

Photo Credit: Todd Tietjen, SNWA



NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**



Nevada Department of
**CONSERVATION &
NATURAL RESOURCES**

Multi-Agency Coordination on HABs in Nevada

Jennifer Carr, PE, CPM
Deputy Administrator
October 17, 2019

Western States Water Council, Breckenridge, CO



March 2015 Mycrocystis Bloom – Lake Mead Recreational and Drinking Water Body

- **Involved Entities**
 - National Park Service
 - Water Purveyors
- **First Drinking Water Impact in NV History**
- **NPS Issued Swimming Advisory**

Greg Lovato
Administrator

Jennifer Carr
Deputy Administrator

Jeffrey Kinder
Deputy Administrator

Rick Perdomo
Deputy Administrator

Bradley Crowell
Director



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**CONSERVATION &
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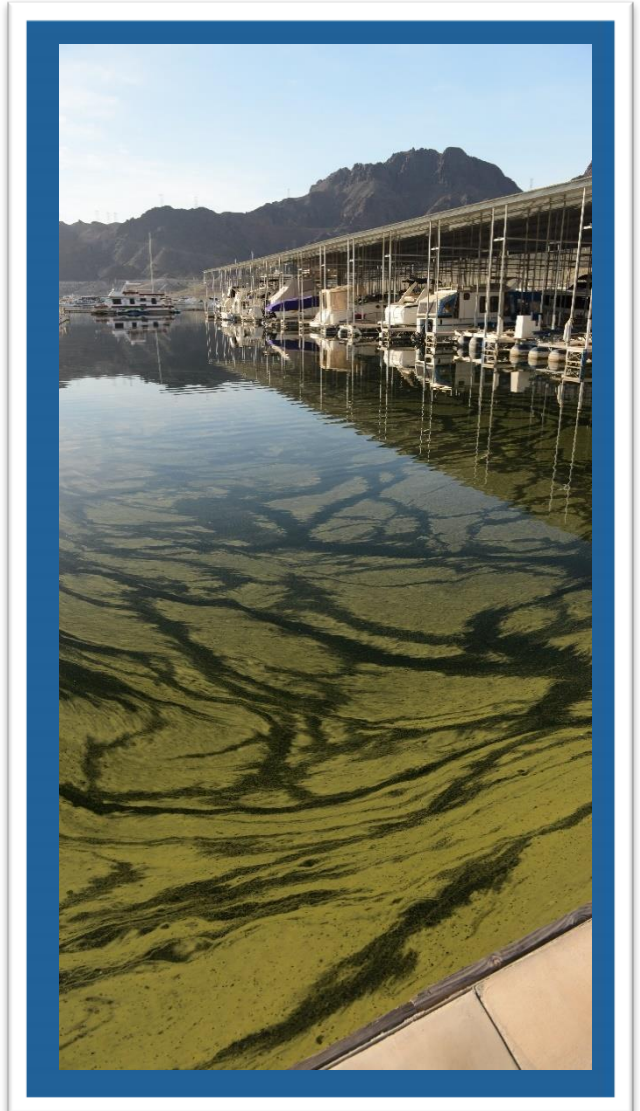


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Nov 2015 Mystery Fish Kill Culprit - Golden Algae

