

North Florida Water Challenges, A Private Landowner's Perspective - Discussion Outline

- Who is Rayonier?
- What do forests currently do for water?
- How can forests impact water quality?
- How can forests impact water quantity?
- What COULD the future hold?

North Florida Water Challenges, A Private Landowner's Perspective – Who is Rayonier?

- Rayonier is a publicly traded forest products company (stock ticker is RYN)
- Rayonier owns/manages 2.6 million acres in the US and New Zealand
- We are the third largest timber REIT (Real Estate Investment Trust) in the US
- US land is located in ten states: FL, GA, AL, MS, LA, TX, AR, OK, TN and WA (~419K acres in FL)
- Rayonier recently (June 28th) spun off a new publicly traded company, Rayonier Advanced Materials (RYAM) which contains two cellulose specialty mills (in FL & GA)

North Florida Water Challenges, A Private Landowner's Perspective – What Forests Currently Do for Water

- In addition to providing wildlife habitat and cleaning our air by replacing Carbon Dioxide with Oxygen (one tree can produce about 260 pounds of O₂ per year), forests clean our water...
- Forest vegetation acts as a sediment trap to prevent sediment from reaching water bodies
- Forests also metabolize nutrients (nitrogen and phosphorus) before it can reach waterways; many cities use forests to treat wastewater effluent
- Forested wetlands provide natural filtration for surface water and surface water storage capacity
- Forested uplands can provide recharge to surficial aquifers
- Storm attenuation from forests can lessen the impact of hurricane related storm surges and flooding

North Florida Water Challenges, A Private Landowner's Perspective – How Forests Impact Water Quality

- Landowners use water quality **Best Management Practices** (BMPs) to prevent water quality issues (sediment, nutrients, etc) by preserving **Streamside Management Zones** (SMZs) along water courses
- The overall BMP compliance rate in FL for the 2013 audit is **98.9%**
- Virtually all loggers are certified and trained to follow BMPs
- Currently 5.1 million acres in FL have enrolled in a Notice Of Intent (NOI) program (to follow water quality BMPs)
- Landowners that manage certified forests (SFI, FSC, ATFS, etc.) **OR** send wood to certified mills are required to follow water quality BMPs and protect aquatic habitat

SFI = Sustainable Forestry Initiative, FSC = Forest Stewardship Council; ATFS = American Tree Farm System

North Florida Water Challenges, A Private Landowner's Perspective – How Forests Impact Water Quantity

- Forests use groundwater through evapo-transpiration (ET)
- By managing forest health, vigor and density, you can “manage” the amount of groundwater a forest “uses”
- Excess rainwater, not used by the forest, can either run off into surface water bodies or recharge aquifers
- Runoff can be a good thing (where a waterbody needs more flow) or not (in the case of a hurricane where you want the forest to use all the water it can)

North Florida Water Challenges, A Private Landowner's Perspective – What COULD the Future Hold?

- Working forests should be kept working through continued strong markets for forest products (“*Forests follow markets*”)
- Strategically located forests could be kept in perpetuity via conservation easements or incentives (ecosystem services payments)
- Forest densities could be reduced, with compensation paid by utilities, etc, to increase recharge capacity
- Forestland and freshwater grasslands could be used as surface water reservoirs, with landowner compensation
- Historic surface drainage could be “re-plumbed” to help increase aquifer recharge

Other “North Florida Water Challenges”:



62# Cobia



Redfish #33
(...has a good story)

North Florida Water Challenges, A Private Landowner's Perspective

Questions & Discussion



Water is good...
be happy!