YUROK TRIBE ENVIRONMENTAL PROGRAM (YTEP) MEMORANDUM

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TO: Klamath River BGA workgroup

FROM: Suzanne Fluharty <sfluharty@yuroktribe.nsn.us>

DATE: July 26, 2019

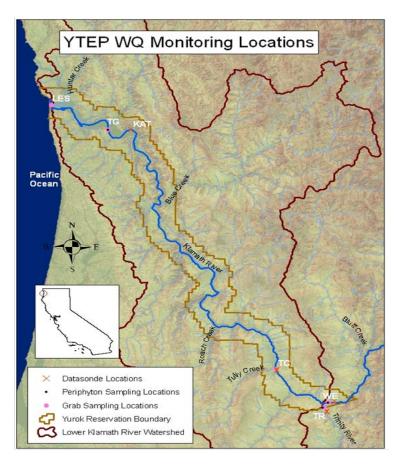
RE: July 23-24 Microcystin Results

YTEP has received results for water samples collected July 23-24 for blue green algae and associated toxins within the external boundaries of the Yurok Reservation. The areas above Tully Creek at Weitchpec and the Trinity River remain with no detections at this time.

However, toxin levels have been detected in local areas of low flow water at Tully Creek mouth (0.12 ug/L) and in the South Slough of the estuary (0.33 ug/L).

Because these detections are below the Health Advisory Level public access points from river mile 38.5 to the mouth will be posted with Level 1 Informative, Caution flyers.

Caution should be used due to the patchy nature of algal blooms and YTEP"s limited sampling budget at all regions with slow moving water. Please see the attached flyer for recommended precautions.



The figure to the left, illustrates the locations of Grab Sampling Locations on the Yurok Reservation by a pink dot Individual results from physical water samples may be referenced in Table 1, below.

The Klamath Basin Monitoring Program has developed a BGA Tracker and can be viewed at: http://www.kbmp.net/mapsdata/blue-green-algae-tracker

If you have questions about the algae monitoring from Weitchpec to the mouth of the Klamath River, please contact the Yurok Tribe Environmental Program:

Matt Hanington, Water Division Manager (707) 954-7519; or

Suzanne Fluharty, Ecosystem & Community Manager (707) 482-1350 X1013.

TABLE ONE: Yurok Phytoplankton Identification and Enumeration Results 2019

Date	Time	Location	River Mile	Sample ID	Depth (cm)	MSAE (cells/ml)	AFA (cells/ml)	ANA (cells/ml)	Other (cells/ml)	Microcystin (ug/L)
5/7/2019	10:20	LES	0.5	LES050719-OC	30	*	*	*	*	ND
5/7/2019	11:17	TG	6	TG050719-OC	30	*	*	*	*	ND
5/8/2019	10:12	TC	38.5	TC050819-OC	30	*	*	*	*	ND
5/8/2019	11:17	WE	43.5	WE050819-OC	30	*	*	*	*	ND
5/21/2019	11:27	LES	0.5	LES052119-OC	30	*	*	*	*	ND
5/21/2019	12:05	TG	6	TG052119-OC	30	*	*	*	*	ND
5/22/2019	11:36	TR	0.06	TR052219-OC	30	*	*	*	*	ND
5/22/2019	10:35	TC	38.5	TC052219-OC	30	*	*	*	*	ND
5/22/2019	11:50	WE	43.5	WE052219-OC	30	*	*	*	*	ND
6/4/2019	13:01	SS	0.2	SS060419-SG	10	*	*	*	*	ND
6/4/2019	11:40	LES	0.5	LES060419-OC	30	*	*	*	*	ND
6/4/2019	12:27	TG	6	TG060419-OC	30	*	*	*	*	ND
6/4/2019	12:27	TG	6	TG060419-SG	10	*	*	*	*	ND
6/5/2019	10:30	TC	38.5	TC060519-OC	30	*	*	*	*	ND
6/5/2019	11:40	WE	43.5	WE060519-OC	30	*	*	*	*	ND
6/5/2019	11:40	WE	43.5	WE060519-SG	10	*	*	*	*	ND
6/18/2019	11:39	LES	0.5	LES061819-OC	30	DNS	DNS	DNS	DNS	ND
6/18/2019	11:10	TG	6	TG061819-OC	30	DNS	DNS	DNS	DNS	ND
6/19/2019	11:33	TR	0.06	TR061919-OC	30	DNS	DNS	DNS	DNS	ND
6/19/2019	10:12	TC	38.5	TC061919-OC	30	DNS	DNS	DNS	DNS	ND
6/19/2019	11:52	WE	43.5	WE061919-OC	30	DNS	DNS	DNS	DNS	ND
6/25/2019	13:14	TG	6	TG06262019-SG	10	broken	broken	broken	broken	broken
6/25/2019	14:14	WE	43.5	WE062519-SG	10	DNS	DNS	DNS	DNS	ND
6/26/2019	12:25	SS	0.2	SS062619-SG	10	DNS	DNS	DNS	DNS	ND
6/26/2019	11:10	NA	NA	KBW062619-SG	10	DNS	DNS	DNS	DNS	ND
7/9/2019	11:58	SS	0.2	SS070919-SG	10	DNS	DNS	DNS	DNS	ND
7/9/2019	10:10	LES	0.5	LES070919-OC	30	DNS	DNS	DNS	DNS	ND
7/9/2019	11:12	TG	6	TG070919-OC	30	DNS	DNS	DNS	DNS	ND
7/9/2019	11:12	TG	6	TG070919-SG	10	DNS	DNS	DNS	DNS	ND
7/10/2019	10:29	TC	38.5	TC071019-OC	30	DNS	DNS	DNS	DNS	ND
7/10/2019	11:47	WE	43.5	WE071019-OC	30	DNS	DNS	DNS	DNS	ND
7/10/2019	11:47	WE	43.5	WE071019-SG	10	DNS	DNS	DNS	DNS	ND
7/23/2019	12:42	SS	0.2	SS072319-SG	10	*	*	*	*	0.33
7/23/2019	11:22	LES	0.5	LES072319-OC	30	*	*	*	*	ND
7/23/2019	11:45	TG	6	TG072319-OC	30	*	*	*	*	ND
7/23/2019	11:56	TG	6	TG072319-SG	10	*	*	*	*	ND
7/24/2019	10:30	TC	38.5	TC072419-OC	30	*	*	*	*	0.12
7/24/2019	11:26	TR	0.06	TR072419-OC	30	*	*	*	*	ND
7/24/2019	11:55	WE	43.5	WE072419-OC	30	*	*	*	*	ND
7/24/2019	11:57	WE	43.5	WE072419-SG	10	*	*	*	*	ND

