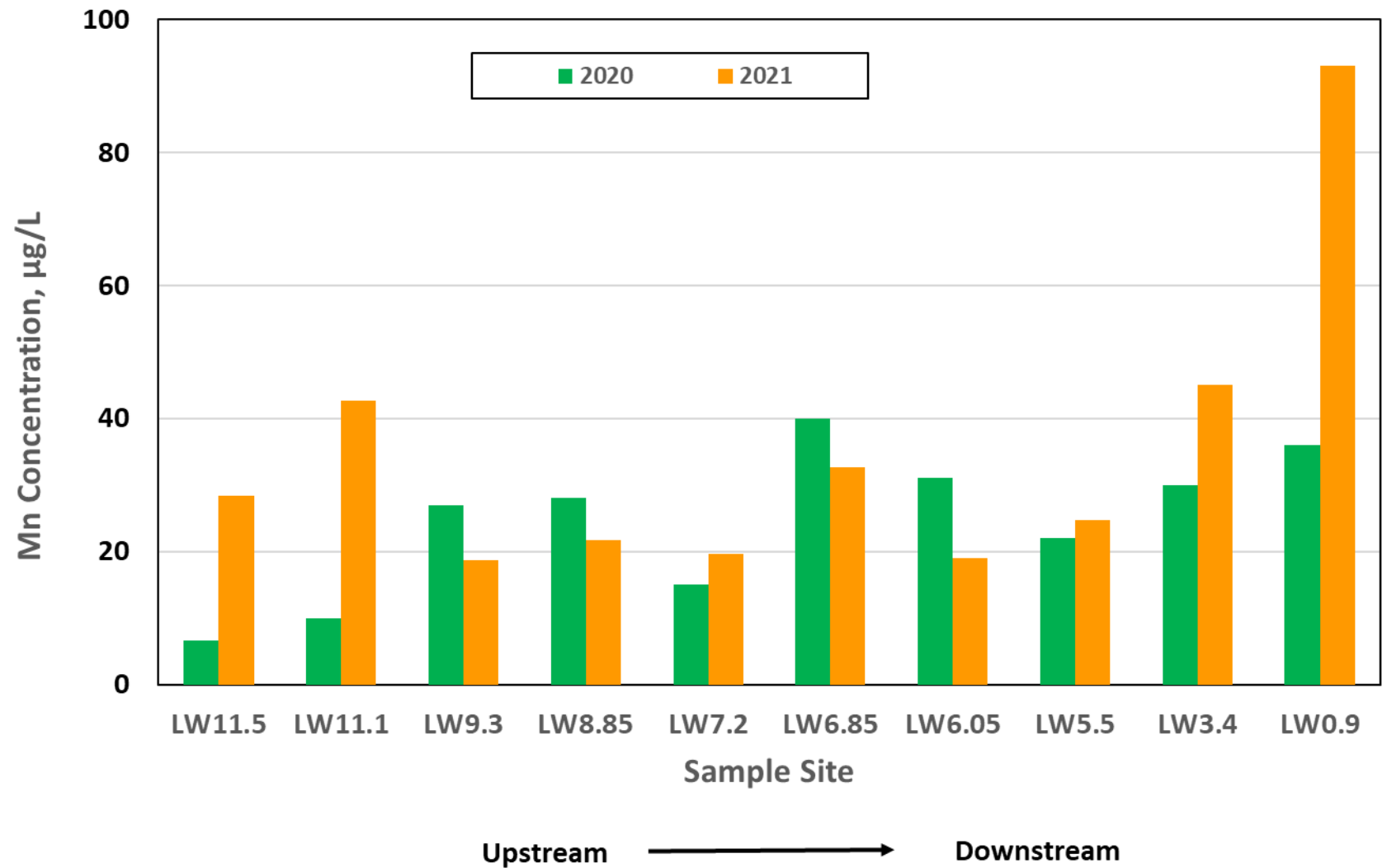
Yearly Average Barium (Ba) Concentrations in the Wash (2020 vs. 2021)



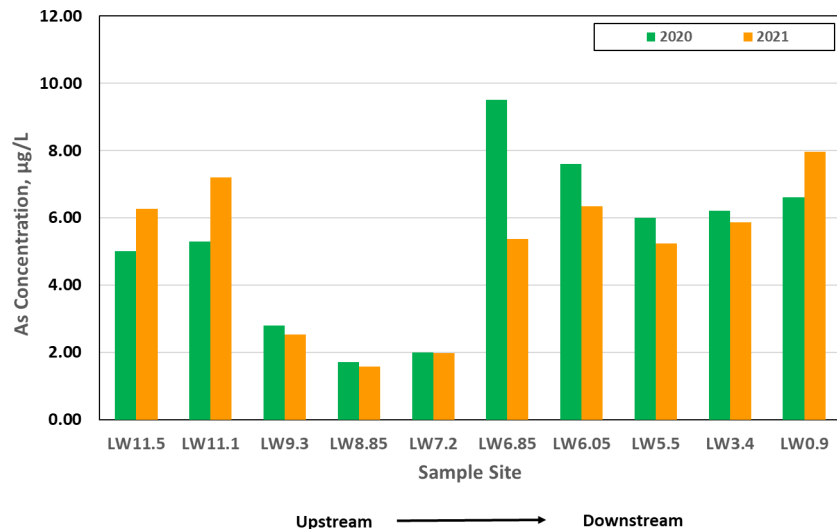
Yearly Average Zinc (Zn) Concentrations in the Wash (2020 vs. 2021)



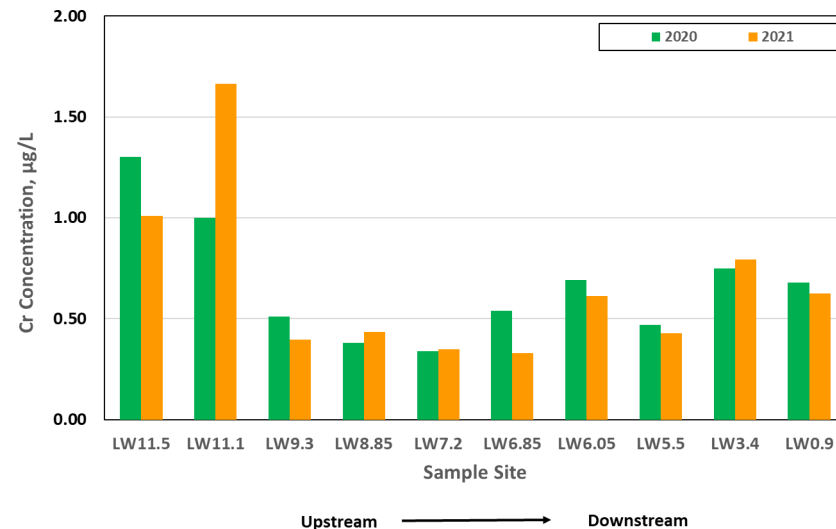
Yearly Average Manganese (Mn) Concentrations in the Wash (2020 vs. 2021)



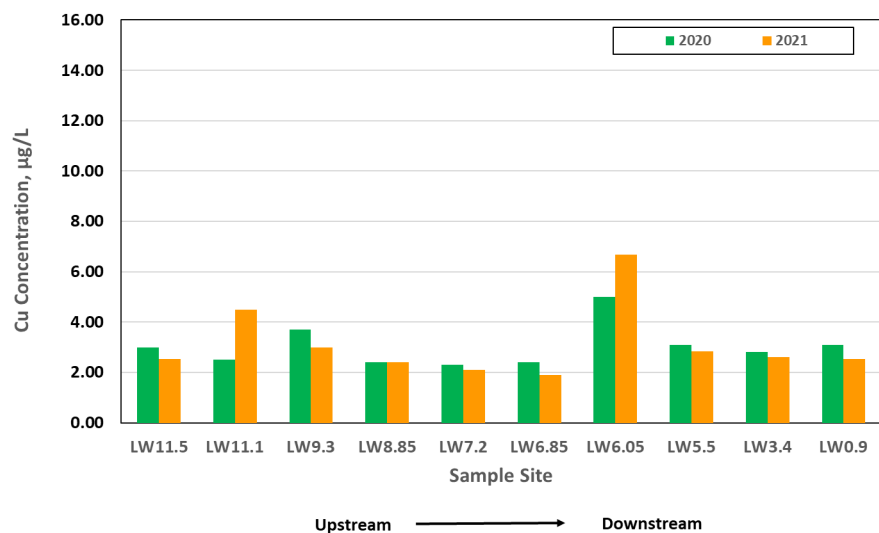
Yearly Average Arsenic (As) Concentrations in the Wash (2020 vs. 2021)



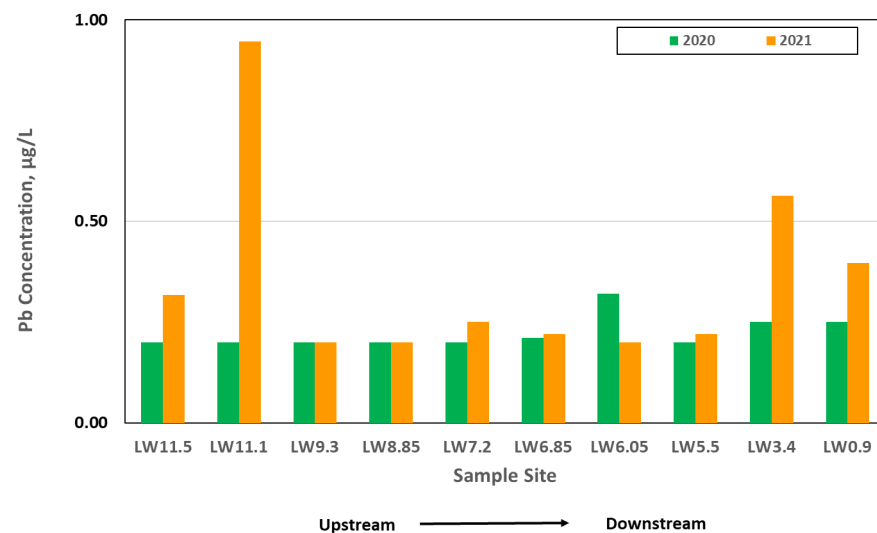
Yearly Average Chromium (Cr) Concentrations in the Wash (2020 vs. 2021)



