

## **IMPLEMENTING THE 60% SOLUTION TO STOP FISH KILLS—One page article #4**

The second one-page article titled FISH KILL DATA GRAPH showed that having the Big Eau Pleine (BEP) reservoir at least 60% full at the start of winter, December 1, is key to preventing fish kills. This article is an example of how that can be accomplished. The recent year 2008 was chosen to be analyzed. The reservoir was actually just 22% full on Dec 1--its lowest Dec 1 level in over 40 years. Due to severe drought, 2008 was one of the toughest years to have been able to keep the reservoir 60% full on Dec 1. This article shows how, with changes in water management, it could have been done in 2008. Thus it can probably be done any year!

The black beaded line on Fig 1 is the BEP reservoir level during 2008 from Jan. 1 through Dec. 31, using the scale on the right side. Note that from late June through October the reservoir level dropped steadily until it was only 22% full on Dec. 1 at the start of winter.

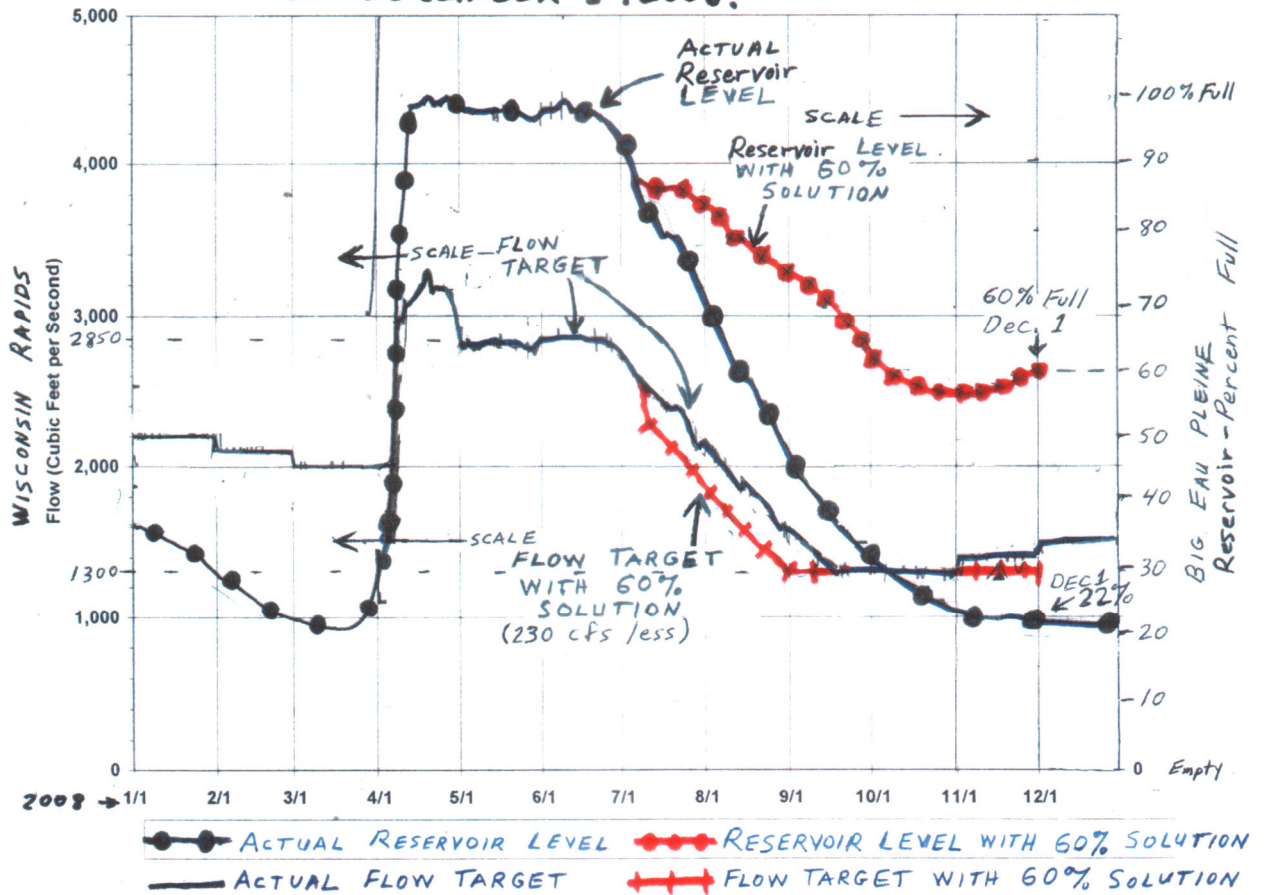
WVIC releases water from the BEP reservoir as needed to control the water flow in the Wisconsin River to a flow target at Wisconsin Rapids that is set by their computer model. The solid black line shows this flow target during 2008, using the scale on the left side. Note that the river flow target gradually dropped from 2850 cfs in late June (the sweet spot to maximize hydropower generation) to 1300 cfs in mid-September (the DNR required minimum river flow).

The red lines show how things could be done differently to have the reservoir at 60% full at the start of winter. This is the 60% Solution! The red dashed line shows the flow target lowered by 230 cfs (about a 15% decrease) for 11 weeks from July through September, and by 100 cfs during November. Less Wisconsin River flow at Wisconsin Rapids allows less water to be taken from the BEP reservoir. The red beaded line shows the effect this lower flow rate out of the BEP reservoir and on down the river would have had on the BEP reservoir level. The reservoir level would go down more gradually from July through October, then go back up slightly in November, filling up to 60% full by December 1.

**KEY POINTS:** If water management changes could allow the BEP reservoir to be 60% full Dec. 1 in the extremely dry year of 2008, it can probably be done any year. There is enough water available. The river flow always stays above the DNR required minimum of 1300 cfs. There is actually more protection for the minimum river flow because there is more water in the reservoir. There is no loss of hydropower generation as the water not used in the summer is not lost; it is used during the winter. There is no change in the Wisconsin River flow or reservoir levels to the north of the BEP. All the reservoirs on the Wisconsin River stay full as they normally do. Changes are: The flow out of the BEP reservoir and on down the river through Wisconsin Rapids would be 230 cfs less during 11 weeks in the summer; the level of the BEP reservoir would drop more gradually and be 60% full at the start of winter; and the fish kill in the spring of 2009 probably would not have happened. There is enough water during an extreme drought to allow 60% level in the reservoir on Dec. 1 for the fish to live, but it must be managed differently.

You can help! Ask WVIC to step up as a good environmentally concerned neighbor and improve their operating model to "Provide Enough Water for the Fish to Live!" Send a message to your legislators also. Feel free to pass this and all our articles on to others. They are on our website.

**FIGURE 1. HOW THE "60% SOLUTION" COULD HAVE PROVIDED 60%+ BIG EAU PLEINE RESERVOIR VOLUME ON DECEMBER 1, 2008.**



The Big Eau Pleine Citizens Organization (BEPCO) Board of Directors.  
 More information at [www.bigeaupleine.org](http://www.bigeaupleine.org) including legislative contacts