Heber Public Utility District

REPORT TO BOARD OF DIRECTORS

MEETING DATE: February 18, 2016

FROM: Laura Fischer, General Manager

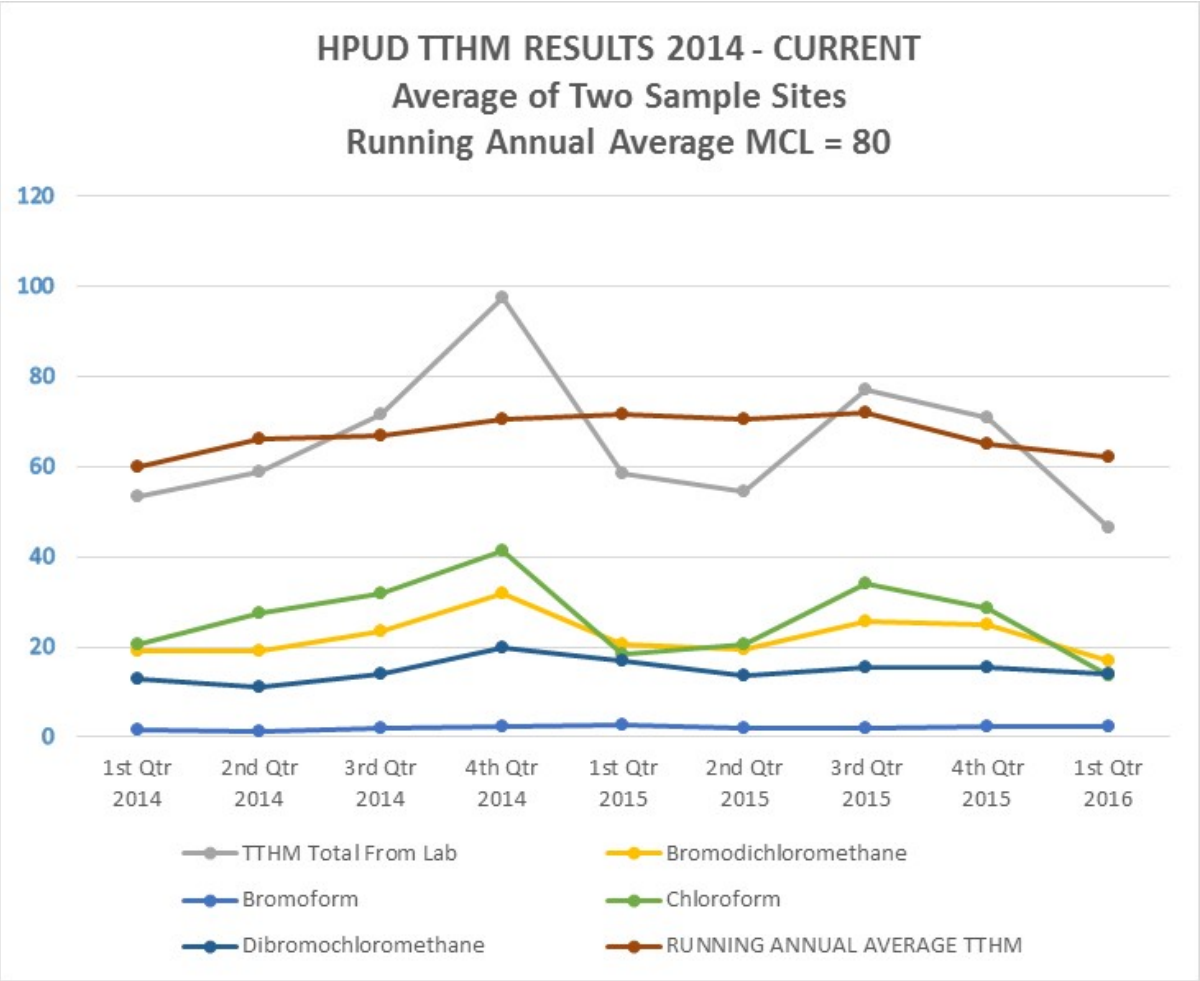
SUBJECT: Information Only Exceedance of HAA5 Maximum Contaminant Level (MCL) at Water Treatment Plant.