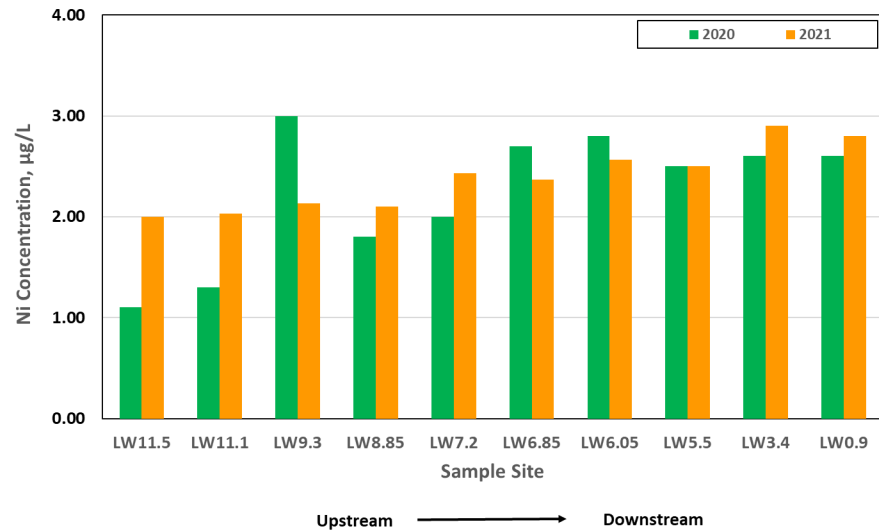
Yearly Average Copper (Cu) Concentrations in the Wash (2020 vs. 2021)



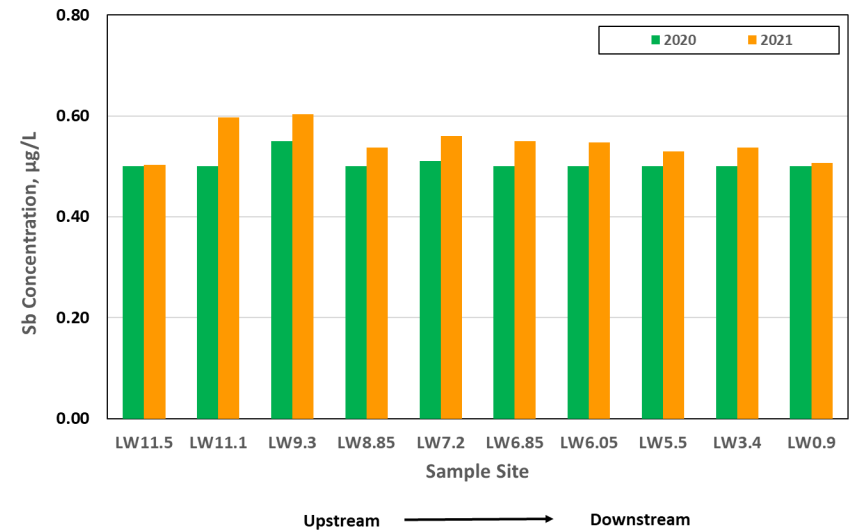
Yearly Average Lead (Pb) Concentrations in the Wash (2020 vs. 2021)



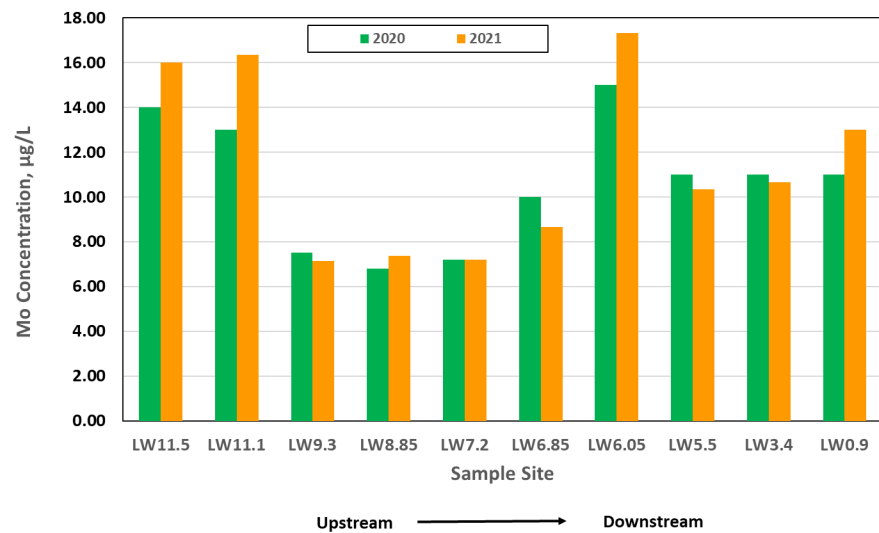
Yearly Average Nickel (Ni) Concentrations in the Wash (2020 vs. 2021)



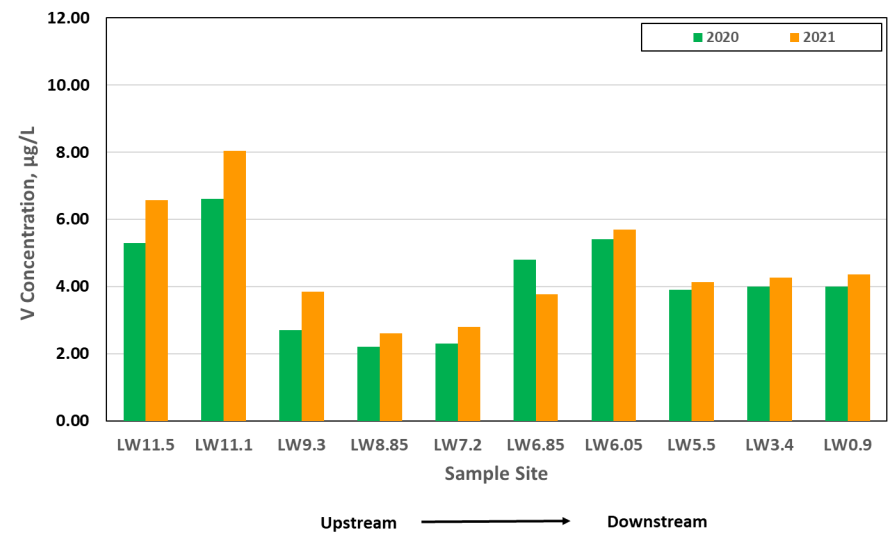
Yearly Average Antimony (Sb) Concentrations in the Wash (2020 vs. 2021)



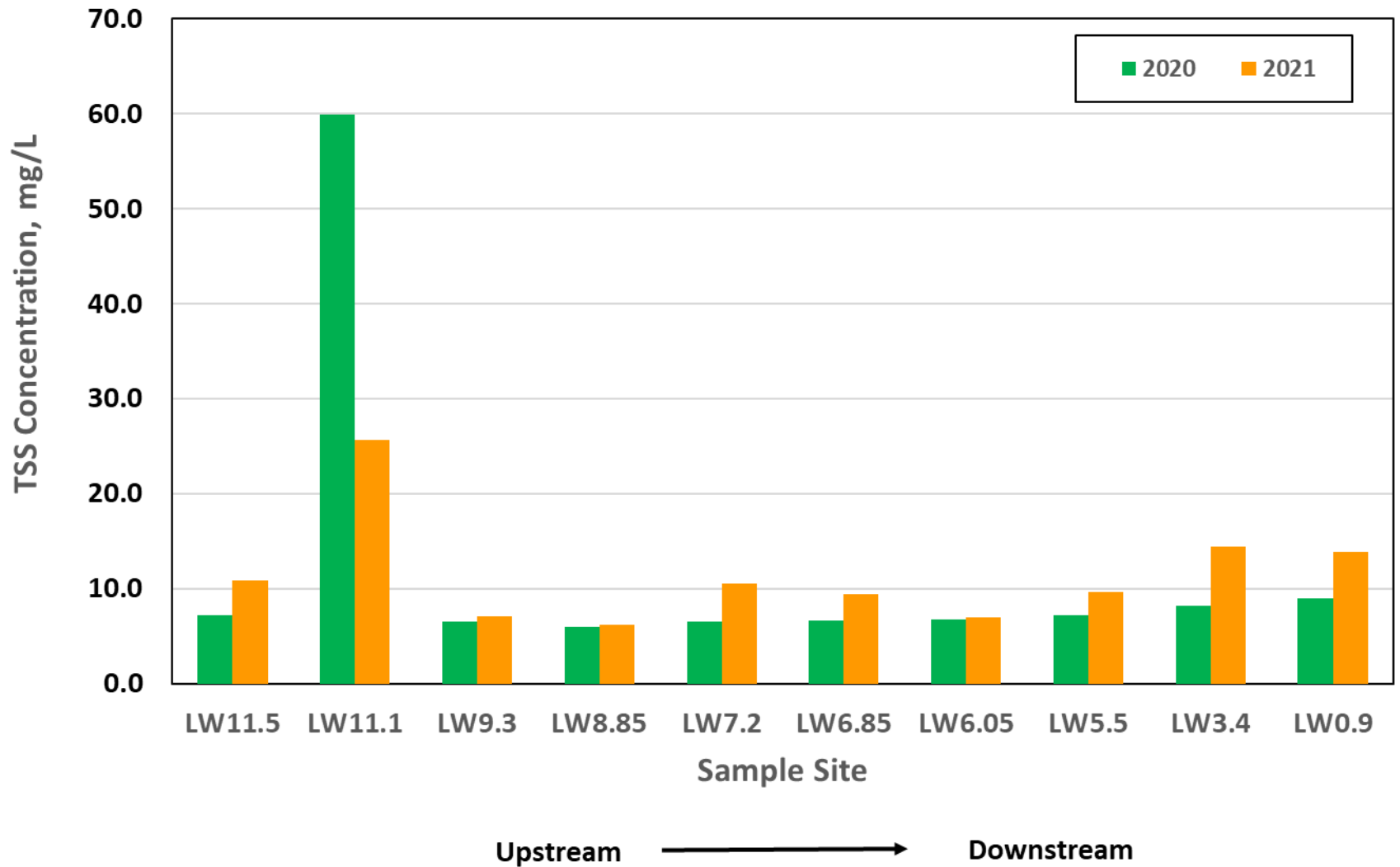
Yearly Average Molybdenum (Mo) Concentrations in the Wash (2020 vs. 2021)



