

## FOR IMMEDIATE RELEASE

Columbia, SC – January 29, 2015

### Columbia's Engineering Division Offers Design Stage Review of Projects As Part of Wastewater Capacity Assurance Program

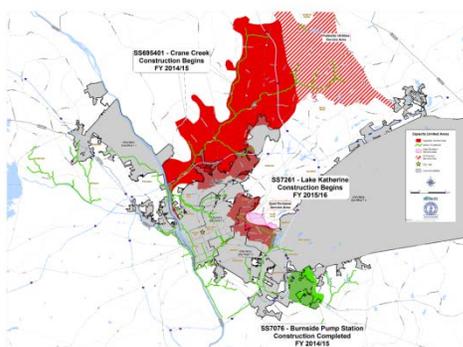
The City of Columbia's Engineering Division is proud to announce the Pre-Capacity Assurance Program Analysis (Pre-CAP Analysis), a new optional planning level review program for proposed developments that would need new wastewater service. Property owners who choose to have their proposed projects analyzed under this program can determine if current sewer service in the area is capable of handling their project before making a significant investment. While the assessment is non-binding for either the City or the developer—meaning if conditions change, final approval may change—the Pre-CAP Analysis can be a useful tool in helping local developers better plan their investments.

The Pre-CAP is part of the City's ongoing effort to implement a comprehensive sewer assessment and rehabilitation program for its wastewater system. It also supports smart growth both for the City and local developers. By being clear with local developers about where the City's system has capacity before they have even purchased a property, developers can protect their investment while the City protects current sewer customers and the environment. The program also allows the City to work with local developers to prevent sanitary sewer overflows (SSOs)—something which benefits everyone.

The Pre-CAP Analysis is an extension of the current wastewater Capacity Assurance Program (CAP). Under the CAP, all new projects that contribute additional flow are required to undergo review. The City may allow minor connections without a detailed capacity analysis. This review follows specific criteria to determine whether the City's collection, transmission, and treatment system has sufficient capacity to accept new connections and increased flows. For more details on this program, see the [Letter to Local Engineers: City of Columbia Capacity Assurance Program](#).

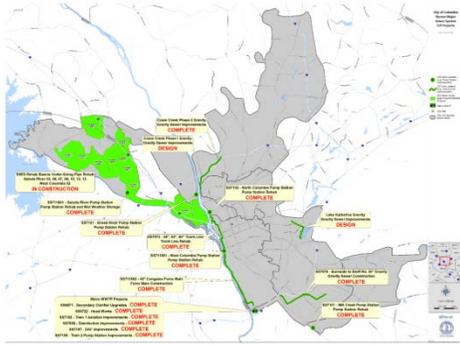
Currently, the City has identified portions of Northeast Columbia known as the Crane Creek Basin and areas around Lake Katherine as being capacity limited (see [Map of Current Capacity Limited Areas](#) below). Projects are planned or underway and should be completed soon in these areas to address capacity limitations.

To date, the City has completed 15 major capital improvement projects that have relieved or prevented capacity limitations across its wastewater service area (see [Map of Capacity Enhancement Work To Date](#) below), with several more in design or underway. The completed projects have contributed to a 70% reduction in the number of sanitary sewer overflows the City has experienced since the 2008/2009 fiscal year.



**Picture Title:** [Map of Current Capacity Limited Areas](#)

**Picture Caption:** The Crane Creek Basin and areas around Lake Katherine (shown in red) currently are sewer capacity limited. Projects are underway in both areas to address these limitations. The Burnside area (shown in green) had capacity limits lifted after a capacity enhancing project was completed in November, 2014.



**Picture Title:** [Map of Capacity Enhancement Work To Date](#)

**Picture Caption:** The City has completed 15 capacity enhancement projects with several more in design or under construction. The completed projects have contributed to a 70% reduction in the number of sanitary sewer overflows since fiscal year 2008/2009.

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Please contact Victoria Kramer with the City of Columbia Department of Utilities and Engineering at (803) 545-3227 or [Info@CleanWater2020.com](mailto:Info@CleanWater2020.com) if you have questions. If you would like to learn more about improvements to the City of Columbia's wastewater treatment plant and wastewater collection system, visit [www.CleanWater2020.com](http://www.CleanWater2020.com). If you would like to learn more about the City of Columbia's Department of Utilities and Engineering, visit [www.columbiasc.net/utilities-engineering](http://www.columbiasc.net/utilities-engineering).