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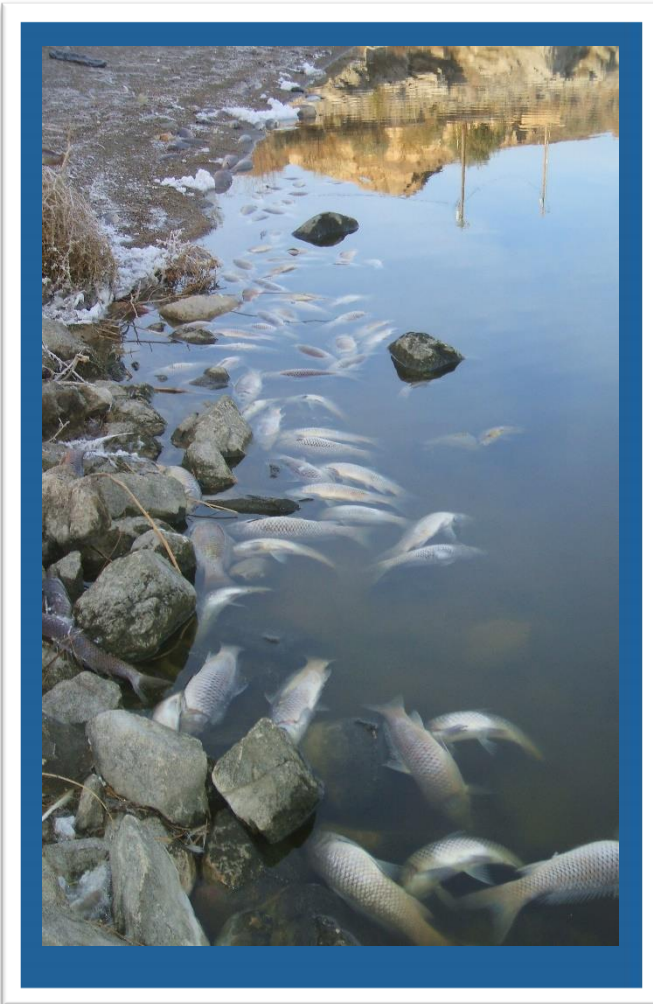
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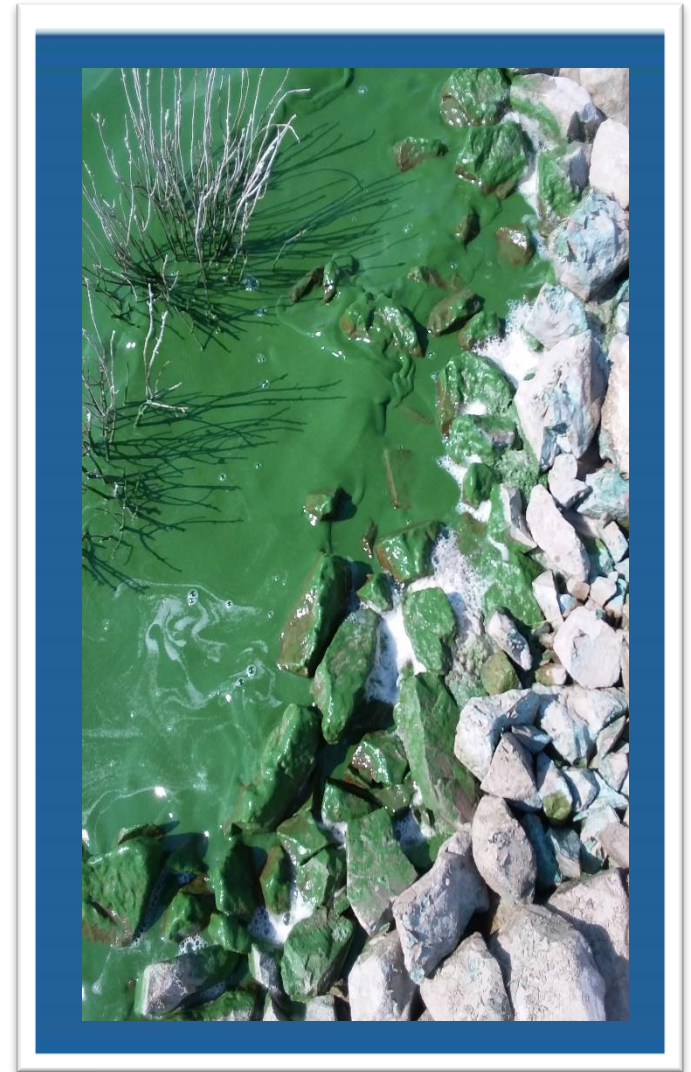
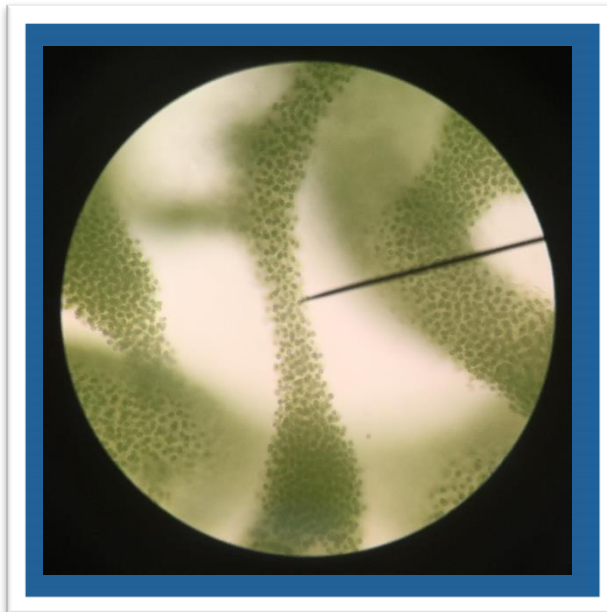