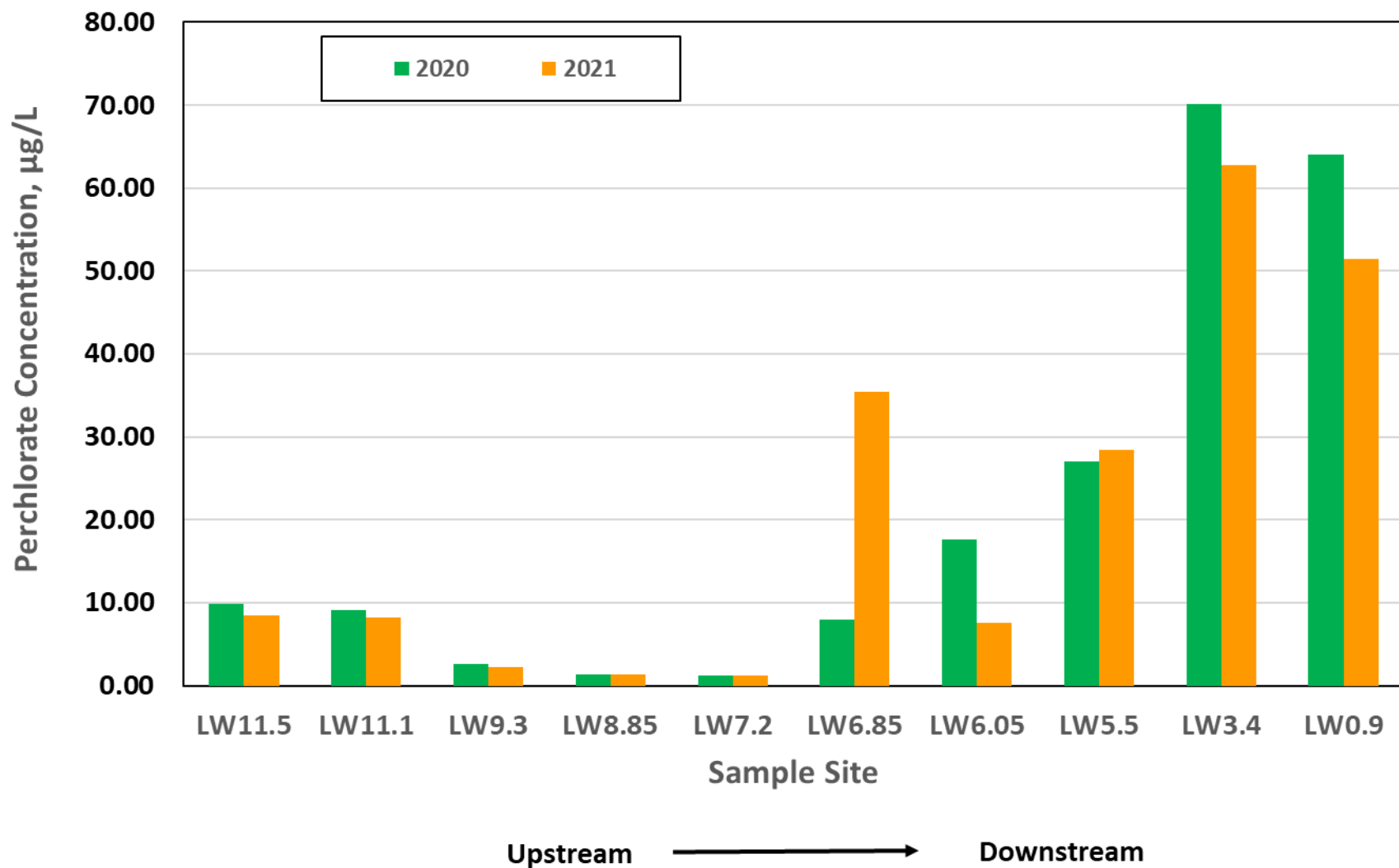
Yearly Average Vanadium (V) Concentrations in the Wash (2020 vs. 2021)



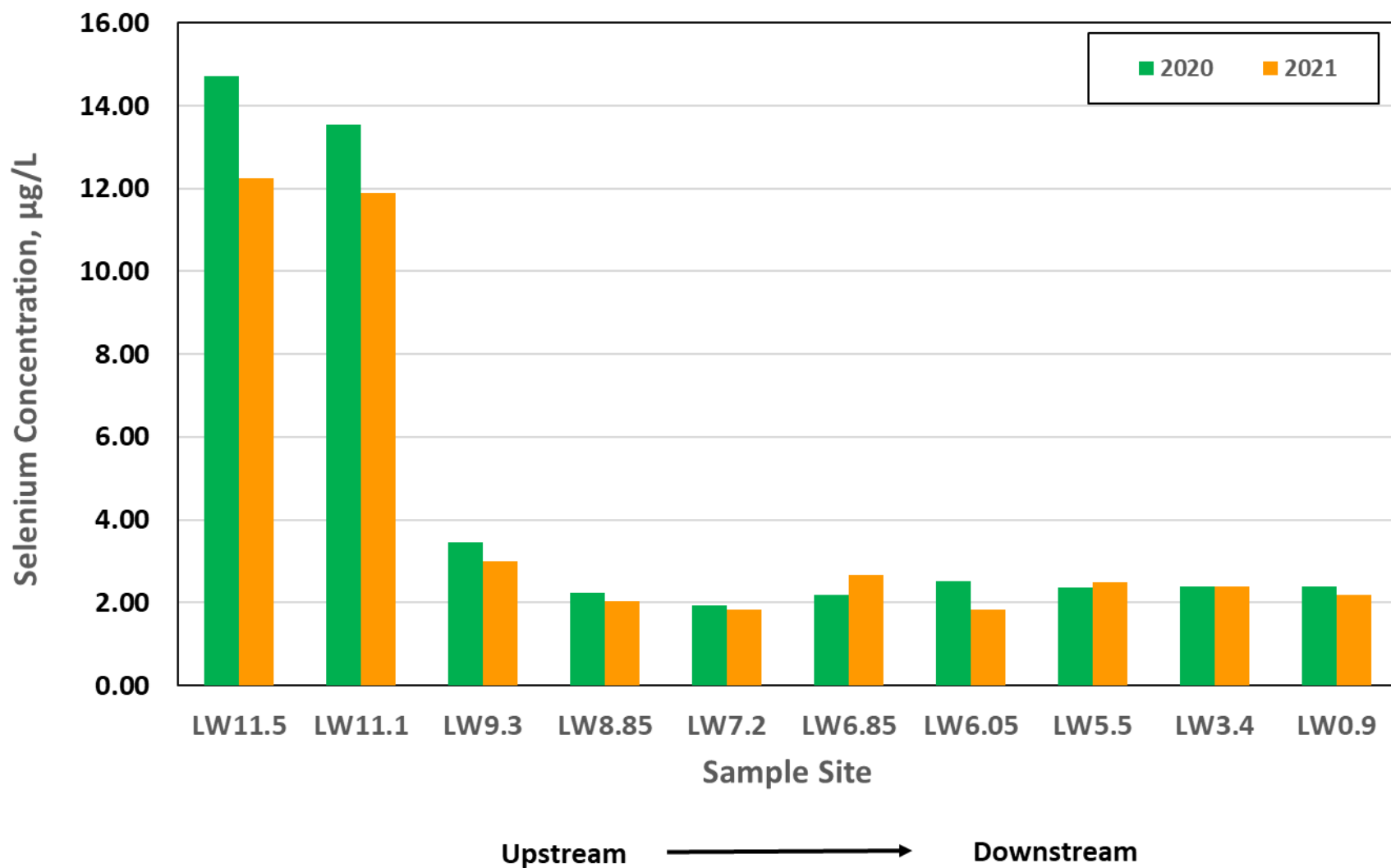
Yearly Average Total Suspended Solids (TSS) Concentrations in the Wash (2020 vs. 2021)



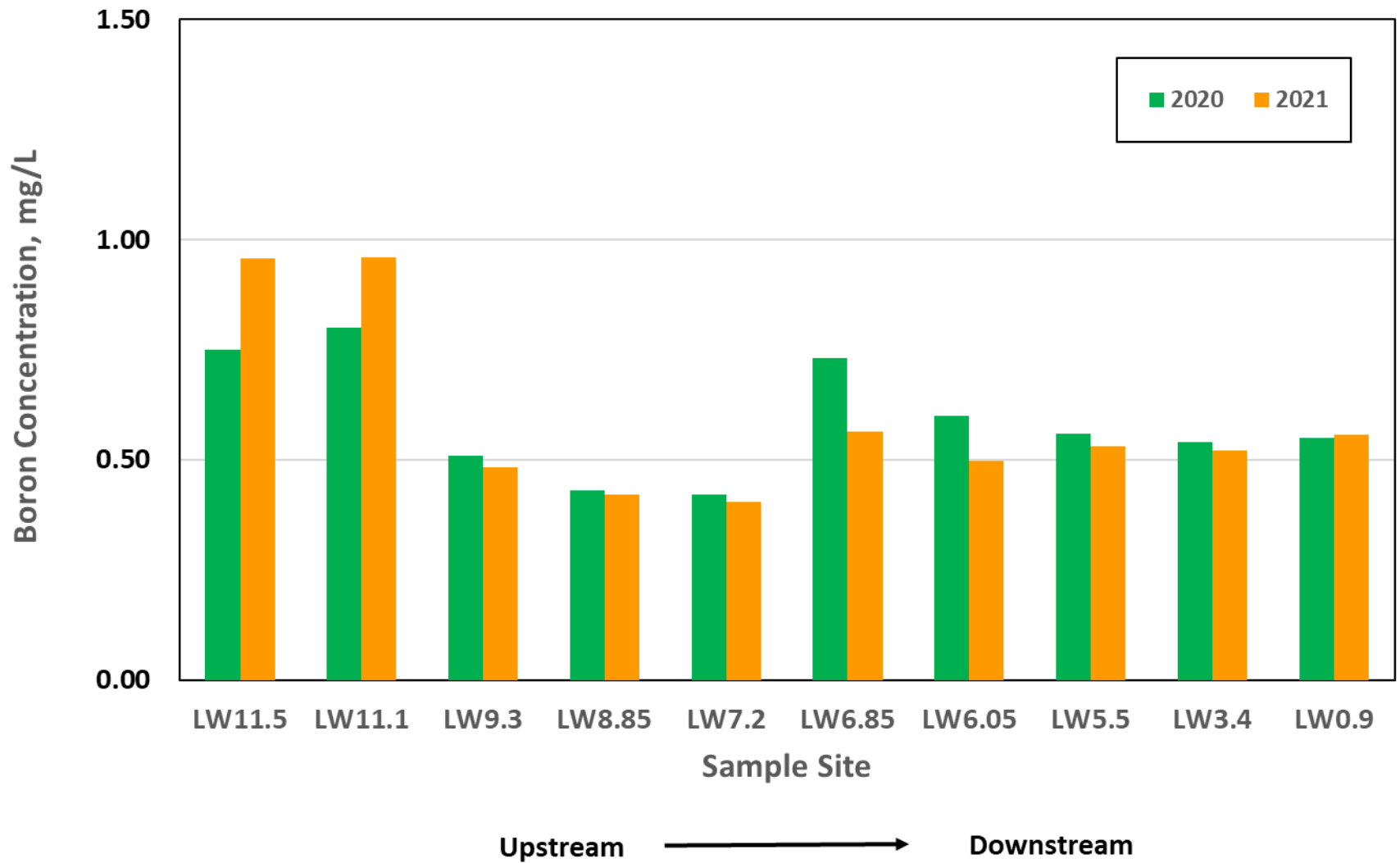
Yearly Average Perchlorate Concentrations in the Wash (2020 vs. 2021)