January 29, 2015

Re: City of Columbia  
Capacity Assurance Program

To Whom It May Concern:

As you are aware, the City of Columbia (Columbia) entered into a Consent Decree with the U.S. Department of Justice, the U.S. Environmental Protection Agency (EPA), and the South Carolina Department of Health and Environmental Control (DHEC) to resolve alleged Clean Water Act violations related to the operation of Columbia's wastewater collection and treatment system. On May 21, 2014, the U.S. District Court approved the Consent Decree in the matter captioned *The United States of America and State of South Carolina by and through the Department of Health and Environmental Control vs. the City of Columbia*, Civil Action No. 3:13-2429-TLW. A copy of the Consent Decree is available at [www.columbiasc.net/utilities-engineering](http://www.columbiasc.net/utilities-engineering).

The Consent Decree requires Columbia to implement a comprehensive sewer assessment and rehabilitation program and to develop other programs related to the operation and maintenance of Columbia's wastewater sewer system. Additionally, in order to reduce and eliminate sanitary sewer overflows, the terms of the Consent Decree impose certain limitations on the City's ability to accept wastewater from new service connections and increased wastewater flow within all areas served by Columbia's wastewater system, including all satellite sewer systems that discharge to Columbia's wastewater system.

Pursuant to Paragraph 12.e of the Consent Decree, Columbia must implement a capacity assurance program (CAP). Under the current CAP, all new service connections and increased wastewater flow contributing more than 4,000 gallons per day must be reviewed in accordance with the City's CAP. This 4,000 gallons per day threshold is calculated based on the total connections for a proposed development, which will include all phases within a larger common plan of development. The CAP outlines specific criteria by which Columbia determines whether

its collection, transmission, and treatment system has sufficient capacity to accept new connections and increased flows. Proposed wastewater flows of 4,000 gallons per day or less may be approved without further analysis at the discretion of the City.

There are two levels of review that Columbia's Engineering Division may perform as a part of the CAP process. The planning level review, referred to as a Pre-CAP Analysis, provides the prospective developer/engineer with an initial non-binding assessment of the City's ability to collect, transmit, and treat the additional estimated wastewater flow from a proposed development. The second level of review, referred to as a CAP Determination, is performed as a part of the Columbia's sub-division review once a project design is complete. All other requirements of the sub-division review process apply to any proposed development.

There are portions of Columbia's collection and transmission system with limited capacity such that Columbia's approval of additional connections and increased wastewater flow may be substantially constrained under the CAP. Therefore, it is strongly recommended that any new service connection and increased wastewater flow contributing more than 4,000 gallons per day be submitted to the Columbia's Subdivision Review staff for a planning level review Pre-CAP Analysis in the early stages of planning for a proposed development. See the attached Capacity Assurance Program Flow Request Form for information required for Columbia to perform the planning level analysis of the proposed development.

Should you have any questions please feel free to contact myself or John Riggs at (803) 545-3400.

Regards,



William H. Davis, P.E.  
Wastewater Engineer

cc: Joey Jaco, PE, Utilities Director  
Dana Higgins, PE, City Engineer  
John Riggs, PE, Hydraulic Engineer  
Scott Rogers, Subdivision Review Manager

# Capacity Enhancing Projects

## Congaree River Sewer Force Main Project (SS711502)



### Project Status:



Cost: \$9.5 M

### Special Note:

Benefits Downtown, West Columbia, Crane Creek Basin, & Saluda Basin

### Project Description:

Added over 4 miles of 42" force main along the Congaree River

### Public Benefits of Project:

- Improved Transmission to Metro Wastewater Treatment Plant
- Increased Collection System Capacity
- Reduced Sanitary Sewer Overflow Potential

## West Columbia Pump Station Improvements (SS711501)



### Project Status:



Cost: \$9.5 M

### Special Note:

Benefits Downtown, West Columbia, Crane Creek Basin, & Saluda Basin

### Project Description:

Pump station redesigned and overhauled for efficiency and to survive flooding

### Public Benefits of Project:

- Improved Design to Survive Flooding
- Increased Pump Station Capacity
- Reduced Sanitary Sewer Overflow Potential

## Major Outfall Rehabilitation (SS7073)



### Project Status:



Cost: \$15 M

### Special Note:

Benefits Downtown & Crane Creek Basin

### Project Description:

Rehabilitated 2.5 miles of large diameter sewer lines that serve 1/3 of the City's sewer customers