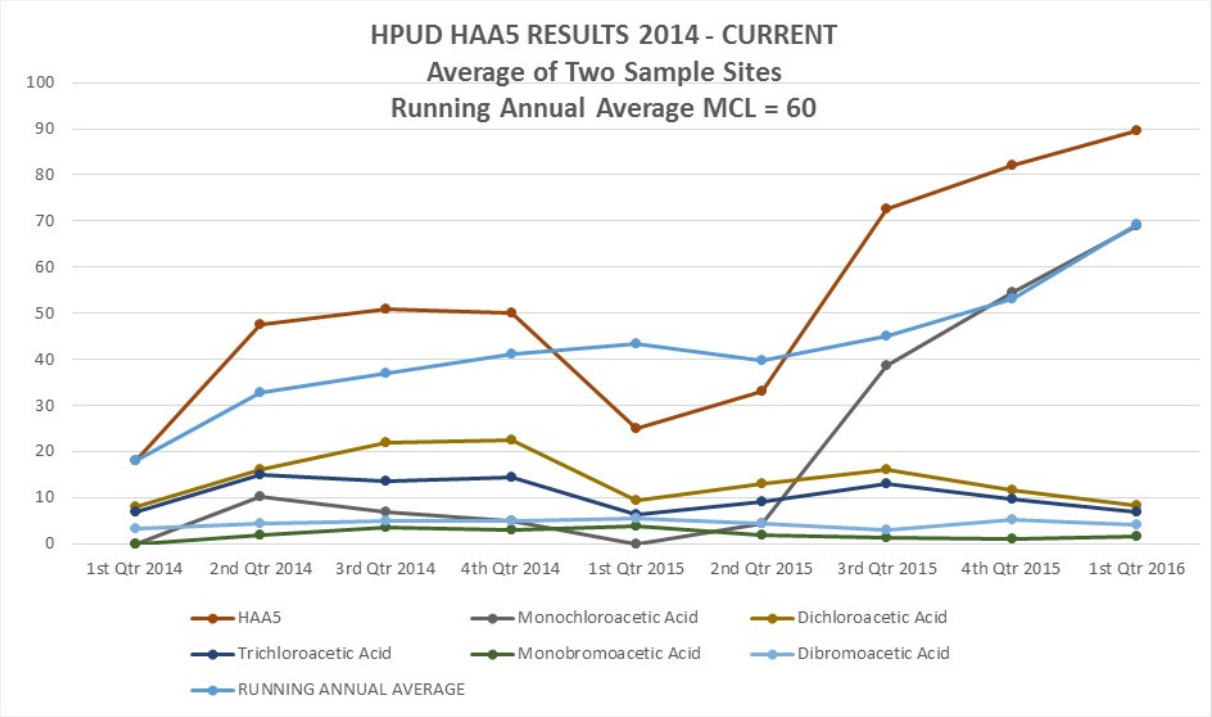
INFORMATION ONLY:
As previously reported to the Board, the HPUD water has shown a significant increase in the HAA5 (haloacetic acids) in our finished drinking water. The HAA5 are a common undesirable by-product of drinking water chlorination. In water, HAAs are stable (non-volatile) and the most common are:

Monochoroacetic acit
Dichloroacetic acid
Trichloroacetic acid
Monobromoacetic acid
Dibromoacetic acid

BACKGROUND:
Disinfectant by-products that are regulated by the State Water Board and the EPA include trihalomethanes and haloacetic acids. As you may know, in 2011 and 2012 the HPUD was in violation of our trihalomethane (TTHM), but our HAA5 numbers were well below the MCL. We received a Citation for Noncompliance of our TTHM MCL in January 2013. However, after staff made changes in our operations in the first quarter of 2013 HPUD has been in compliance with the TTHM maximum contaminant level (MCL).

The Maximum Contaminant Level (MCL) is determined by taking the running average over the past four quarters. Tests on the disinfection by-products are taken quarterly. The graphs below show the TTHM and HAA5 test results for the past two years. As you can see from the graph below, starting in the third quarter of 2015 the HAA5 numbers started an unexplainable rise.


HPUD TTHM RESULTS 2014 - CURRENT
Average of Two Sample Sites
Running Annual Average MCL = 80
120
100
80
60
40
20
0
1st Qtr 2014
2nd Qtr 2014
3rd Qtr 2014
4th Qtr 2014
1st Qtr 2015
2nd Qtr 2015
3rd Qtr 2015
4th Qtr 2015
1st Qtr 2016
TTHM Total From Lab
Bromodichloromethane
Bromoform
Chloroform
Dibromochloromethane
RUNNING ANNUAL AVERAGE TTHM


HPUD HAA5 RESULTS 2014 - CURRENT
Average of Two Sample Sites
Running Annual Average MCL = 60
100
90
80
70
60
50
40
30
20
10
0
1st Qtr 2014
2nd Qtr 2014
3rd Qtr 2014
4th Qtr 2014
1st Qtr 2015
2nd Qtr 2015
3rd Qtr 2015
4th Qtr 2015
1st Qtr 2016
HAA5
Monochloroacetic Acid
Dichloroacetic Acid
Trichloroacetic Acid
Monobromoacetic Acid
Dibromoacetic Acid
RUNNING ANNUAL AVERAGE

According to the State of California Disinfection By-Product Rules, HPUD must send out a notice to our customers within 30 days of receiving our test results. The notice must tell them about our violation and the steps we are taking to correct the problem. This notice will go out in our March 1st utility bill.

NEXT STEPS:

Currently several water districts in our area are experiencing higher than normal HAA5 levels. We have been in contact with the State Water Board Engineers and have a conference call scheduled next week to discuss our efforts to correct the issue. We are conducting a system wide analysis starting with additional samples and tests of our raw water, chemical compounds used and possible changes to our coagulants, chlorine generation and injection points, sediment in tanks and possible algae in distribution lines. We are conducting additional tests and will use two separate labs in case the problem is only with the lab used.

The urgency, aside from the health risks associated with higher levels of HAA5, is that our current plant improvement project does not address any changes in operation or treatment to fix the HAA5 concerns. We must determine the best way to ensure that our water quality is well within the EPA and State Water Board regulations and we must make sure that our Water Plant improvement project addresses these issues.

Respectfully Submitted,

Laura Fischer,
General Manager