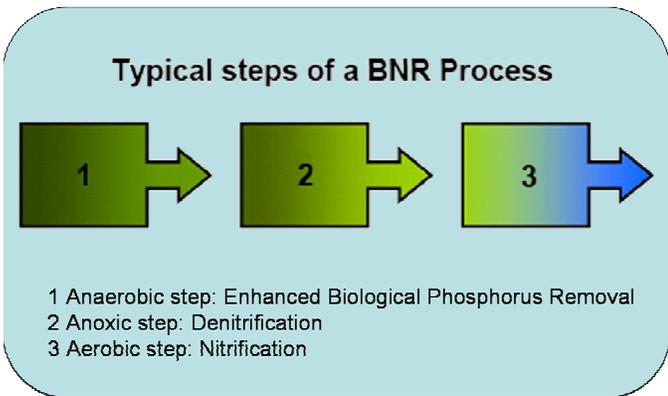
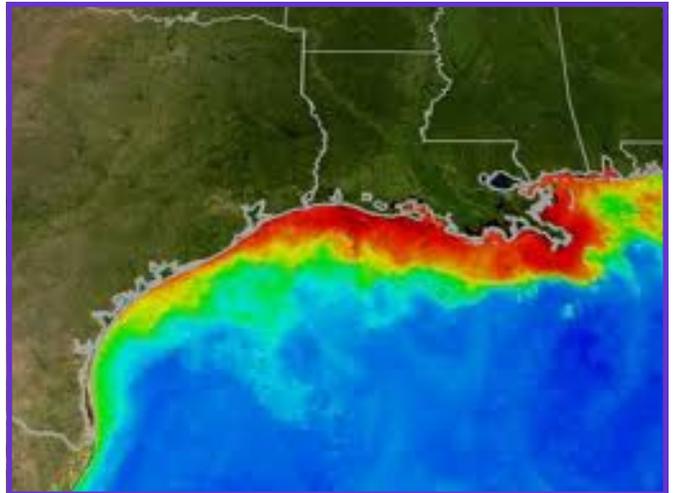




<b>Workshop #</b>	WW120
<b>Workshop Name</b>	Biological Nutrient Removal—BNR
<b>Summary</b>	The workshop discusses topics such as: what are “nutrients”, and why remove them; calculation of nitrogen loadings and nitrogen balance; what affects BNR; how to adjust and operate plants for maximum BNR.
<b>KDHE/ABC Credits/Points</b>	10 hours/0.25 points
<b>Target Audience</b>	This is for advanced operators. Anyone will benefit, but some topics may be too advanced for a person new to the field. Other workshops that give a more introductory view of the topic: <i>Secondary Treatment-A Review of the Activated Sludge Process</i> .

### Workshop Description

EPA and KDHE are decreasing the limits of the amount of nutrients—primarily Nitrogen and Phosphorous—that can be released into the environment. The regulations are becoming increasingly more stringent, so the operator needs to be more knowledgeable on the techniques used to reduce nutrients in their final effluent.



The workshop includes such topics as why reduce nutrients in the first place; what is BNR, and how does it work; calculating

*(Continued on page 2)*



(Continued from page 1)

nitrogen balance; determining the most effective strategies for BNR; what affects the BNR process; and more. This is an advanced workshop, and is targeted for the operator or manager of a BNR facility; or for those who are considering one. If you want a more introductory view of the topic, check out the workshop entitled: *Secondary Treatment-A Review of the Activated Sludge Process*.

The workshop participants will take a facility tour— **please dress appropriately for the weather and for walking outdoors around a wastewater treatment facility.**

Be sure to bring a pencil/pen, highlighters and a calculator, as we will be performing calculations.

#### **How to register**

1. Follow the link below to go to the Workshop page on the website, or use any app that can read QR codes and scan the QR code below.
  - Be sure to read all information—especially the information in red—before proceeding.
2. Click on the link of the appropriate Workshop Title. This takes you to the "At A Glance" page for your chosen workshop.
3. Next, double-check the information (like the workshop title, date and location of the workshop) to be sure you have chosen the correct one.
4. Then click on the appropriate link to register and pay

#### **Links:**

<http://wwwater.org/workshops.html>



WWWATER Workshops