Press Release

To: Lodi News Sentinel; the Record

CC: City of Lodi- Public Works Director-Charlie Swimley; Utility Superintendent- Andrew Richle

From: City of Lodi, Public Works- Kathy Grant – Watershed Program Coordinator; Contact kgrant@lodi.gov; 209-333-6800 - Ext. 2317, or 209-327-2063.

Date: 7/29/2020

Re: PRESS RELEASE – JULY IS "LAKES APPRECIATION MONTH!"

City of Lodi's 20th annual Secchi Disk Dip-In!

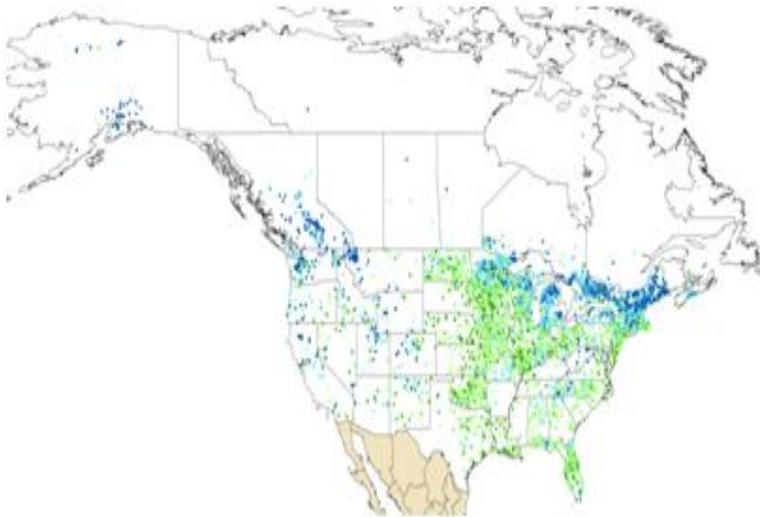**Lodi Measures the Water Clarity of Lodi Lake and the Mokelumne River on July 13, 2020.**

"July is special – it's Lakes Appreciation Month! You work and play on them. You drink from them. However, do you really appreciate them? Growing population, development, and invasive species stress your local lakes, ponds, and reservoirs. All life needs water; let's not take it for granted! Lakes Appreciation Month is a time to enjoy our lakes and reservoirs, spread the news of how important they are and how we can keep them special."

On, Monday, July 13, 2020, just after noon, Storm Drain Detective leaders dropped a Secchi disc into Lodi Lake and the Mokelumne River to measure water clarity, adding their findings to the **2020 Annual Secchi Dip-In**, a volunteer waterbody monitoring event. This is the twentieth year Lodi has participated.

Check https://www.nalms.org/secchidipin/ for more information. More Lake Appreciation month events and information can be found at: https://www.nalms.org/events/.

The Dip-In is an international effort in which volunteers produce a "snapshot" of the transparency of water in the United States and Canada. Sponsored by the North American Lake Management Society and the United States Environmental Protection Agency, the Dip-In is directed by former Kent State University scientist, Dr. Robert Carlson. Since the Dip-In began in 1994 in six Midwest states, it has expanded to participation by more than 400 programs and 9,000 volunteers in the U.S., Canada, and several other countries. The Dip-In has generated more than 41,000 water transparency records that are used to detect trends in transparency.

Carlson said that he wanted to find a way to produce a scientific "snapshot" of the trends in water quality of the world's waterbodies. Such a project could only be done using the thousands of volunteers who routinely measure transparency in local volunteer programs. The Dip-In is a chance for volunteers to think and contribute globally by taking a measurement in their local environment. Although the Dip-In accepts data from all types of turbidity instruments, most volunteers will use an instrument called a "Secchi disk," a flat, horizontal, black and white disk that is lowered from a rope into the water until it disappears. The depth the disk disappears is a measure of the transparency of the water. The disk itself is named after the Jesuit priest, Pietro Angelo Secchi, who first used the disk more than 150 years ago.