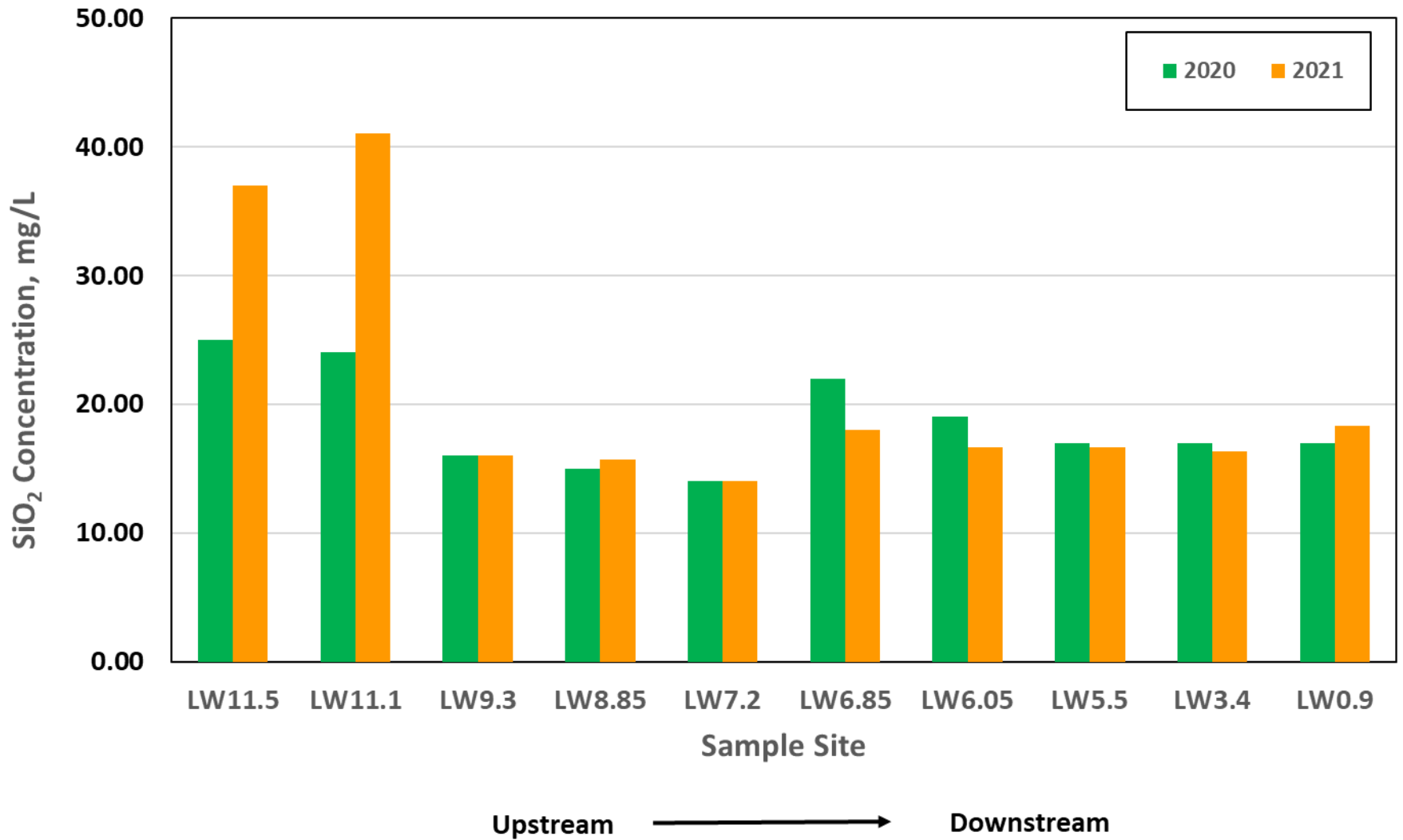
Yearly Average Selenium Concentrations in the Wash (2020 vs. 2021)



Yearly Average Boron Concentrations in the Wash (2020 vs. 2021)



Yearly Average Silica (SiO_2) Concentrations in the Wash (2020 vs. 2021)



Data Comparison (2020 vs. 2021)

- **Field Measurements:**

- ❖ Temperature: higher
- ❖ pH and DO: lower
- ❖ Conductance: consistent

- **Nutrients:**

- ❖ Ammonia: low (< 0.08 mg/L as N) at most sites
- ❖ Nitrate + nitrite: decreased (1-38%) at most sites
- ❖ OP and TP: declined (7-11% for OP; 8-37% for TP) at the end of the Wash

Data Comparison (2020 vs. 2021)

- **Metals** (at the end of the Wash):
 - ❖ Increased: Al, Fe, Ba, Mn, As, Pb, Ni, Sb, Mo, V
 - ❖ Decreased: Zn (25%), Cr (8%), Cu (18%)
- **Others:**
 - ❖ Selenium: decreased (1-27%) at most sites
 - ❖ Perchlorate: decreased (10-20%) at the end
 - ❖ TSS: stay low (< 10 mg/L) at most sites



Questions?





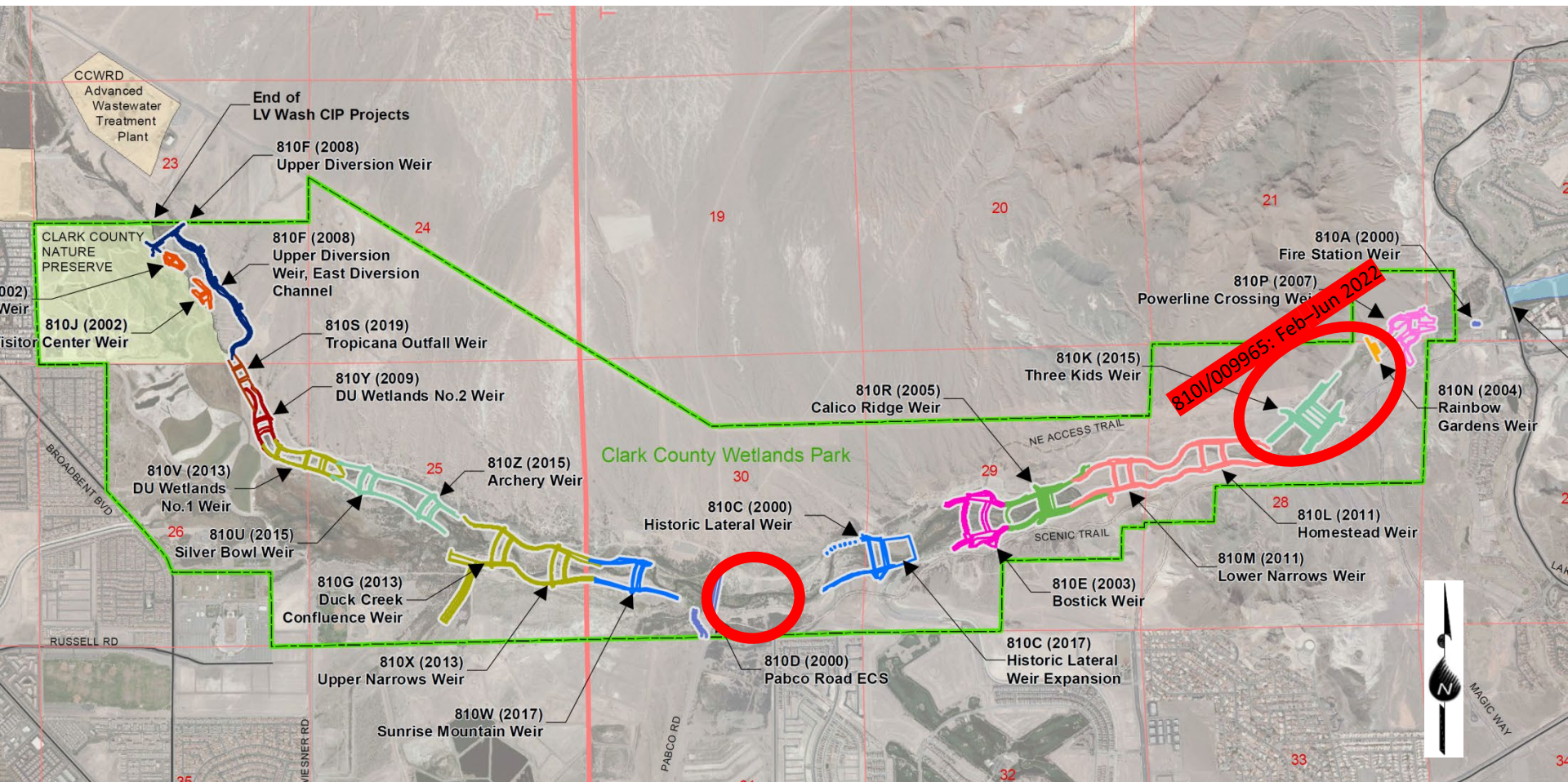
Status Updates

Las Vegas Wash Coordination Committee

January 25, 2022



Locations





Wash Activities

- Reconstruction of Existing Weir Structures
 - Pabco Apron, Three Kids Weir, Island removal between Three Kids and Rainbow Gardens
 - 810I/00965: Jan–June 2022
 - Contract awarded 1/20/22
- Place Facilities Back to Originally Constructed Lines and Grades
 - Removal of Vegetation and Sediment from Structures
 - Reposition and Installation of Rip Rap



Vegetation Management - Pabco



Vegetation Management – Three Kids



Vegetation Management – Rainbow Gardens



Vegetation Growth Downstream of Three Kids



Vegetation Growth Downstream of Three Kids

Consultant Engineering Services

- Objective:
 - professional services for the review of existing Las Vegas Wash stabilization facilities and stream sections for compliance with all local, regional, state and federal regulations and recommendations for remediation of any areas not in compliance
- WSP

Consultant Engineering Services

- LOMR Update
 - Submitted to FEMA in September of 2019.
 - Notice of possible violation has been resolved and application has been accepted.
 - If additional information is not required, a final letter of determination within 90 days of receiving your request. March 8, 2022.

