

Bald Eagles...our “canary in the coal mine”

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Our national symbol, the Bald Eagle, is highly prized by the public and a charismatic species that daily graces the skies of St. George Island. Research across the U.S. affirms the importance of the Bald Eagle as a valuable sentinel indicator species for changes in our environment. Why?

The Bald Eagle has numerous unique characteristics that can provide information for tracking environmental quality and ecosystem changes. Established Bald Eagle monitoring programs exist that provide long-term and extensive data. The Bald Eagle has a wide presence from coast to coast across the nation and North American continent. This species is sensitive to environmental pollution and has known levels for sustaining population health and exhibiting toxicity to some pollutants. It is a top food chain predator largely tied to aquatic habitats where pollution can often concentrate. The Bald Eagle shares similar habitats and dietary requirements with other species. Scientific interest is strong for using the Bald Eagle as a bioindicator species.

Offering the opportunity to identify trends or shifts in exposure to contaminants is a valuable tool not only for the health of Bald Eagles, but for appraising the long-term health of the ecosystems in which they reside. Being a top predator, the health of adult eagles and their chick productivity can be a sensitive indicator of trends and levels of exposure to environmental contaminants in their aquatic habitats.

While known contaminants (PCBs, OCs, lead, mercury) are still monitored in Bald Eagles by scientists, the focus now is now broadening to emerging contaminants. As the number of

contaminants released into our environment continues to increase, the need for a cost-efficient monitoring system to identify exposure trends and potential reproductive impacts increases. Current studies, such as one that focuses on Bald Eagles along the Great Lakes, show that monitoring Bald Eagle health and productivity nationwide is a cost effective method.

Bald Eagles that nest on St. George Island are apex predators of St. George Sound and Apalachicola Bay fisheries. With our ever-changing environment and as stewards of our natural resources, monitoring what is occurring in our various ecosystems is important in order to avoid the mistakes of the past (DDT, PCBs). We now know it is better to be proactive and monitor what is occurring in the environment rather than being reactive and have to deal with adverse impacts that can be difficult, timely, and expensive to reverse. So, the reproduction and health of Bald Eagles can be our “canary in the coal mine” as they reflect the health of SGI’s neighboring waters.