- **Atypical Time of Year**
- **Initially not expecting algae**
- **Suffocation Effect**



Aug 2018 - Chimney Reservoir

- **Microcystins/Nodularins**
 - 10,825 ug/L (vs. 8 ug/L)
- **“Danger” Keep Out Message**
 - Continued Observations
 - October 4: Re-Sample @ 1.17 ug/L



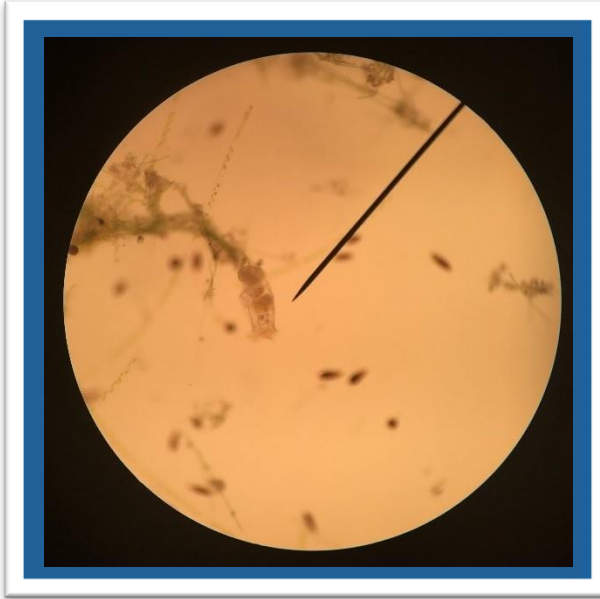
Aug 2018 – Lemmon Valley

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- **Swan Lake**
 - Terminal lake/playa surrounded by development
 - *Euglena sanguinea*



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Aug 2018 – Warning Developed

WARNING

**Harmful Algae May Be Present
People and Animals May Get Sick**



**Keep Pets &
Livestock Away
From The Water**

- Use caution when contacting lake water and wash with clean water/soap afterward
- Avoid areas of algae accumulation
- Don't let pets eat dried algae or drink lake water

Date Posted:

Call your doctor or veterinarian if you or your animals have sudden or unexplained sickness or signs of poisoning.

Rocky Mountain Poison Control Center

1-800-222-1222



Report new algae blooms to
Nevada Division of
Environmental Protection Spill
Hotline:
1-888-331-6337



Report possible algae-bloom
illness to Nevada Department
of Health and Human
Services:
1-775-400-0333



Report possible animal
illness, wild or domestic, to
Nevada Division of
Agriculture, State
Veterinarian:
1-775-738-8076



Multi-Agency Effort (We can't do it alone)

- **Agencies with varying authorities and interests**
 - NDEP – Surface Water Quality & Drinking Water
 - Dept of Agriculture – Livestock, State Vet
 - Health and Human Services – Response & Notification
 - State Parks – Recreation
 - Dept of Wildlife

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**Nevada Department of
Health and Human Services**

**DIVISION OF PUBLIC AND
BEHAVIORAL HEALTH**



Aug 2019 - Squaw Creek Reservoir

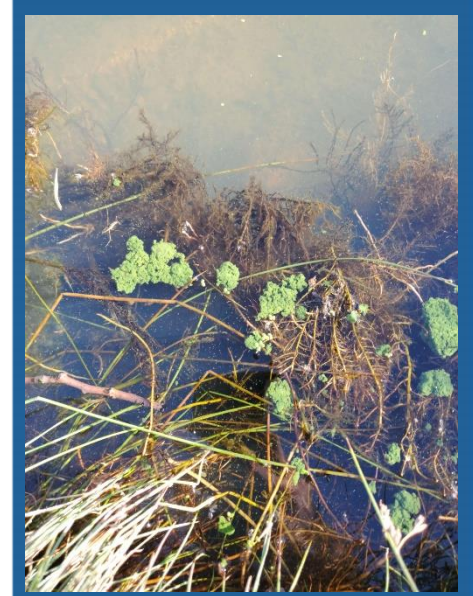
- **Microcystins/
Nodularins**

- 8/7/19 @
15,800 ug/L
- 8/19/19 @
1.59 ug/L
- Visual ass'mt
not a good
indicator