### Public Benefits of Project:

- Improved Transmission to Metro Wastewater Treatment Plant
- Increased Collection System Capacity
- Reduced Sanitary Sewer Overflow Potential

## North Columbia Pump Station Improvements (SS7102)



### Project Status:



Cost: \$4 M

### Special Note:

Benefits Crane Creek Basin

### Project Description:

Improved the pump station's ability to handle solids in the influent stream and provided better access for pump removal

### Public Benefits of Project:

- Increased Operational Efficiency and Reliability
- Reduced Sanitary Sewer Overflow Potential
- Reduced Operating Costs

## Crane Creek Phase 2 (SS695402)



### Project Status:



Cost: \$4.3 M

### Special Note:

Benefits Crane Creek Basin

### Project Description:

Installed a 48" sewer line from Monticello Rd. to Brickyard Rd. north of I-20

### Public Benefits of Project:

- Improved Transmission to Metro Wastewater Treatment Plant
- Increased Collection System Capacity
- Reduced Sanitary Sewer Overflow Potential

## Broad River Pump Station Improvements (SS7101)



### Project Status:



Cost: \$5.4 M

### Project Description:

Addressed existing hydraulic, electrical, structural, and HVAC deficiencies and increased the pump station's pumping capacity

### Public Benefits of Project:

- Reduced Sanitary Sewer Overflow Potential
- Increased Pump Station Capacity by 80%

## Saluda River Pumping Station Upgrade (SS711601)



### Project Status:



Cost: \$19 M

### Special Note:

Benefits West Columbia & Saluda Basin

### Project Description:

Upgraded the pump station's capacity, equipment, and downstream force main for efficiency and reliability

### Public Benefits of Project:

- Increased Pump Station and Downstream Gravity Sewer Capacity
- Reduced Sanitary Sewer Overflow Potential
- Increased Pump Station Reliability and Efficiency

## Burnside Gravity Sewer Main (SS7076)



### Project Status:



Cost: \$6.5 M

### Special Note:

Benefits Southeast Service Area

### Project Description:

Installed over 3 miles of 30" gravity sewer in Southeast Service Area and removed a problematic pump station from the system

### Public Benefits of Project:

- Increased Operational Efficiency and Reliability
- Reduced Sanitary Sewer Overflow Potential

## Crane Creek Phase 1 (SS695401)



### Project Status:



Budget: \$4.3 M.

### Special Note:

Benefits Crane Creek Basin

### Project Description:

Project will replace ~1.3 miles of 36" pipe with ~1/3 miles of 48" pipe. A temporary bypass will allow for additional capacity before this project is complete.

Estimated Bid Date: February, 2015\*

\* All future dates are estimated and subject to change.

### Public Benefits of Project:

- Improved Transmission to Metro Wastewater Treatment Plant
- Increased Collection System Capacity
- Reduced Sanitary Sewer Overflow Potential

# Capacity Assurance Program: Frequently Asked Questions

## Questions Answered in This FAQ

### About the Capacity Assurance Program

1. What is the Capacity Assurance Program?
2. What projects will be reviewed?
3. What triggers result in a capacity limitation for an area?
4. Does a capacity limitation mean development has to stop?
5. Do capacity enhancing projects really ease capacity limitations?
6. What is the City planning to do about current areas with capacity limitations?

### About Project Review

7. I have heard about the Pre-CAP review. When should new projects undergo Pre-CAP review?
8. How early can I submit my project for Pre-CAP review?
9. I submitted a project and received a "Denial" or "Revise and Resubmit" letter. What does that mean?
10. I submitted a project and received a letter stating a capacity enhancement project would have to be completed before the system could handle my proposed flows. What does this mean?
11. Will the City authorize taps on projects for which a valid and unexpired wastewater construction permit has been issued, but the taps have not yet been purchased?

### More Information

12. I'd like to know more about this hydraulic model. When does the City use it to determine if there are capacity issues?
13. I'd like to request a CAP review, a Pre-CAP review, or get more information on this program.

## About the Capacity Assurance Program

### 1. What is the Capacity Assurance Program?

The Capacity Assurance Program (CAP) is a program to review all new sewer service connections and increased wastewater flow. This review follows specific criteria to

determine if the City's wastewater system has sufficient capacity to accept new connections and increased flows.

The CAP is a part of the City's comprehensive program to reduce and prevent sanitary sewer overflows. The City is required to implement a CAP that meets federal and state approval.

## **2. What projects will be reviewed?**

Any new sewer service connections or proposed increased wastewater flow are subject to the CAP review.

