

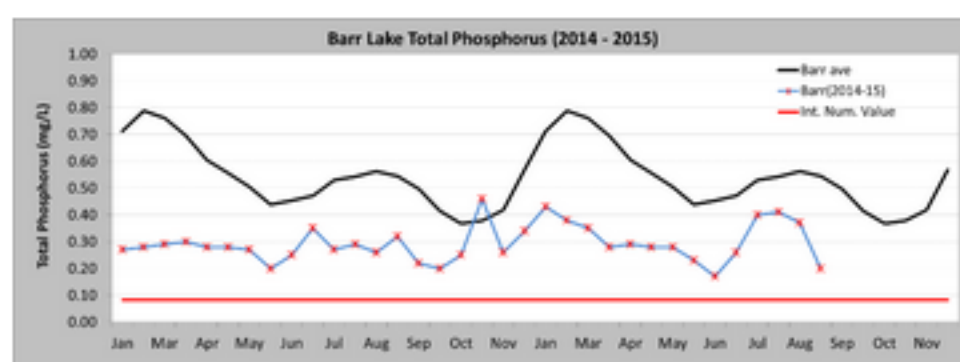


## Barr Lake and Milton Reservoir Watershed Association

### Lower Phosphorus in Barr for the Past Two Years

Unlike the severe droughts of 2002 and 2012, the past couple of years have been relatively wet in the Barr/Milton watershed. The floods of September 2013 washed away the pump works that delivered treated wastewater effluent, which contains phosphorus, to Barr Lake. This was followed by a wet spring in 2015 that delivered more water to Barr Lake from the S. Platte River. This flush of water appears to have diluted phosphorus concentrations in the reservoir.

Typically, phosphorus peaks around 0.80 parts per million or mg/L in January/February and then settles out during the spring and early summer. Another rise in phosphorus occurs during the summer months, thought to be contributed by internal loading. For the past two years phosphorus levels have been lower, presumably due to the lack of pumped effluent combined with dilution from the big snow and rain events. The recent winter time phosphorus peak ranged from 0.30 to 0.40 ug/L, dropping to 0.20 ug/L in early summer. Consequently, it is estimated that phosphorus loading to Barr has decreased by 26,000 kg/yr (about 28 tons) for the past couple of years. Improvements in water clarity, shorter duration algae blooms, and more consistent attainment of the pH standard seem to have benefited from all the rain.

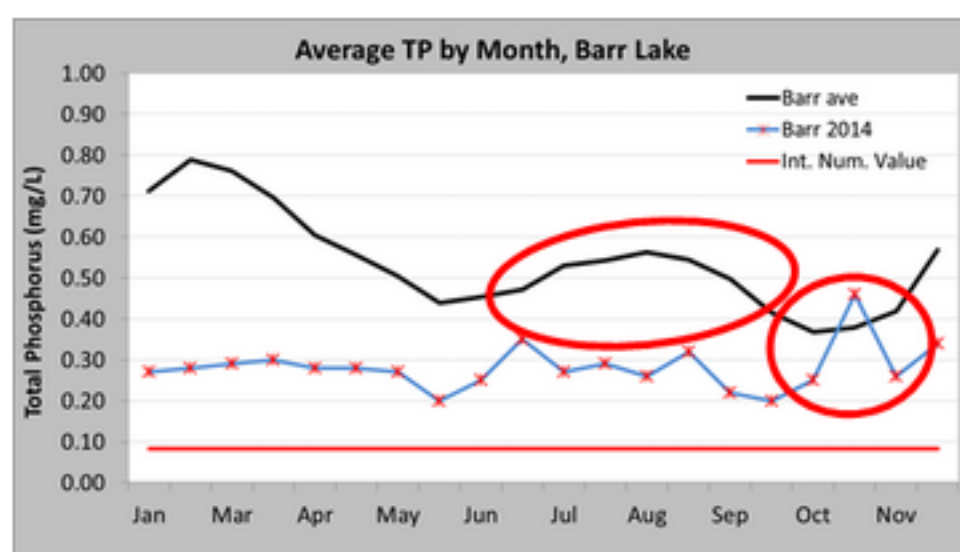


### In-Reservoir Study Initiated for Barr Lake

The next step in implementing the BMW TMDL is to see what can be done in-reservoir to help improve water quality. Approximately 4,000 kg/year of phosphorus is contributed from the lake sediments when oxygen levels drop at the lake bottom, winds stir up the lake sediments, and carp dive into the lake muck looking for food. This 4,000 kg a year is a big contributor when the total allowable amount for the entire reservoir is calculated at just less than 6,000 kg for the year.

The BMW Technical Committee has hired limnologist, Ken Wagner, to evaluate a variety of options for reducing the internal loading of phosphorus. The study should be complete early in 2016.

