



New study links sewage and reef

*By Pamala J. Suarez Keynoter Contributor
It's scheduled to be unveiled this Tuesday*

A study funded by the U.S. Environmental Protection Agency has found evidence of human sewage contamination on a reef more than six miles off the Keys.

Complete results of the study, "Human Fecal Indicator Bacteria and Pathogenic Viruses in Offshore Reefs and Human Recreational Risk in Nearshore Waters of the Florida Keys," are expected to be revealed at Tuesday's meeting of the Florida Keys National Marine Sanctuary Water Quality Protection Program steering committee.

The meeting is scheduled to begin at 8 a.m. Tuesday at Key Colony Beach City Hall.

Bill Kruczynski, program scientist for the EPA's water-quality protection program, will give the study report. He declined comment about the study's findings, saying he would issue no specific information about what the researchers discovered until Tuesday's meeting because the study, conducted by researchers from the University of Georgia, U.S. Geological Survey and Michigan State University, is undergoing peer review, meaning experts in the field are examining it to check its validity. The study was submitted to the EPA in December.

Until that review is complete, or until Tuesday's meeting - whichever comes first - Kruczynski said he would have no comment except to say "the conclusion of the report supports improving wastewater and stormwater treatment in Monroe County."

Kruczynski said the study's principal investigators have been told not to issue statements to the media pending the outcome of the peer review.

However, a copy of the study obtained by the Keynoter and Keys Sunday paints a grim picture of the quality of ocean water and reefs off the island chain, and cites in-ground untreated waste disposal as the likely culprit.

The document states the goals of the project were to investigate the levels of human waste contamination along a nearshore-to-offshore portion of the Upper Keys using human enteric (intestinal) viruses as the indicator of sewage; and to determine health risks associated with contamination.

Between July 2003 and September 2005, researchers took samples from coral mucus, the water column and groundwater at five testing stations off Key Largo.

Coliform found

Researchers detected evidence of fecal coliform, enterococci and *C. perfringens* - which are found in human and animal waste - at several testing stations off Key Largo. Although the levels were well below those indicating a hazard to recreational swimmers and divers, fecal coliform bacteria were detected on coral growing offshore, and evidence of human enteric viruses were found more than six miles from land.

During the course of the study, researchers also sampled surface water from Port Largo Canal and the canal at West Shore Drive on Big Pine Key.

Coliform bacteria were detected in both areas, and it was found that movement of waterborne contaminants into the bay and ocean waters were dictated by tidal ebb and flow.

Finally, samples were taken from Higgs Beach in Key West and the beach at Bahia Honda State Park. While fecal coliform levels were below state standards, higher levels of enterococci at Higgs corresponded with beach advisories issued twice during the study period.

If the concentration is high enough, viral and/or bacterial contaminants can pose a health risk to people exposed to them by swimming or diving.

They can also kill coral, said DeeVon Quirolo, executive director of Reef Relief in Key West.

"Coral are highly sensitive to any pollution at all, and we've already witnessed the decline of the coral due to contamination," Quirolo said. "The marine ecosystem cannot absorb this level of pollution. We have got to get systems installed to adequately treat our sewage and deal with stormwater runoff."

"This latest study just underlines the urgency of swift action on the part of our municipalities and the county."

The Keys are under a state mandate to replace septic tanks and cesspits with modern sewer systems by 2010 or face possible sanctions. Many communities throughout the area are scrambling for money to complete their sewage treatment facilities.

'Same song and dance'

Islamorada flats guide Mike Collins, a governing board member of the South Florida Water Management District, said he has read the study and, in his opinion, "it's the same old song and dance."

"This is ridiculous and inexcusable," Collins said. "We've had evidence of contamination for years and we all know it's due to a lack of proper wastewater treatment."

He said the water district stopped allocating money two years ago for studies like the one to be released Tuesday because "nothing ever comes

out of those studies.”

Collins also said he does not understand why the EPA has been holding the results of the current study for seven months without releasing its findings to the public.

“The federal government's behavior in this is despicable,” Collins said. “It's wrong, and people should be screaming from the rooftops.”

Citizens will have a chance to hear the full report of the study and comment on it and other topics of concern at Tuesday's meeting. A public comment session is scheduled to begin at 3:15 p.m.; Kruczyski's presentation of it is set for 11 a.m.

Also on the meeting agenda are annual reports on projects monitoring seagrass, coral and water quality, as well as a report on the status of the Monroe County wastewater master plan and an update on the status of money for wastewater and stormwater upgrades.