Consultant Engineering Services

Task Name	Finish Date
<i>DRAFT</i> Facilities Assessment Report	complete
<i>FINAL</i> Facilities Assessment Report	complete
<i>FINAL</i> Long Term Operating Plan (LTOP)	complete
<i>DRAFT</i> Letter of Map Revision (LOMR)	<i>Ongoing FEMA approval coordination</i>

Questions





Clark County Wetlands Park

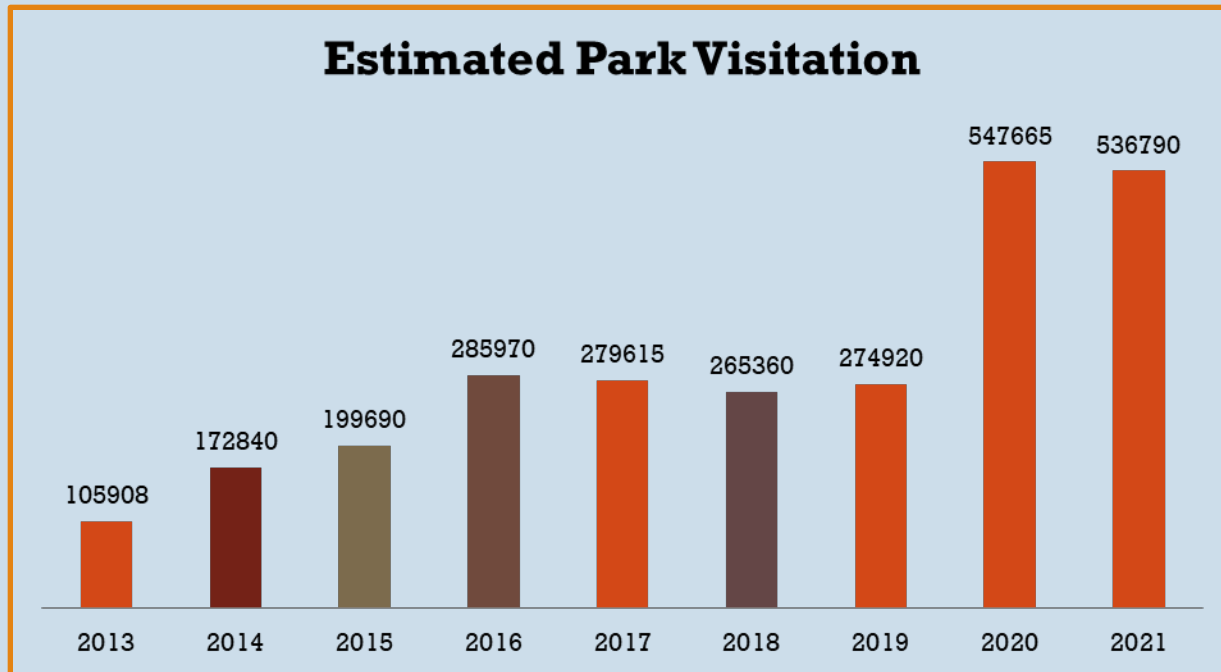


LVWCC UPDATE
JANUARY 25, 2022

Clark County Parks & Recreation

**Elizabeth Bickmore
Program Administrator**

Park Visitation



Upcoming Events



Wetlands: Hands On! – Stewardship

- Monthly

NFL Green: ProBowl Planting Event

- February 2, 2022

World Migratory Bird Day

- March 19, 2022

BioBlitz

- April 30, 2022

Discovery Day

- July 9, 2022

Clark County Parks and Recreation Presents
Wetlands: Hands On!
Community Stewardship Program
2021-2022 SEASON



ADVANCE REGISTRATION REQUIRED

Sign up at who.ccwetlandspark.com

Clark County Wetlands Park
7050 Wetlands Park Lane
Las Vegas, NV 89122
(702) 455-7522

www.ccwetlandspark.com
@wetlandspark
@CCWetlandsPark
@CCWetlandsPark

Clark County Board of Commissioners
PARKS & RECREATION DEPARTMENT
CLARK COUNTY, NEVADA
CLARK COUNTY PARKS & RECREATION
CLARK COUNTY, NEVADA
CLARK COUNTY PARKS & RECREATION
CLARK COUNTY, NEVADA

Clark County NV Gov/parks
ccparks@ClarkCountyNV.gov

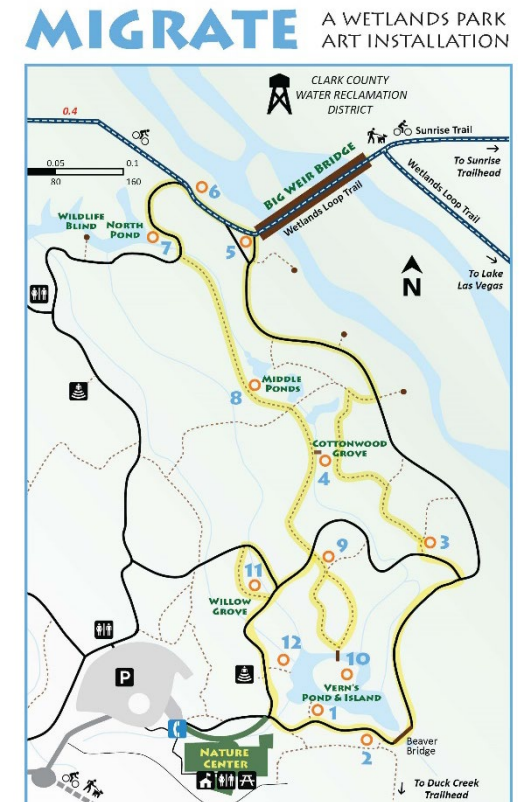
Art at Wetlands Park

Migrate - 2022 Temporary Art Installation

- March 4 – April 4

Guest Artist Workshops

- Colored Pencil, Anne Hoff
- February 5 - and monthly



Interpretive Programs



Year of the Peregrine Falcon:
2022

Kids ages 3 - 8:

- Wetlands Explorers, Nature Tales & Storytime

Families & Adults:

- Discovery Walks, Birding Walks, Art Programs

Nature Play Corner & Nature Preserve Signage



Completion early 2022

- Interpretive Signage
- Wayfinding
- Nature Play Corner
 - April 2022 (date pending)
Grand Opening



Improvement Projects

Wetlands Loop Trail

- Paving Final Section
 - Phased approach for completing the alignment and paving \$6 M Project
 - Phase 1 now to include paved trail from Wetlands Park Lane to the future site of the Hollywood Extension
- Northside Repairs
 - Completed crack repair - January

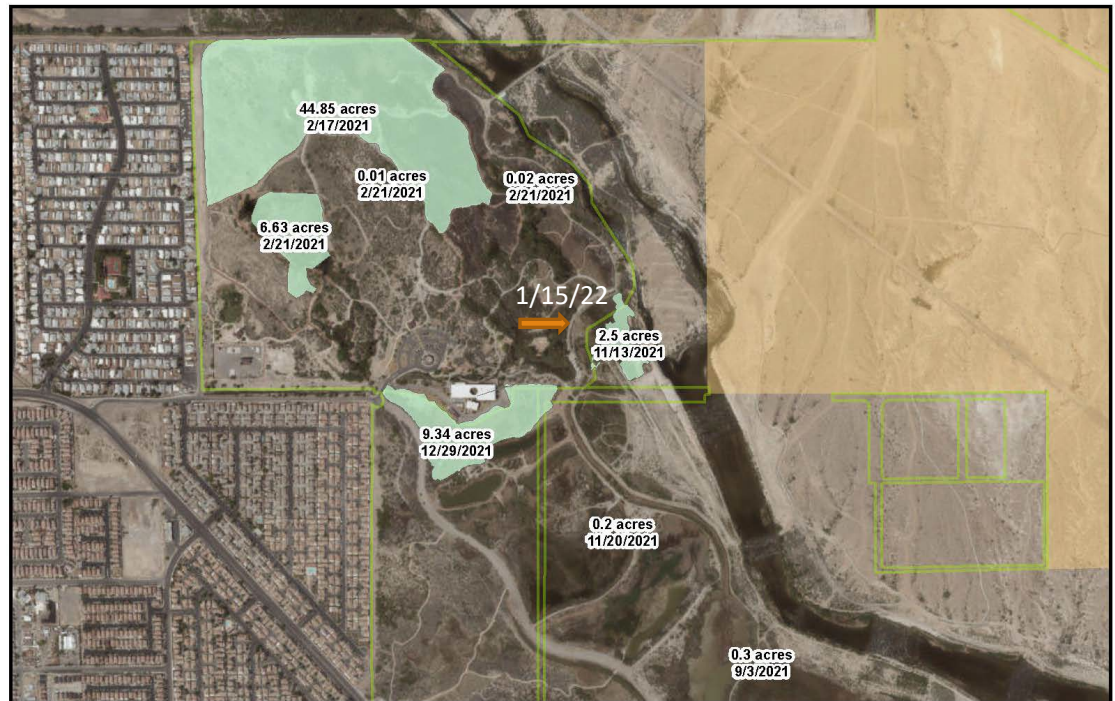
Wildfires 2021 & 2022

December 29, 2021

- 9 Acres – Nature Center/ILFMW

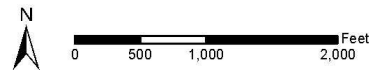
January 15, 2022

- 3.5 acres – Tropicana Wash



Clark County Wetlands Park
Fire History - 2021

Date: 1/5/2022



Legend

- Wildfire 2021
- Wetlands Park Boundary
- Bureau of Reclamation Boundary

Improvement Projects

Fencing/Gate

- New gate to be installed at the service road entrance near Wells Trailhead
- Trail bollards to be added at Wells Trailhead
- Hollywood Boulevard fencing repairs - ongoing

Hollywood Extension

- Ongoing planning for new wash bridge and roadway through Wetlands Park
- Phase 1 at 70% design to include roundabout at site of new trailhead

Land Management Projects

Fuels Management

Phragmites control

- Herbicide, mowing, burning

Three-year study ongoing (UNLV)



Pond & Stream Maintenance

Pond maintenance

- Weir debris removal
- Stoplog replacement (pending)

Land Management Projects



Pond & Stream Maintenance

Cleared stream channels in Nature Preserve

- Cottonwood Grove Area
- Hidden Pond Area

Land Management Projects



Mitigation Wetlands

- Ongoing work to replace the C10 Gate in Mitigation Cell F (AKA Cell 7) and reinstall beaver barriers
- New stoplogs and locked box lids installed
- Phragmites clearing around Cells A, B, and C planned for January/February

Nature Center

Open Tuesday – Sunday
9 am – 3 pm

Exhibit Gallery
Nature Store
Info kiosk
Lizard lounge
Auditorium





QUESTIONS

Elizabeth Bickmore

bickmore@clarkcountynv.gov

Regional Water Quality Update

Todd Tietjen, Ph.D.

