The Cap Times
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Health Department's Janel Heinrich: Article on fireworks exaggerates study findings

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Dear Editor: The following comments are in response to "Eco group says study shows Rhythm & Booms hurts Warner Park wetlands" by Pat Schneider in the Capital Times on Feb. 20. The recommendation in the article that suggests moving toward greener practices for this annual event is welcomed. Using no or low-level perchlorate pyrotechnics and improved debris cleanup would help reduce the concern of the surrounding neighborhoods and promote a more environmentally friendly strategy for Rhythm & Booms. However, despite these suggested improvements, the article does contain numerous inaccuracies and based its analysis and conclusions more on the opinions of individuals than on a careful examination of the data.

There are several problems with this article that need clarification and correction. First, the information used to develop this article was derived from draft reports that were still in the review process. Both reports that Schneider links to in her article were clearly labeled as "draft" and, in fact, the report written by Dr. Jim Bennett was labeled as "draft — do not quote or cite."

Second, the article exaggerates the findings of the study. It correctly states that a temporary spike in the levels of perchlorate was detected in the surface waters of Warner Park lagoon but what it does not mention is that these levels rapidly decrease and return to near background levels within 30 days due to microbial degradation and dilution. The rapid decrease in perchlorate concentrations mirrored other previously published studies and was expected. The article also implies that there was significant and persistent trace metal contamination in Warner Park´s wetland. The report, however, states that "with the exception of chloride, trace metal concentrations in lagoon surface waters showed no discernible change after the event."

The third issue with the article is the comment about perchlorate levels identified in plants to be "at critical levels" and apparently links this finding to the annual fireworks display. However, data from the report written by Jim Bennett do not support that statement. A total of 17 plant species were listed in the report to assess concentration of perchlorate in plants. The article fails to mention that of the plants collected at the three sites evaluated in this investigation, only five plant species had increased levels of perchlorate following Rhythm & Booms compared to levels reported prior to the event. These noted increases were inconsistent between collection sites. In all other species of plants that were evaluated, perchlorate was either not detected before or after the fireworks display or levels of perchlorate was actually shown to decrease. In the soil, perchlorate levels were not observed to increase following the event. Therefore, the data from the analysis of plants and soil do not support the implied conclusion of the article that the Rhythm & Booms event is harmful to the environment and may impact public health.

In addition, the article also seemingly implies that the "critical levels" of trace metals in the plants are also derived from fireworks alone. While some increases in trace metal were identified following Rhythm & Booms, efforts to determine the source of trace metal

contamination are confounded by storm water runoff and car exhaust from vehicle idling in traffic prior to and following the fireworks display. Both of these are additional sources of the type of trace metal contamination evaluated in this investigation but were not included as part of the research design.

Lastly, the suggestion that there was an impact of fireworks on the "food chain, fish, birds, and public health" is speculation and opinion. The evaluation of these proposed outcomes was beyond the scope of these studies. Additional research would be necessary to determine the existence of any impact on the ecosystems and health of the community derived from perchlorate and trace metals at the concentrations identified in this investigation.

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