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**JACKSONVILLE  
WATERWAYS  
COMMISSION**

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JACKSONVILLE WATERWAYS COMMISSION

March 3, 2005

9:00 a.m

The monthly meeting of the Jacksonville Waterways Commission was called to order on Thursday, March 3, 2005, in the City Council Chamber, by Acting Commission Chair, Council Member Art Graham.

The minutes for the February 10, 2005 meeting were approved.

Dr. Edmund Gerstein made his presentation on Sound Effects on Manatees in the St. Johns River, a compilation of the study on underwater noise in the water created with dredging and how this noise affects manatees' ability to detect boats. On the recommendation of the Waterways Commission, the City contracted Dr. Gerstein to conduct the study. There had been manatee fatalities in the river where dredging projects were prevalent and Dr. Gerstein was asked to study and determine whether or not manatees could hear approaching vessels in the waterways. Dr. Gerstein acknowledged the assistance of Jacksonville University's Dr. Jerry Pinto and Research Assistant Seth Barr in the study and the use of JU's boat. The study focused on areas of the river that included the waters around the Dames Point, the Hart Bridge, Blount Island the Jacksonville Port Authority terminal and the Talleyrand terminal. A distinction had to be made between the noise emanating from a dredging operation and the noise from a ship. Dr. Gerstein indicated at the outset that the presentation would be hindered because our computer set-up in the Chamber did not have the necessary card to enable Dr. Gerstein to make audio a part of his presentation. One of the earlier premises for the increased manatee fatalities was that the fatalities might be

associated with the hydraulic dredging that was being done to deepen the channels in the St. Johns River waterways a couple of years ago. The noise profile of a hydraulic dredge is much louder than the noise emanating from a hopper dredge. Though Dr. Gerstein was unable to look into hydraulic dredging operations, his team was able to gauge, record and analyze the hopper dredge project that was recently undertaken to deepen the channel near Talleyrand and Blount Island. Dr. Gerstein proceeded to discuss the techniques and equipment used in the acoustic tests that measured and monitored sound propagation patterns in the water, enabling the creation of sound and speed profiles. In looking at hopper dredge noise, it was found that the noise of the hopper dredge ship was much louder than the actual dredge noise. The actual noise of the hopper dredge is not that loud. Most of the noise comes from the dredge ship, particularly the cavitation of the ship's propeller. Another source of noise that is exceedingly loud is the submerged pumping from hydraulic dredging; the ambient noise travels quite a bit in every direction. Dr. Gerstein stated that manatees have a difficult time hearing a fast moving vessel and that dredging noise masks the noise of passing boats. On the other hand, cavitation noise of boats masks other noise in the water. Rain masks the noise of boats. Even without the ambient level of noise emanating from dredging, there will be problems with manatees' ability to hear boats. To minimize manatee fatalities or injuries in areas where dredging projects are underway, Dr. Gerstein recommended the elevation of dredging pipes above water wherever possible; that propeller efficiency be improved to reduce cavitation noise, particularly in hopper dredging; and putting directional alarms for manatees on boats. In answer to a question as to what would be the optimum time of the year to dredge to minimize manatee fatalities, Dr. Gerstein suggested that in terms of acoustics, the winter would *not* be a good time for dredging. If you are operating a small craft in the vicinity of a dredge project, it is better to *not* to slow down or reduce speed because the water is turbid. Slowing down boats in clear water environments makes sense because the boater has an opportunity to avoid manatees and the manatees can pretty much see boats. In many environments, however, the boater has no idea that manatees are around and because of the water's turbidity, the manatee can neither hear nor see watercraft. To Dr. Gerstein, we live in a visual world; the manatee lives in an acoustical world. When boats slow down, the possibilities of the manatee hearing the boat are lessened because of propagation factors. Manatees can detect fast moving crafts. Dr. Gerstein said that he was struck by the considerable amount of commercial traffic that he encountered in Jacksonville's waterways and suggested that most of the manatee fatalities in the region were probably linked to commercial vessels. Dr. Gerstein expects to have his report completed in three weeks at which time he will be providing the Commissioners with written copies and a copy of the PowerPoint presented at the meeting.

In the monthly Manatee Update, Dr. Pinto reported that no manatees had been seen in the most recent aerial flight and that no watercraft-linked manatee fatalities had been reported. There had been one cold water related death in the St. Johns River that occurred on February 17<sup>th</sup>.

Alan Mosley, Director, Department of Public Works, provided the Commission with an update on the feasibility of the Fuller Warren Bridge pier. Mr. Mosely

reviewed the previously published department's report (November, 2000) that recommended reasons for the destruction of the portion of the old Fuller Warren Bridge that has been proposed for a pier. The report's assessment concluded that the bridge should *not* be used as a pier. Presently, the City is re-thinking the issue. New consultants (CH2Hill) have been asked to revisit the issue. That study is expected to be completed by the end of April. The Acting Chair, C/M Graham, inquired as to whether, in light of the JSO patrol boat accident at the old bridge pier during Super Bowl week, anything had been done to alleviate the problem (no lighting) that caused the boat accident. Director Moseley said that he would find out.

In the public hearing that followed the Public Works Department's update, several speakers aired their views before the Commission. Mike Hollingsworth of Riverside, a former River Keeper, presently with the Army Corps of Engineers (speaking for himself, as a citizen) thought that the issue of the potential use of the bridge should be looked at from all angles, that there were many sides to the issue, citing several communities that had successfully converted surface bridges into public fishing piers; John Nooney spoke in favor of the bridge being used as a public pier; Neil Armingden, the current River Keeper felt that all options for use of the bridge should be weighed, urged the Commission, the Mayor's Office and the City Council work with FDOT and recommended that FDOT, already in the permitting phase for the old bridge's demolition, take into consideration that the City is engaged in an ongoing study on the feasibility of the bridge as a pier and that FDOT might want to wait until the study by the Commission is completed before moving forward with the demolition plans; the Rev. Edward Fields, Jr. decried the decreasing number of public piers for fishing in the County. Andy Sikes, representing Baptist Health Center (Safety Director) indicated that Baptist opposes the public use of the bridge as a pier for largely traffic concerns. Jim Knight, representing the Florida Department of Transportation indicated that FDOT is committed to working to whatever extends that the department could with the City in delaying the demolition work. FDOT is expected to reach an accord with a contractor during the month of April so that blasting/demolition can be undertaken during the winter months when there are no manatees in the vicinity.

On Pending Legislation, the Commission reconsidered and voted to recommend re-referral of a substitute for **Resolution 2005-207**. The substitute has language that specifically says that the Waterways Commission would undertake the study of the viability of a downtown pedestrian promenade or pier. **Ordinance 2003-1132**, changing the manatee protection motorboat speed zones from year-round to seasonal, was deferred. **Ordinance 2005-60**, appropriating \$750,000 in FDOT funds for water taxi stations was deferred. **Resolution 2005-276**, approving a conservation easement to Florida DEP for .083 acres to mitigate for the Goodby's Creek Boat Ramp construction was recommended for approval. **Resolution 2005-277**, approving a conservation easement to Florida DEP for 39.93 acres to mitigate for the construction of Goodby Creek's Boat Ramp was recommended for approval.

Commissioner Grey announced a meeting of the BIG Grant Subcommittee

that he heads (Tuesday, March 8, 2005, 9:00 a.m.)

John J. Jackson  
Council Research Division