

## Matt Gilligan: Marine expert addresses Palmetto Pipeline, offshore drilling

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By MATT GILLIGAN

Ensuring that decisions regarding fossil energy pipelines and offshore fossil energy exploration in Georgia are wise ones will require facts, analysis and logic as well as personal commitments to doing the right thing.

Let's do some math regarding human and environmental risks of petroleum product transport. If the risk analysis offered by James Conca in his 2014 article in Forbes "Pick Your Poison For Crude — Pipeline, Rail, Truck Or Boat" can be applied to refined products such as gasoline and aviation fuel, then it offers facts to consider here.

The (Congressional Research Service) data that were used indicate that truck is worse than train is worse than pipeline is worse than boat in terms of death and property destruction.

In terms of harm to environmental (dominated by impact to aquatic habitat), it's boat is worse than pipeline is worse than truck is worse than rail. If I assign a numerical ranking from 4 (worst) to 1 (least) for these four transport types and calculate the average risk, it becomes truck (3) is worse than pipeline and boat (both 2.5) is worse than rail (2).

That's not a particularly strong argument for or against a new pipeline option for refined petroleum products in the Southeast.

The pace of port growth and the Savannah harbor deepening project in particular, would suggest sufficient existing future capacity for both energy import and export. Boat and rail transport of petroleum products are not without risks, but risks in one region are not always the same as risks in others.

Oil spills along the rocky coastlines of Alaska do not have the same impacts as those in Coastal Georgia. There were dramatic and long-lasting effects on birds, mammals, and marine life due to temperature and substrate-dependent decreased volatility and bioavailability for bacterial decomposition at the Exxon Valdez spill (31.7 million gallons in 1989) site in Prince William Sound, Alaska.

The impacts seen during and after the spill of 500,000 gallons of crude oil into the Savannah River by the Amazon Venture in 1986 were significantly less and not just because of the volume difference. Our warmer temperatures and coastal salt marsh grasses came to the rescue by adsorbing (surface trapping) it and making it more available for evaporation and biological decomposition than if the heavier fractions had all sunk and been incorporated into the sediment or formed tar balls that float onto beaches and shorelines after the volatile ones had evaporated.

While damaging one year of stem and leaf growth, the adsorbed oil did not kill the rhizomes (root systems) from which the stems and leaves of our dominant salt marsh grass (*Spartina*) grow back every year. Damage to wildlife, fisheries and habitat was minimal.

The construction and maintenance of large electric power lines permanently scar the landscape. Less so pipelines, because most are buried underground, but pipeline construction and operation have risks both human and environmental.

Most of the Georgia coast remains natural and unconstrained. Through voice and legislation, the people have spoken and want it to be preserved and protected. If a coastal pipeline is installed, what will happen when the erosion of a meandering river begins exposing or threatening the pipeline? Will the shoreline be armored and river constrained or will the pipeline need to be re-routed or re-buried?

Adding another layer of hard structure to our coastal and water-dominated topography seems unnecessary and, more simply, does not feel right. Whether it makes sense in some personal (gas price at the pump), regional or national economic and infrastructural sense can be debated until the cowfish come home.

I would suggest that we should go with our gut on this one. Our coastal heritage and responsibility for the stewardship of coastal natural resources, in the absence of a compelling need, otherwise puts this one over the top for saying “no” in my view.

The environmental impacts of offshore fossil energy exploration and harvest is more abstract because the environments and ecosystems of the outer continental shelf are distant, deep and, frankly, more poorly known and understood than those closer to home.

If there are outer continental shelf leases sold, explorations made and wells drilled, though rare, spills can happen. Big ones sometimes. The Deepwater Horizon oil spill in the Gulf of Mexico in 2010 is considered the largest accidental marine oil spill in the history of the industry (210 million gallons). Like Exxon Valdez spill, offshore and coastal ecosystems will take decades, maybe longer, to fully recover.

A large swath of outer continental shelf of the East Coast is on the table. Some could be taken off before any lease sales are made. It is possible that sections with higher energy reserve potential adjacent to states more opposed to offshore exploration and drilling may be removed before sections with less reserve potential and less opposition.

Let's hope that our Georgia community listens carefully, asks lots of questions and demands impartial studies.

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