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November 3, 2014

M&C 1561-0005

Fred Royal, PE  
Town Engineer  
Town of Pittsboro  
41 Fayetteville Street  
P.O. Box 759  
Pittsboro, NC 27312

RE: Request for Additional Clarification on Chatham Park  
Town of Pittsboro  
Draft 2014 Jordan Lake Allocation Request

Dear Mr. Royal:

On behalf of Preston Development Company, please find the requested information on the Chatham Park development. This information is prepared in response to Mr. Don Rayno's of NCDENR comments regarding clarification of planned wastewater treatment in the Chatham Park development provided to McKim & Creed on October 23, 2014, and our meeting on October 27, 2014. The following text is intended to be included in the Town's revised Draft 2014 Jordan Lake Allocation Request.

Text for Draft 2014 Jordan Lake Allocation Request:

*With respect to the Chatham Park development, there are several opportunities available that are anticipated to be implemented to address the difference between the projected generated wastewater and the Town of Pittsboro's current NPDES flow limit. At this time, these may include:*

- **Utilization of the former Townsend poultry property.** The property is owned by Chatham Park and includes a wastewater treatment plant, treatment lagoon, and non-discharge spray field permit.
- **Utilization of the City of Sanford's wastewater treatment capacity.** Discussions are continuing with the City of Sanford regarding the possible conveyance of raw wastewater to their facility.
- **Reducing wastewater generation through efficient system, homes, and community.** The principles of Smart Homes, Smart Community, and Smart Water are to be fully expressed. For reference, the Briar Chapel community recently received an approved flow reduction application for allocating

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wastewater flows at 56 gpd/bedroom. Chatham Park will be taking water efficiency and smart home technology to the next level, and expects to better this mark – which is not reflected in the wastewater flow projections.

- **Installation of a development-wide reclaimed water distribution system.** This system will attempt to displace all possible non-potable uses with reclaimed water. Every residential, commercial, institutional, and industrial customer will have access and connection to the reclaimed water system. Further, covenants and ordinances will require certain uses and constructed facilities to maximize the use of reclaimed water, such as dual-plumbed structures for initial commercial and future residential toilet flushing. Appropriate open space and common areas - such as greenways, parks, and landscaping - will all be irrigated with reclaimed water. Construction phase demands, such as dust control and heavy early stage grow-in irrigation demands will be met with reclaimed water.
- **Opportunities to utilize reclaimed water for “utility water” (water used for energy production activities and exclusive of other non-potable uses such as irrigation and toilet flushing).** Through either a central energy plant or building scale units, evaporative cooling for chilled water production and air conditioning is very efficient and highly desirable, and consumes a very large amount of water. Chatham Park would intend to satisfy that demand entirely with reclaimed water. For example, on college campuses (which are a microcosm of a small city), “utility water” can compromise 35-45% of total water demand.
- **Water reclamation facilities at Chatham Park are planned to treat to the most stringent Type 2 reclaimed water standards.** This will permit reclaimed water to be available for any current use as well as adaptable to emerging or future uses.
- **Implementation of indirect and direct potable reuse.** Recent legislation allows direct potable reuse. In that the Pittsboro WTP is virtually adjacent to the Chatham Park property, this use could be evaluated and considered in the future.
- **Implementation of environmental applications for reuse, such as wetland augmentation and stream restoration.** Early in the planning stages, Chatham Park has identified environmental areas within the development that may benefit from augmentation with reuse water.

Chatham Park is planned to be a beacon of sustainability and a model of water efficiency. Yet if we consider one widely held definition of sustainability – meeting the needs of the present without compromising the ability of future generations to meet theirs – and given that Chatham Park is very much a multi-generational build-out, one must consider that the water regime in 30-40 years may look radically different from today, and therefore examining or adopting solutions for all of those future needs through a prism of today’s standards and technology is inherently flawed and additional flexibility and consideration must be a factor in the program planning. We believe the program outlined above does just that, providing suitable definition and confidence in nearer term accommodations, reasonable planning for future solutions, and necessary flexibility to

*adapt to inevitable evolution in human behavior, external forces, and available technology.*

Please contact me at 919-233-8091 or [blatino@mckimcreed.com](mailto:blatino@mckimcreed.com) if you have any questions. Your prompt response to this invoice is greatly appreciated.

Sincerely,

McKIM & CREED, Inc.

Ben R. Latino, Jr., P.E.  
Project Manager

Cc: Mr. Tim Smith – Preston Development Company  
Mr. Tim Baldwin – McKim & Creed, Inc.  
Ms. Becky Smith – Hydrostructures