VILLAGE OF KEY BISCAYNE

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Re: United States of America, State of Florida Department of Environmental Protection, and State of Florida v. Miami-Dade County, Florida; Civil Action No. 1:12-cv-24400-FAM (DOJ Ref: No. 90-5-1-1-4022/1)

Consent Decree regarding Miami-Dade County Wastewater Treatment Plants and alleged violations of the federal Clean Water Act, NPDES Permit conditions, and the Florida Air and Water Pollution Control Act – Public Comments

Ladies and Gentlemen:

The Village Council of the Village of Key Biscayne, Florida, provides the following public comments on the Consent Decree referenced above. We generally support the goals expressed in the Consent Decree, but we are concerned that the document in its present form does not adequately address the risk of storm surge and flooding at the Center District Wastewater Treatment Plant on Virginia Key (Central District WWTP). We also question (a) reliance on unspecific engineering and capital plans for the Central District WWTP, particularly in light of the County's recently submitted report for compliance with Florida's ocean outfall legislation; (b) whether the sequencing of various implementation plans are appropriate and adequate overall to prevent or control sanitary sewer overflows, effluent limit violations, and to ensure compliance with applicable laws; and (c) whether further substantial investment in and reliance on the Central District WWTP is prudent and in the public interest, in view of beach erosion, jeopardy to the shoreline and increasing risk of inundation.

The County provides our water and sanitary sewer services. We are served by the Central District WWTP, located on Virginia Key, a sand-barrier island within Biscayne Bay, bounded by the Atlantic Ocean, the City of Miami, the Port of Miami, Fisher Island, the City of Miami Beach, and the Village of Key Biscayne immediately adjacent to the south. Inasmuch as Key Biscayne is directly adjacent to Virginia Key, interconnected by bay and ocean, we discern a

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compelling interest to ensure that plans for the Virginia Key facility are sound and effective, with due consideration given to foreseeable risks and special circumstances.

We noted in communications with the County last February that risk of storm surge at the Central District WWTP – always a concern – is projected to worsen because of sea level rise. The County acknowledged this and affirmed its intent to incorporate effective storm surge and flood mitigation features in its planning. However, the County also pointed out that such design considerations were not featured in the Consent Decree negotiations or drafts, because federal and state regulatory agencies historically had not imposed plant siting or risk mitigation requirements, and because the County deemed such requirements to be outside of the Consent Decree's particular focus on rectifying Clean Water Act violations.

As we view the matter, the purpose of the Consent Decree is indeed to rectify violations, but also to ensure effective management, operations and maintenance, and ongoing legal compliance. By not addressing Virginia Key's beach and shoreline loss, and the consequences of weather effects or storm surge, we are concerned that the Consent Decree ignores a foreseeable risk that can easily affect future legal compliance.

If historically the regulatory agencies have not been concerned with plant siting and flood mitigation, we respectfully suggest that they should be. This is a lesson well-learned from the experience of "Superstorm Sandy" and other weather events, including the damage and interruption in operations Hurricane Andrew caused at the South District WWTP. President Obama emphasized infrastructure planning in his June 25th policy speech on climate change responses at Georgetown University. Consistent with the President's message, the County's Sustainability (Green Print) Plan, and the Regional Climate Change Compact and Regional Climate Action Plan adopted by Miami-Dade, Monroe, Broward and Palm Beach Counties, each address climate-adaptation strategies to protect public infrastructure. These policy statements call for infrastructure planning to take into account sea level rise and include flood mitigation measures.

Bearing in mind this background and the Consent Decree's recitals about historical violations, we note that the Consent Decree and capital plans set forth in Exhibit D do not, but should (we suggest), include more detailed consideration of the risk if not certainty of storm surge and inundation affecting the Central District WWTP. As to sea level rise, we appreciate the difficulty in prognosticating and we are aware of the policy and budgetary considerations behind "adaptive management." However, considering the vulnerability of the Virginia Key location, including the "sluiceway" effect resulting from its lower-lying location between two higher areas, we think the capital plans should include specific facility "hardening", equipment protection and flood mitigation measures.

We think these features should be stated explicitly, even if engineering and construction details are left to-be-determined in a design/build context. The effectiveness of a design/build methodology depends on needed features being included in the design. The Consent Decree

itself, as written, will not provide sufficient guidance on required design features. This will be left to future requests for proposals, which may or may not include the "hardening", protection and mitigation measures that already are conceded as being necessary. Future budget constraints or misjudgments could leave us all wishing that the Consent Decree was more specific about what is required where and by when. It does not require a vivid imagination to perceive the consequences of a mistake.

The proposition that regulatory agencies might responsibly ignore siting vulnerabilities is belied by the Consent Decree exhibit entitled "Checklist for Conducting Evaluations of CMOM". This includes the following question at Section IV. F., page 3-21, relative to collection system operations: "[D]oes the plan take into consideration vulnerable points in the system, severe natural events, failure of critical system components... and a root cause analysis protocol"? The reference to severe natural events in the context of emergency preparedness and response indicates that weather-driven flood risk is not outside the purview of the regulatory agencies and therefore should properly be the subject of the Consent Decree.