9/5/2019 @ 915 ug/L

8/7/2019



10/7/2019 (awaiting results)



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Aug 2019 - Squaw Creek Reservoir

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DANGER

Harmful Algae Present

People and Animals May Get Sick



KEEP OUT OF WATER

Date Posted: **THURSDAY, SEPTEMBER 19, 2019**

Call your doctor or veterinarian if you or your animals have sudden or unexplained sickness or signs of poisoning.

Rocky Mountain Poison Control Center

1-800-222-1222



Report new algae blooms to Nevada Division of Environmental Protection Spill Hotline:
1-888-331-6337



Report possible algae-bloom illness to Nevada Department of Health and Human Services:
1-775-400-0333



Report possible animal illness, wild or domestic, to Nevada Division of Agriculture, State Veterinarian:
1-775-738-8076



Technology Innovation

("Necessity is the Mother of Invention" – Plato?)

NDEP App Development

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Verizon LTE 11:16 AM 85%

HAB Field Data

Water Conditions

☒ flat ☐ choppy

☐ white cap

Weather conditions

☒ clear ☐ overcast

☐ precipitating

Other observations?

Take picture

Max size of file is 10 MB

take_picture-419c8d032c2040d4b0d75192e363a9ef.JPG

Verizon LTE 11:14 AM 85%

HAB Field Data

Survey for logging Harmful Algal Bloom observations

Date Observed *

Tuesday, October 8, 2019

3:40 PM

Waterbody

Office test

Coordinates

Allow access to device's location services to acquire GPS coordinates

39°9'N 119°46'W ± 65 m

Report Completed By *

☒ Dave ☐ John



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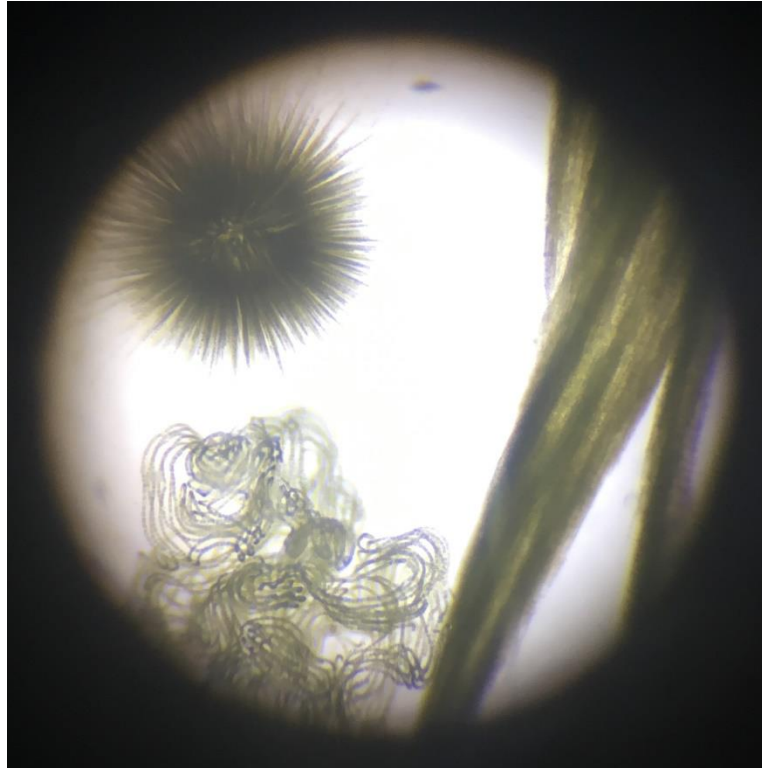
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Questions?



3 Algae Types
Knott Creek, 2019

*Round spiky is
Gloeotrichia*

*Grassy is
Aphanizomenon*

*String is
Anabaena*

Contact:

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Contact:

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NDEP BWQP Bureau Chief

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