KEY to TABLE ONE

LES Low er Estuary

SS South Slough

TC Above Tully Creek

TG Above Turw ar Gage

TR Trinity River

WE Weitchpec

MSAE Microcystis aeruginosa

AFA Aphanizomenon flos-aquae

ANA Anabaena circinalis

Other¹ Oscillatoria sp.

Other² Gloeotrichia echinulata

WE Weitchpec

Other³ Aphanizomenon sp.

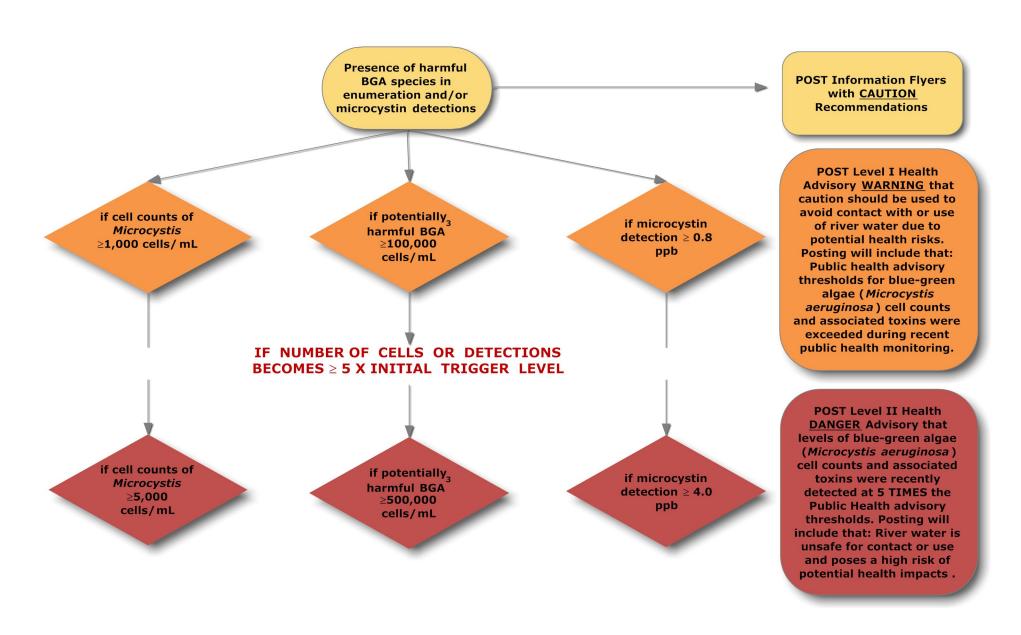
Highlighted rows denote results by week.

Other⁶ Anabaena variabilis
Other⁷ Anabaena planctonica
Other⁸ Limnothrix sp.
Other⁹ Dolichospermum sp.

Other Pseudanabaena sp.

Other⁵ Anabaena sp.

DNS Did not sample
* Not available at this time
BRL Below Reporting Limit
ND No detections



CAUTION

BLUE GREEN ALGAE IS PRESENT IN THE KLAMATH RIVER (July 26, 2019)



1. Avoid swimming or wading in areas when the water has a strong bright green color or where algae mats are present.



2. Keep pets, especially dogs out of strong bright green watercolor Do not allow them to drink river water or lick algae from their fur.



3. Swimmers should shower & rinse pets with tap water after swimming.

4. Fish may be eaten after removing guts & liver- rinse fillets in tap water.

5. Do not drink or cook with river water.

Blue green algae in the river during the summer & fall may result in dangerous buildup of toxins in the water.

ACTIVITIES NEAR THE WATER SUCH AS FISHING, CAMPING & HIKING ARE SAFE

If you have questions please contact: Matt Hanington, Division Manager, Yurok Tribe Environmental Program (707) 954-7519.

- North Coast Regional Water Quality Control Board at 707-576-2220
- California Department of Public Health website: http://www.cdph.ca.gov/HealthInfo/environhealth/water/Pages/Bluegreenalgae.aspx

If you have questions about the algae monitoring from Weitchpec to the mouth of the Klamath River, please contact Matt Hannington, Acting Assistant Director, Yurok Tribe Environmental Program (707) 954-7519.