In its June 28th ocean outfall legislation report (OOL Report), the County did consider sea level rise projections and storm surge in working through various alternatives for compliance with the state ocean outfall legislation (F.S. Section 403.086[9]). The County concluded that the three treatment plants are vulnerable already to storm surges, and that the existing vulnerability would not be substantially worsened assuming the Regional Climate Action Plan sea level rise projections (2 feet through 2060 and 3 feet through 2078). After noting that storm surge damages mostly electrical and control systems, as opposed to structures and mechanical equipment, the County nevertheless committed in the OOL Report to "harden" the three facilities by various means at an estimated cost of $30 million.

Thus, in the OOL Report, the County acknowledges storm surge risk, recognizes that water damage would affect generators and control systems, and commits to "hardening" measures such as raising equipment and installing water tight enclosures. Yet the Consent Decree, the implementation of which overlaps the time-frames for compliance measures in the OOL Report, requires no explicit "hardening" or mitigation measures at the Virginia Key facility.

We question the disconnect between the Consent Decree and the OOL Report, and the absence of expressed measures in the Consent Decree that the County deems appropriate if not necessary in the OOL Report. We understand that the Consent Decree capital plans do not express the level of detail that, in actual planning, will (or should) be invoked to raise and armor structures and equipment and the like. It nevertheless seems to us that the Consent Decree is deficient in failing to require "hardening" and mitigation measures, even if implementation details are left for later planning.

A specific point in the Consent Decree reinforces this comment. Project No. 2.17 for the Central District, as described in the Consent Decree Capital Plan, pertains to chlorine gas

storage, and describes a "closing system in separate outdoor structures". In describing the Project impact or need, it goes on to say that the "failure of the existing storage system could lead to an unregulated discharge of chlorine gas and exposure ... of the nearby community to chlorine gas". We would reasonably expect that the storage system in question would be designed and sited so as to be protected from a recognized point of vulnerability and the consequences of chlorine gas leak. The Consent Decree does not require this. In the absence of such features, we are concerned that the Consent Decree, by itself, does not adequately ensure Clean Water Act compliance or protection of public health and safety.

Considering the County's plans to comply with the ocean outfall legislation, we also question the adequacy of the Consent Decree inasmuch as it does not address the substrate geology into which injection wells will penetrate, including assurances of geologic separation between the injection realm and the aquifers lying above, or the risk of sludge migration into the marine environment, or pre-injection treatment assuming migration into the aquifers or waterways.

We note that the Consent Decree projects a need for a new western wastewater facility removed from risk of storm events and sea level rise. This certainly seems forward-thinking to reduce if not eliminate reliance on the Virginia Key facility. Yet the Consent Decree contains no specificity about or requirements for a Western District facility. It seems reasonable at least for the Consent Decree to approximate the size and prospective capacity of that facility, and a time-frame for its coming on line. Credible sources project beach and shoreline loss, and higher probabilities if not certainty of inundation at Virginia Key, within a 50 year or so time-horizon. Inasmuch as the County projects (wisely) shifting investment and operations away from the rising water's-edge, we question the adequacy of a Consent Decree that does not speak to plans or a timeline for doing so.

We also note that various cure and compliance measures are sequenced over time. There are risks in the meantime (force main rupture, for example). The Consent Decree refers to numerous overflow violations, including from ruptured force mains, and instances of effluent limits exceeding standards, and also alleged improper management, operations and maintenance practices. Various Consent Decree measures for management, operation and maintenance are deferred for various periods after the effective date; seemingly arbitrarily, without discussion of risk abatement that is deemed most urgent, and despite the proposition that many implementation plans appear to be at an advanced stage of development.

By way of a few examples, the Appendix A criteria (which appear to be fully articulated in the Appendix itself, thus not requiring further drafting) will be added to the County Code only within 180 days of the effective date. Nine months is allowed for a force main criticality and assessment report; seventeen months for submittal of an operations and maintenance program; nineteen months for a sewage overflow response plan; twenty months to develop a force main operations and maintenance program; and two years for submittal of a force main rehabilitation or replacement program. Also, the Capital Plan improvements in Exhibit D are said to be based

on "previous investigations" and are projected in many instances to be "front-loaded and scheduled for completion within the first five years". But twelve months are allowed for submittal of a financial analysis program.

Considering the duration of some of the violations, and the seemingly advanced state of implementation plans as set forth in the Consent Decree, we question whether the implementation time-line is too elastic to ensure that current needs are addressed and that overall compliance will reliably be achieved.

In sum, we perceive that the Consent Decree leaves too much that is too important for later decisions, with too little guidance on what those decisions will require, and also that it focuses too little on long-term plans for putting investment and reliance on critical infrastructure in a safer place. We question whether this is adequate and in the public interest.

Respectfully,

Franklin H. Caplan, Mayor