

# **Georgia-Pacific Palatka Pulp and Paper Operations**

## *Environmental Upgrades*

Project Totals – More than \$250 million

### **State-of-the-Art Improvements** (1998 - 2007)

#### **Upgrades:**

- Dregs Press
- Oxygen Delignification
- New, fully enclosed, Brownstock Washers (BSW)
- New, 100 percent, Elemental Chlorine-Free (ECF) bleach plant
- Numerous other plant process modifications and upgrades

#### **Associated Effluent Water Improvements:**

- 40 percent reduction in process water volume
- 75 percent reduction in phosphorous released
- 59 percent reduction in nitrogen released
- 66 percent reduction in water color
- 32 percent reduction in conductivity
- 80 percent reduction in chlorinated organic compounds

### **Post-Optimization Initiatives** (2008-2009)

#### **Upgrades:**

- Low chloride caustic usage
- Brownstock washers operating upgrades and software
- Oxygen Delignification upgrades
- Improved Best Management Practices (BMP's) for spills control

#### **Associated Additional Effluent Water Improvements:**

- 25 percent reduction in conductivity
- 14 percent reduction in color
- 30 percent reduction in chlorinated organic compounds
- 20 percent reduction in BOD

### **Planned Environmental Investments** (2010 – 2012)

#### **Upgrades:**

- Primary Clarifier Solids Press
- Dregs Press upgrades
- New and improved of treated effluent entry point into the St. Johns River
- Proprietary raw water treatment plant modifications
- Optimization of secondary treatment operations (oxidation ponds)

#### **Anticipated Effluent Water Improvements Over Timeframe:**

- 20 percent reduction in conductivity
- 30 percent reduction in color
- 100 percent compliance with effluent limits needed to assure that full water quality standards are consistently met in the St. Johns River