Why bother? Water clarity can be a measurement of healthy or unhealthy water. The City of Lodi's "stormwater", or streets' rainy season runoff, and what Public Works fondly calls, "nuisance water", or year-round landscaping runoff, drains to Lodi Lake, the Mokelumne River or a local water body, UNTREATED. Transparency can be affected by the color of the water, suspended sediments, algal abundance, and potential pollution in the water. Suspended solids often come from plant nutrients coming into the water from local urban runoff, construction sites, and local agricultural fertilizer or animal wastes**.** Summer street runoff can be potentially loaded with homeowner's herbicides, pesticides, and soapy water from car washing. **"Remember, only rain down the drain!"**

What's a Secchi Disk Dip-In? The concept of the Dip-In is simple. Individuals use a Secchi disk, an 8-inch metal disk with alternating black and white quadrants, and lower it into any lake, river, stream, or body of water, until it disappears. The depth that the disk disappears is carefully noted. This depth of disappearance, called the Secchi depth measurement, measures the transparency (clarity) of the upper water column.
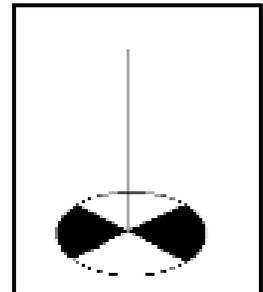
Lodi' measurements were taken on July 13, 2020, mid-day, from three sites. Two sites in Lodi Lake and one is in the Mokelumne River, just upstream of the Woodbridge Irrigation District Dam. Data from 2001-2020 is included below.

Site One- Lodi Lake- West: Site #1, north of the boathouse, west/center of Lodi Lake measured water clarity at 8.8 feet.

Site Two- Lodi Lake- East- Site #2 at the center /east end of Lodi Lake measured water clarity at 6.4 feet.

Site Three- Mokelumne River/ upstream of WID Dam- Site #3 in the Mokelumne River, main channel, about 500 yards upstream from the WID Dam, measured water clarity at 7.8 feet.

PAST FINDINGS: Lodi Lake's visible water quality has not significantly changed since monitoring began in 2001. Conversely, the river's water clarity seems to fluctuate over time, depending on whether there have been high rain or snow runoff or drought conditions. Of note, is the increased presence of water plants growing from the bottom of Lodi Lake.
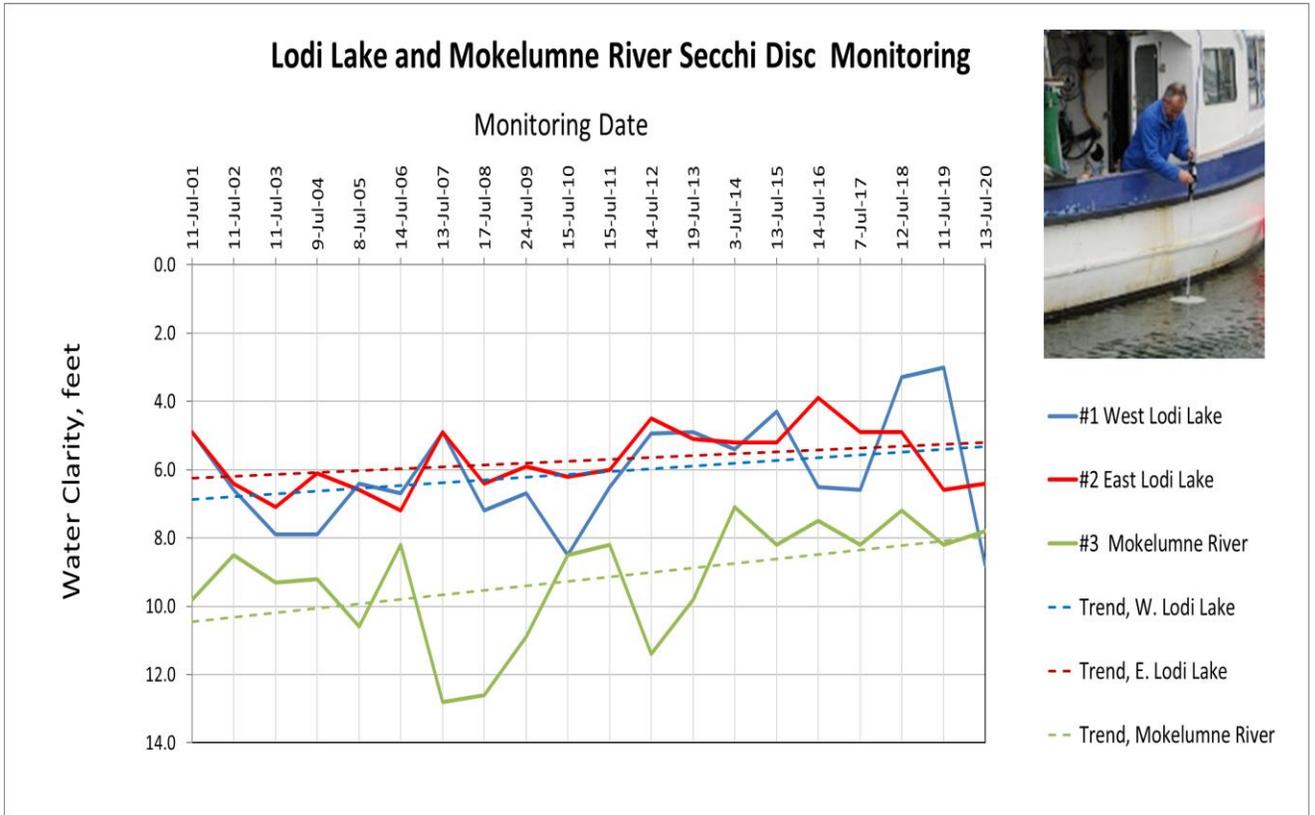
Data from 2001-2020 is below.