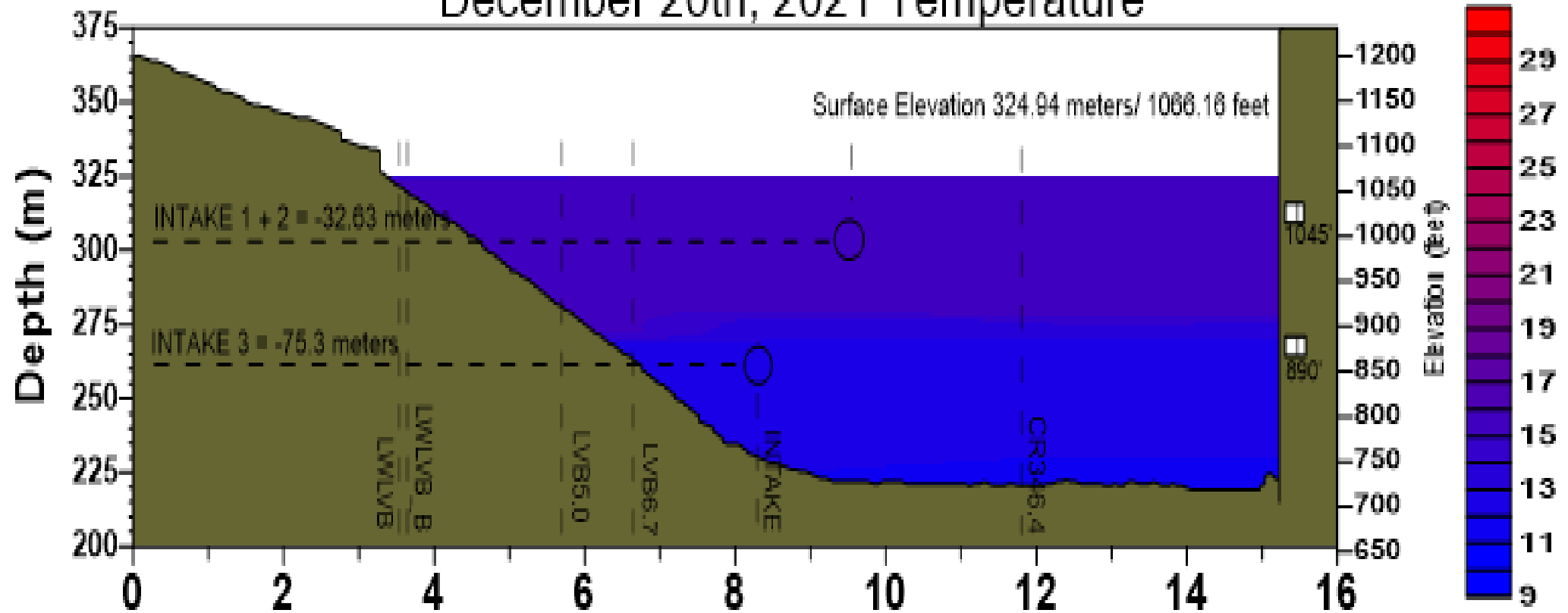
Regional Water Quality Manager

todd.tietjen@snwa.com

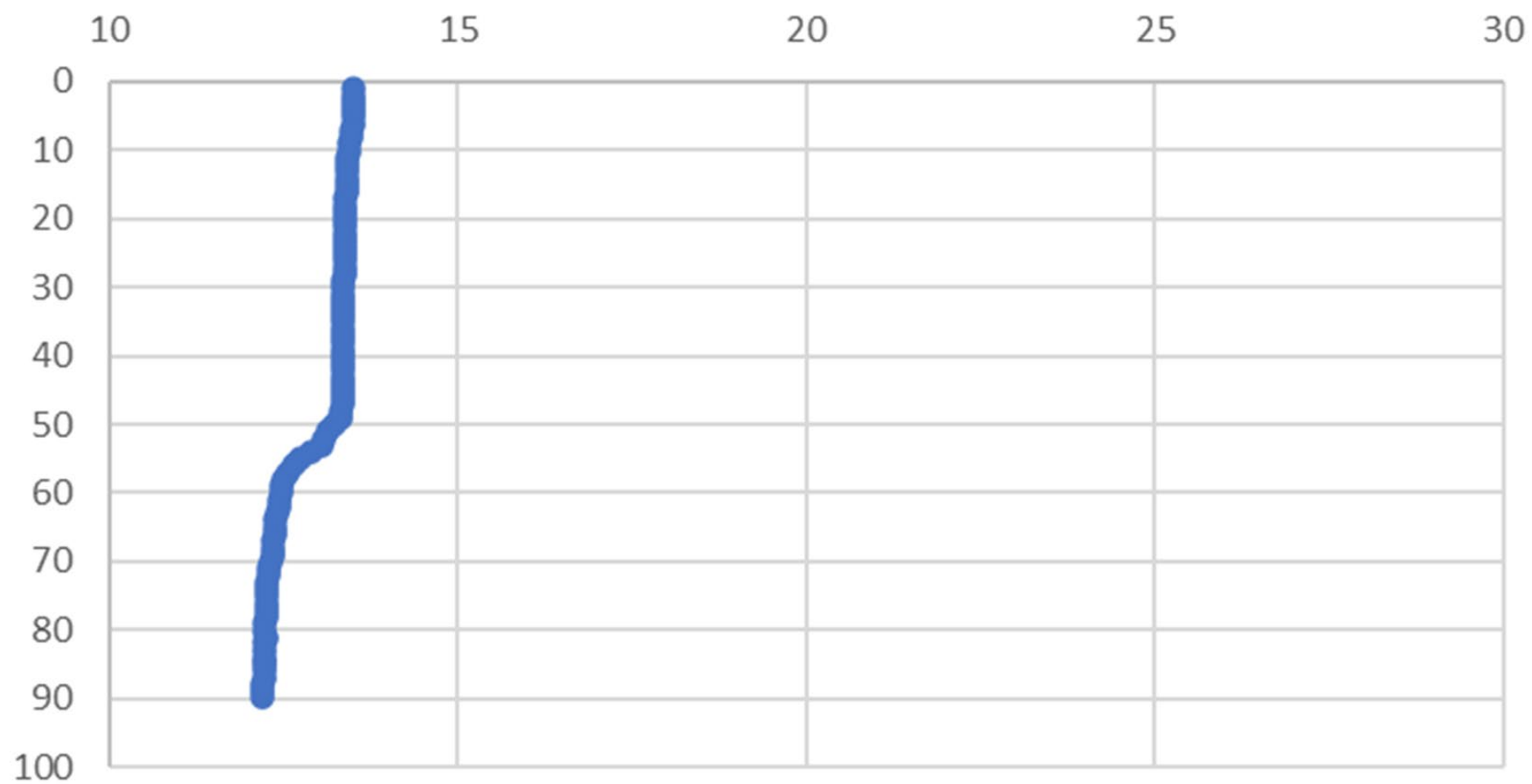
Highlights of the past year

- Lake levels
- Water Quality measures have remained good despite falling lake levels
 - High flushing rate, Las Vegas Wash and Virgin Muddy Rivers remain small part of inflow
- Chlorophyll (Algae) continues to increase at a very slow rate
- Algal Toxins were detected at very low concentrations in Lake Mead in 2021
 - More common in Lake Mohave
- "Expecting" higher temperatures in water entering the lake

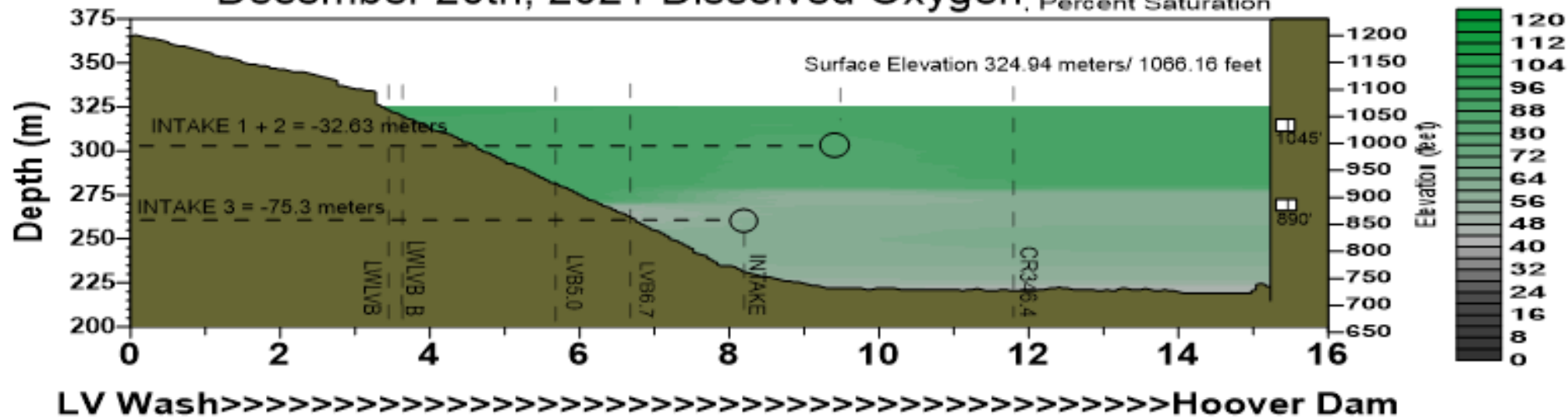
December 20th, 2021 Temperature

[illegible]