Phosphorus tends to increase during the summer months when inflows are minimal. In 2014, Barr was drained with no inflows during October. Phosphorus may have increased because of internal loading.



### Live Like You Love It Campaign Launch

Colorado Water Wise has launched a website promoting their water awareness campaign, Live Like You Love It (LLYLI), [www.lovecoloradowater.org](http://www.lovecoloradowater.org). The campaign is designed to be customizable and can include messaging developed by BMW and others. The first phase of the campaign will focus on Stormwater messages. The campaign is anticipated to continue for many years and support work being done as part of the Colorado Water Plan. The campaign has three (3) calls to action; Conserve, Care and Commit. Water quality messages are part of the 'Care' call to action. The Colorado Stormwater Council (CSC) is pursuing grant funding from the Colorado Water Conservation Board (CWCB) and the Basin Roundtables working to develop the Colorado Water Plan. But the campaign needs more partners. Please visit the website and consider joining this exciting campaign.

### BMW Receives Certificate from the Friends of Barr Lake

In an effort to strengthen their organization and expand their service to Barr Lake State Park, the Friends of Barr Lake are working to recruit corporate sponsors. BMW became their 4<sup>th</sup> corporate sponsor. To commemorate our commitment, the Friends presented Steve Lundt, Michelle Seubert and Amy Conklin with a certificate.



### 2014 Water Quality Summaries are on the Web

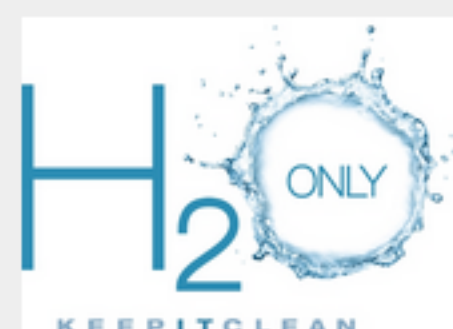
One way to track progress and to see if Barr and Milton are improving is to look at the data. For the third time (2011, 2013, and now 2014), there are short, 2-page water quality summaries available for the important parameters that help measure success. On the BMW website, you can download the 8 different water quality summaries (pH, Chl-a, dissolved oxygen, temperature, phosphorus, nitrogen, water clarity, and (new this year) alkalinity).

These summaries are great resources to see what the water quality is like throughout the year and to see how each reservoir compares. For example, it was the second year in a row for Barr Lake to meet the pH standard, however, Milton's 85<sup>th</sup> percentile pH was over 9.0 for 2014.

Check them out at <http://www.barr-milton.org/regulations>.

#### **Important Websites:**

- BMW Association <http://www.barr-milton.org/>
- Barr Lake State Park <http://www.cp.wv.state.co.us/placestogo/parks/BarrLake>
- Rocky Mountain Arsenal National Wildlife Refuge [www.fws.gov/refuge/rocky\\_mountain\\_arsenal/](http://www.fws.gov/refuge/rocky_mountain_arsenal/)
- Weather [www.crh.noaa.gov/bou/](http://www.crh.noaa.gov/bou/)



Welcome to the quarterly newsletter of the Barr Lake and Milton Reservoir Watershed (BMW) Association assembled by the BMW Information and Education Committee. The mission of the Committee is to reach out to all people in the watershed and provide water quality information important to the health of Barr Lake and Milton Reservoir.

#### **Mark your calendar for these upcoming events in the watershed**

- Shoreline Clean up at Barr September 26th
- BMW Technical Committee meeting (4<sup>th</sup> Thursday of every other month)
- BMW I/E Committee meeting March 3<sup>rd</sup> (first Tuesday of every other month)
- S. Platte River Clean Up September 26th
- Begin construction of new nature center at Barr Lake State Park Fall 2015



#### **Pick up Trash - It Adds UP**

Besides the impressive amount of rain that the watershed received this spring, the amount of floating trash that came with it was even more surprising. With 2.5 million people in the watershed, that is a lot of sources of small pieces of trash. A single plastic water bottle, a cigarette butt, tennis ball, straw, or Styrofoam cup does not seem significant. But when added up, especially during above normal rainy seasons, the trash rapidly collects in our waterways. The storm water system does a great job in sending all those small pieces of trash to the S. Platte River and then ultimately to Barr Lake and Milton Reservoir. Do your part and pick up one piece of trash a day; it adds up.



#### **Guess this Location in the Watershed**

(Answer: Coors Field in downtown Denver. This is a great view of the urban setting that dominates the upper section of the BMW. Even the greenest area downtown is designed to shed an enormous amount of storm water to keep the field playable. Did you know that Coors Field has an MS4 permit? The stadium was designed and constructed under the direction of a statutory Special District and is therefore subject to Phase II rules. Coors Field even has a Storm Water Management Plan that addresses all of the runoff from the site. The field is located only a few blocks from the S. Platte River.)