City of Lodi, Dept. of Public Works

Secchi Disc "Dip-in" Sampling, Lodi, California
Transparency:

Site:	#1 West Lodi Lake Approx. water depth- 8.3' (Long.121°17 ' 30" Lat. 38° 9 ' 21 ") (North of Boathouse, Mid-Lake) Secchi reading			#2 East Lodi Lake Approx. water depth- 8.1' (East End/ Center of Lake) Secchi reading			#3 Mokelumne River Approx. water depth- 18' (Main Channel, 500 yds. Upstream of WID dam) Secchi reading		
Date	Time	Depth meters	Depth Feet	Time	Depth meters	Depth Feet	Time	Depth meters	Depth Feet
11-Jul-01	13:50	1.50 M	4.9	14:10	1.50 M	4.9	13:55	3.00 M	9.8
11-Jul-02	15:00	2.00 M	6.6	15:00	1.95 M	6.4	15:00	2.60 M	8.5
11-Jul-03	11:00	2.40 M	7.9	11:15	2.15 M	7.1	10:45	2.85 M	9.3
9-Jul-04	11:30	2.40 M	7.9	11:20	1.85 M	6.1	11:42	2.80 M	9.2
8-Jul-05	12:25	1.95 M	6.4	12:40	2.00 M	6.6	12:24	3.25 M	10.6
14-Jul-06	11:45	2.05 M	6.7	11:50	2.20 M	7.2	11:35	2.50 M	8.2
13-Jul-07	11:35	1.50 M	4.9	11:40	1.50 M	4.9	11:20	3.90 M	12.8
17-Jul-08	12:25	2.20 M	7.2	12:30	1.95 M	6.4	13:00	3.85 M	12.6
24-Jul-09	13:35	2.05 M	6.7	13:44	1.80 M	5.9	13:00	3.30 M	10.9
15-Jul-10	11:20	2.60 M	8.5	11:35	1.90 M	6.2	12:00	2.60 M	8.5
15-Jul-11	12:05	2.00 M	6.5	12:15	1.80 M	6.0	12:25	2.50 M	8.2
14-Jul-12	12:05	1.51 M	5.0	11:55	1.38 M	4.5	12:20	3.49 M	11.4
19-Jul-13	12:09	1.50 M	4.9	12:25	1.55 M	5.1	12:42	3.00 M	9.8
3-Jul-14	11:30	1.65 M	5.4	11:20	1.60 M	5.2	11:40	2.15 M	7.1
13-Jul-15	11:45	1.30 M	4.3	11:59	1.60 M	5.2	12:10	2.50 M	8.2
14-Jul-16	13:15	1.98 M	6.5	13:15	1.70 M	3.9	13:00	2.30 M	7.5
7-Jul-17	13:25	2.00 M	6.6	13:37	1.50 M	4.9	13:05	2.50 M	8.2
12-Jul-18	11:41	1.00 M	3.3	11:47	1.50 M	4.9	12:02	2.20 M	7.2
11-Jul-19	12:54	0.90 M	3.0	12:40	2.00 M	6.6	12:10	2.50 M	8.2
13-Jul-20	12:10	2.70M	8.8	12:20	1.95M	6.4	12:30	2.37 M	7.8

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