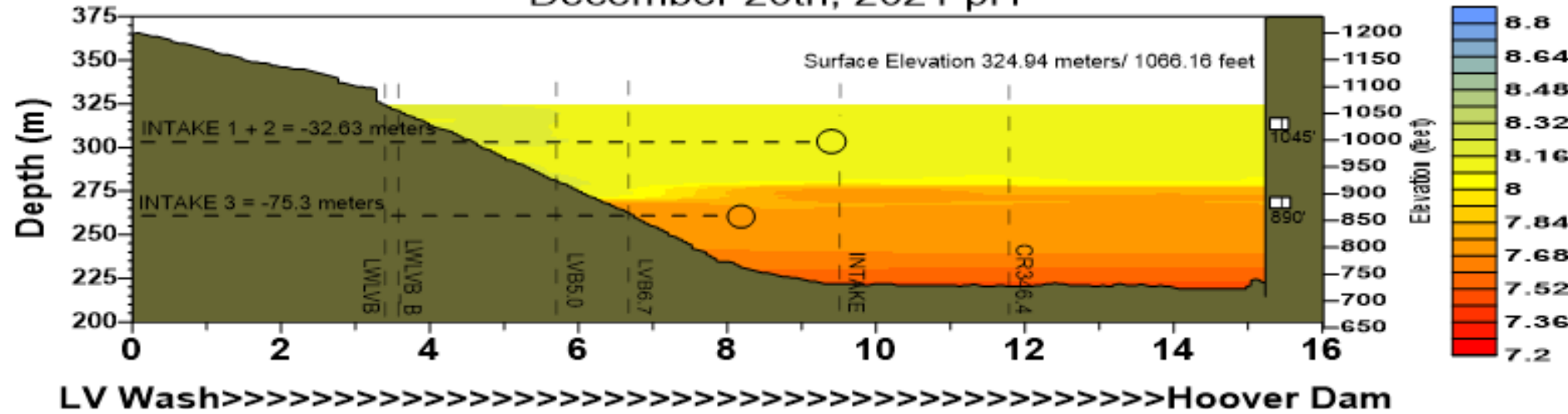
Temperature CR346.4 1/24/22



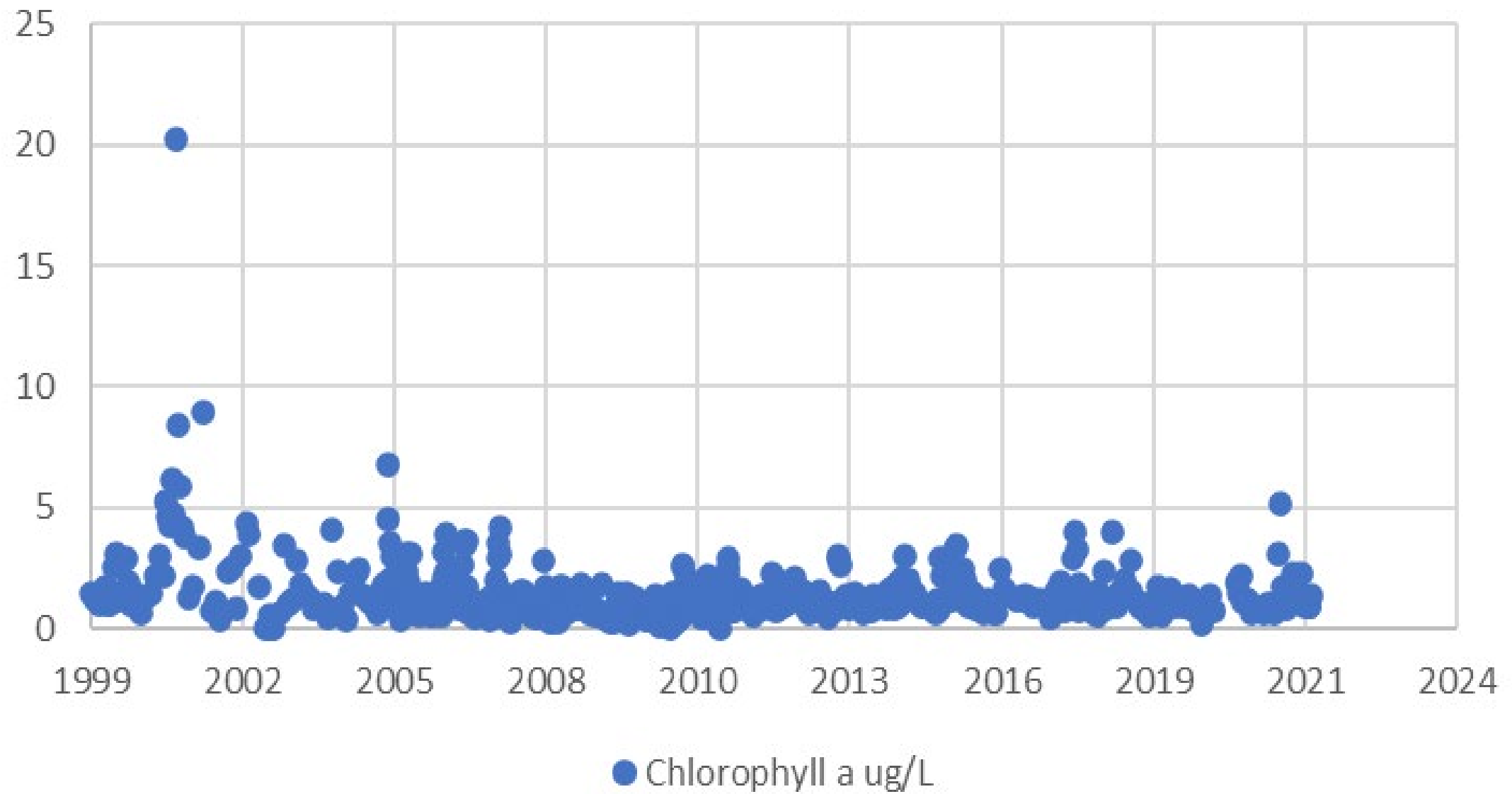
December 20th, 2021 Dissolved Oxygen, Percent Saturation

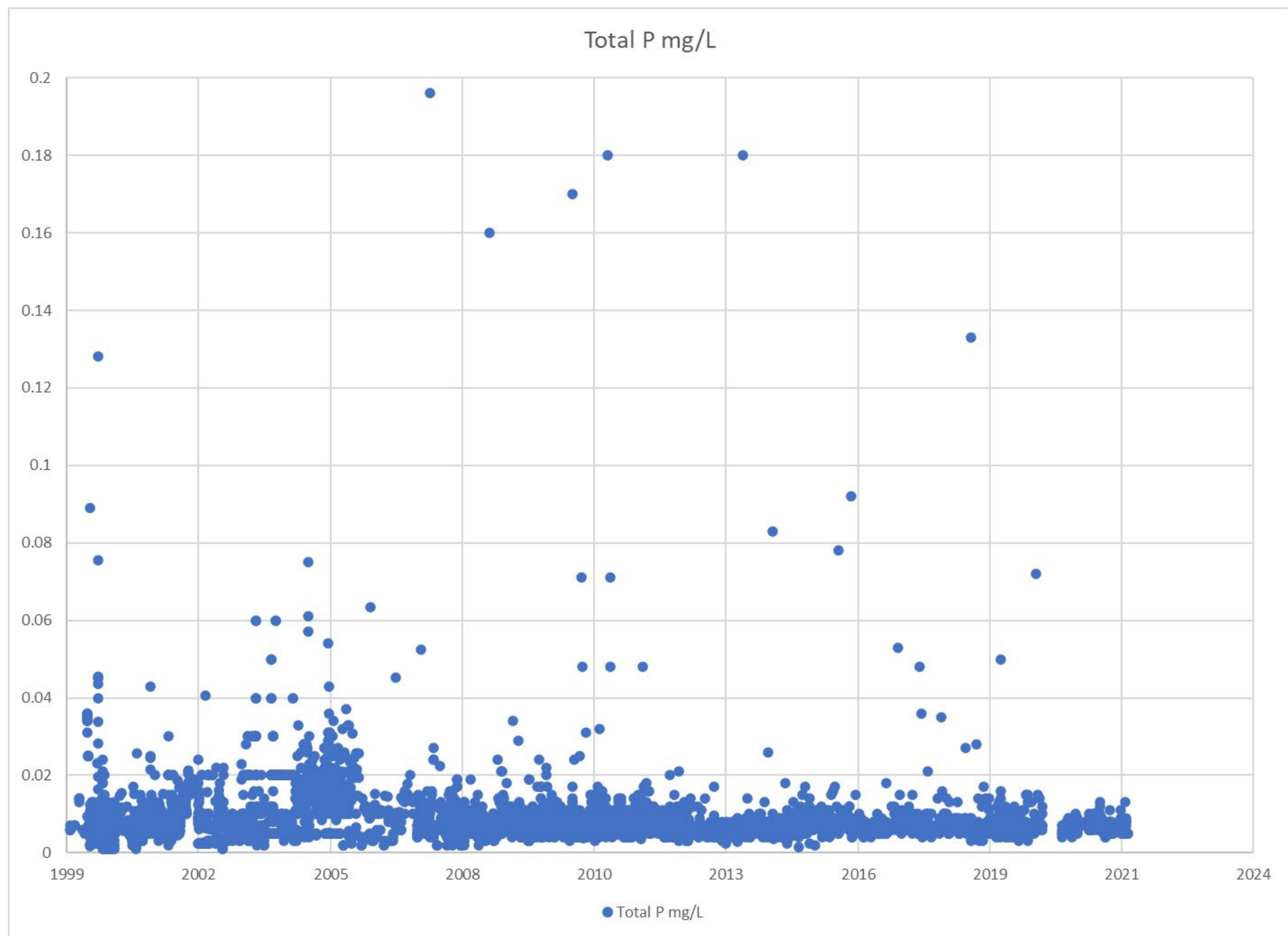


December 20th, 2021 pH

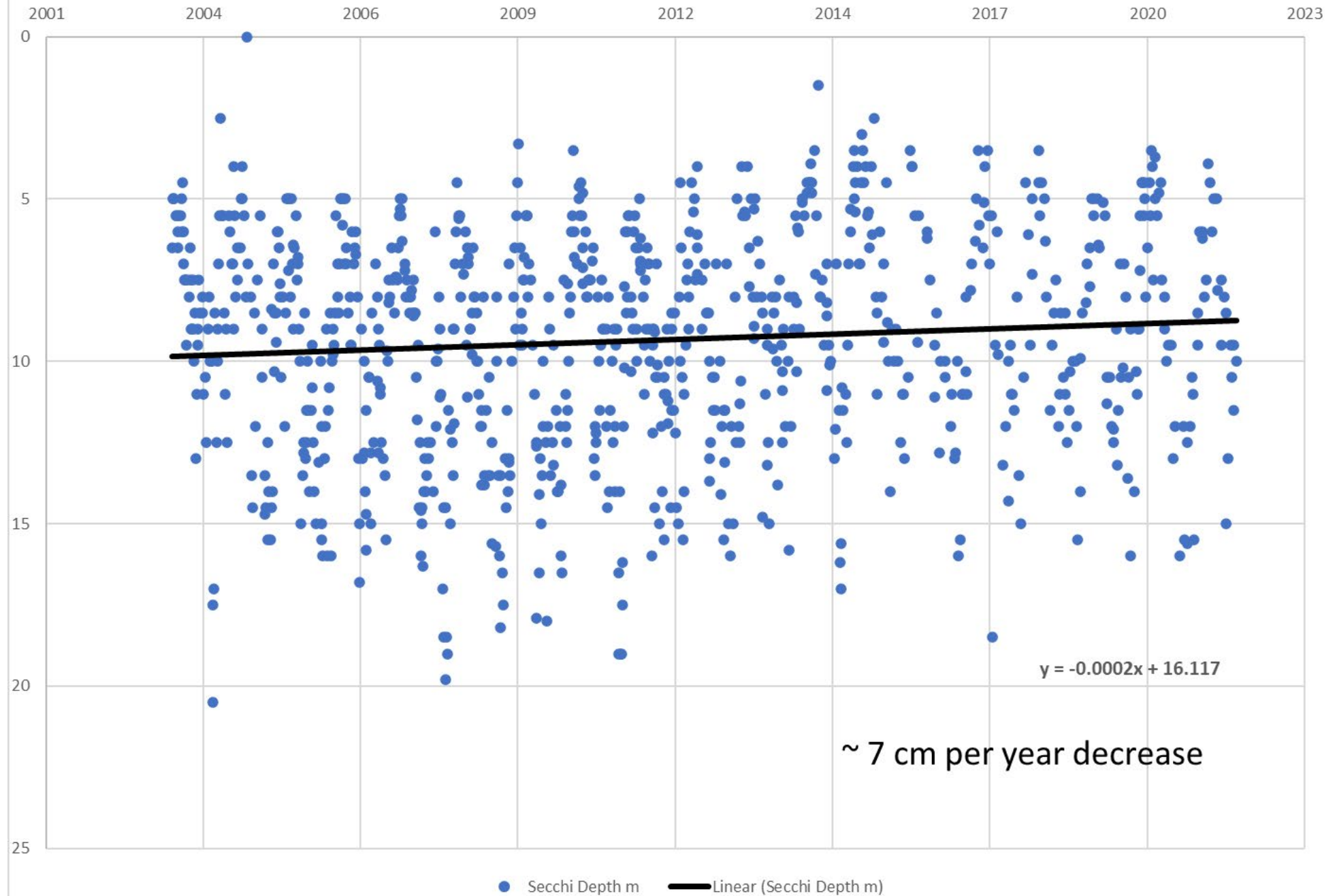


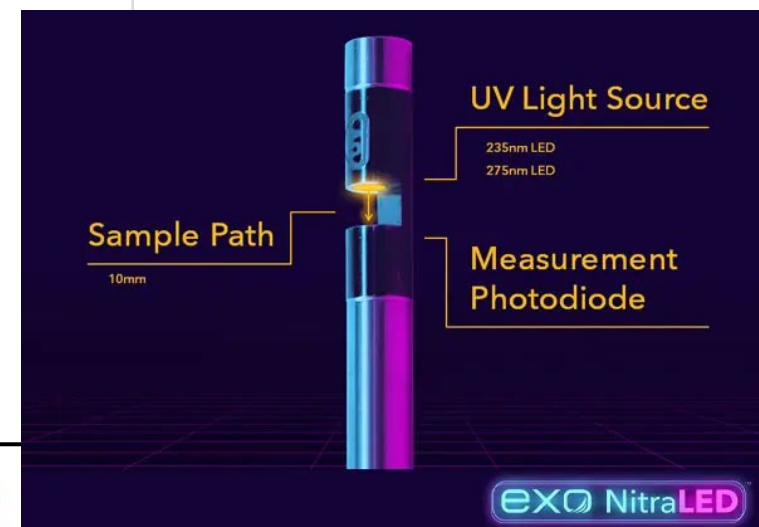
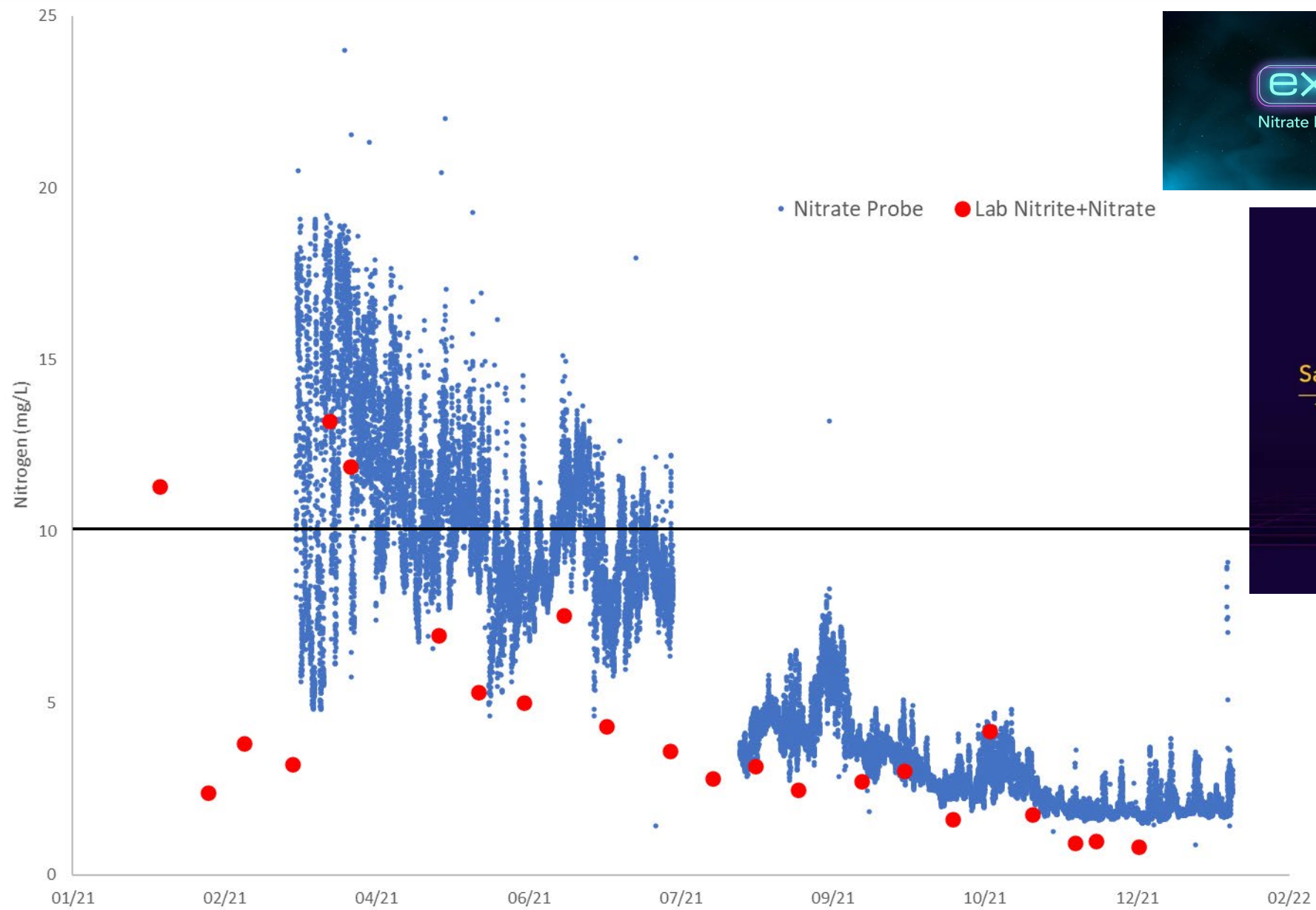
Chlorophyll a ug/L





Secchi Depth m





Lake Mead Modeling

- Continue to update and improve the base model as well as to continue to validate calibration for basic functions
- During the past year Deena has worked to model the impact on water quality of conceptual changes in lake surface elevation and future climate scenarios
- Worked to develop a Water Treatment Model (Jeff Belding, UNLV PhD Grad) to integrate with the Lake Mead Model
- Carried out modeling of future inflow/outflow/lake surface elevations based on predictions prepared by USBR
- Began preliminary simulations using the Lake Mohave model with a goal of expanding predictive capabilities downstream

Las Vegas Valley Watershed Advisory Committee (LVVWAC) Update



January 25, 2022

LVVWAC Update: January 11, 2022 Meeting



Approved the Las Vegas Wash FY 2022/2023 budget

- ❧ First year of long-term operations
- ❧ Total operating budget: \$2,576,126
 - ❧ Estimated Bureau of Reclamation contribution + other grants: \$262,500
 - ❧ Local contribution: \$2,313,626

The budget was approved with the commitment to include the formation of a work group to review the LVVWAC's funding formula on the April 19 agenda

LVVWAC Update:

January 11, 2022 Meeting



Received update on 2021 accomplishments of the LVWCC

- ❧ Cleared 7 weirs and reestablished their lines and grades
- ❧ Monitored water quality; decreases in perchlorate, Se, OP & TP noted
- ❧ Detected record number of Yuma Ridgway's rails
- ❧ Revegetated 21 acres at two Wash Green-Ups
- ❧ Reviewed weir maintenance plans for cultural resource issues; none found
- ❧ Continued virtual outreach, reaching more than 2,500 students
- ❧ Completed website redesign, trimming pages by ~90%; user engagement has since increased

LVVWAC Update:

January 11, 2022 Meeting



Received update on Stormwater Quality Management Committee

- ❧ Detention basin program analysis was conducted in 2021; permittees are on target to meet goals and requirements
- ❧ In April 2021, NDEP distributed a draft of a new permit; reviewed by permittees in June 2021; currently waiting for a revised draft from NDEP
- ❧ NDEP also issued a Draft Construction General Permit for review; permittees to meet and review with NDEP on January 13
- ❧ Selenium fish samples were collected in fall 2021 and will be presented to NDEP on January 26; locations coincide with historic sampling
- ❧ There is no evidence that water quality is being impaired by stormwater

Next Meeting



April 19, 2022

2 p.m.

Location: TBD