## **3. What triggers result in a capacity limitation for an area?**

There are two main triggers that could result in an area being flagged as capacity limited.

1. If an area has experienced repeated capacity-related sanitary sewer overflows (SSOs) in the past 12 months. Capacity-related SSOs might be caused by:

- Heavy rains and wet-weather flows
- Undersized pumps
- Undersized pipes
- Other events that might cause increased peak flow.

They do not include SSOs from:

- Equipment failures
- Mechanical failures
- Unanticipated industrial discharges
- Other errors

2. If a desktop analysis or hydraulic model (see below) determine any proposed additional flows are likely to cause an SSO. This analysis determines:

- If there is room in the pipe to hold the additional proposed flow
- If existing pump stations can move the extra volume quickly enough to keep room in the pipe
- If the wastewater treatment plant can handle the additional proposed flow
- If the system is also capable of handling the additional proposed peak flow
- If there are any other known potential capacity issues downstream.

This analysis is done for all projects over 4,000 gallons per day even if there have not been any recent SSOs.

#### **4. Does a capacity limitation mean development has to stop?**

**No!** Depending on the area, the City may have capacity enhancing projects underway that, once completed, will add capacity to the area in question.

If an area does not already have a capacity enhancing project planned or underway, the City will determine if upgrades to the system would allow for the proposed project.

**Once an area has been upgraded, projects will be re-evaluated based on the new conditions and approved if CAP requirements are met.**

#### **5. Do capacity enhancing projects really ease capacity limitations?**

**Yes!** Recently, the Burnside Gravity Sewer Main Project (SS7076) was completed in southeast Columbia. The project included adding over 3 miles of 30" gravity sewer to the system and removing a problematic pump station from service. Once completed, capacity limitations were eased in the area.

#### **6. What is the City planning to do about current areas with capacity limitations?**

As part of its Capital Improvement Program, the City regularly identifies projects that could improve sewer capacity. The City has completed numerous projects that have avoided many capacity limitations within the system, including upgrading all of its major sewer pump stations, rehabilitating a major sewer outfall, and upgrading capacity at the wastewater treatment plant.

The Crane Creek Basin located northeast of Columbia is known to have capacity limitations. A project to replace almost a mile and a half of 36" pipe with 48" pipe is entering its final phases. Part of the project includes installing a temporary by-pass which will provide capacity relief before the permanent line is completed. Under the current project timeline, this by-pass is expected to be in service by Fall 2015 to ease capacity limitations in the area.

### **About Project Review**

#### **7. I have heard about the Pre-CAP review. When should new projects undergo Pre-CAP review?**

The City offers an optional Pre-CAP review for anyone who has a project they are considering submitting in the future. The City will then determine if current sewer service in the area is capable of handling the project. While the assessment is non-binding for either the City or the developer—meaning if conditions change, final

approval may change—the Pre-CAP Analysis can be a useful tool in helping local developers better plan their investments.

**The City recommends every project be submitted for Pre-CAP review before the property owner or developer makes a significant investment in the project.**

### **8. How early can I submit my project for Pre-CAP review?**

A project can be submitted for Pre-CAP review at any time. If you are considering purchasing a property for development or developing a property you already own, the City recommends you contact us for a Pre-CAP review.

**The City recommends every project be submitted for Pre-CAP review before the property owner or developer makes a significant investment in the project.**

### **9. I submitted a project and received a "Denial" or "Revise and Resubmit" letter. What does this mean?**

Projects that do not meet federal, state or local regulations or standards will be denied before capacity is even considered. If you received a denial, the letter should identify any issues with the proposed project and a corrective action plan. Denied projects may be revised and resubmitted.

### **10. I submitted a project and received a letter stating a capacity enhancement project would have to be completed before the system could handle my proposed flows. What does this mean?**

Depending on the area, the City may have capacity enhancing projects underway that, once completed, will add capacity to the area in question.

If an area does not already have a capacity enhancing project planned or underway, the City will determine if upgrades to the system would allow for the proposed project.

**Once an area has been upgraded, projects will be re-evaluated based on the new conditions and approved if CAP requirements are met.**

### **11. Will the City authorize taps on projects for which a valid and unexpired wastewater construction permit has been issued, but the taps have not yet been purchased?**

The City will authorize the purchase of taps for any project for which a valid wastewater construction permit was issued prior to the U.S. District Court's approval of the Consent Decree with EPA and DHEC on May 21, 2014, as long as that permit has not yet expired.

## More Information

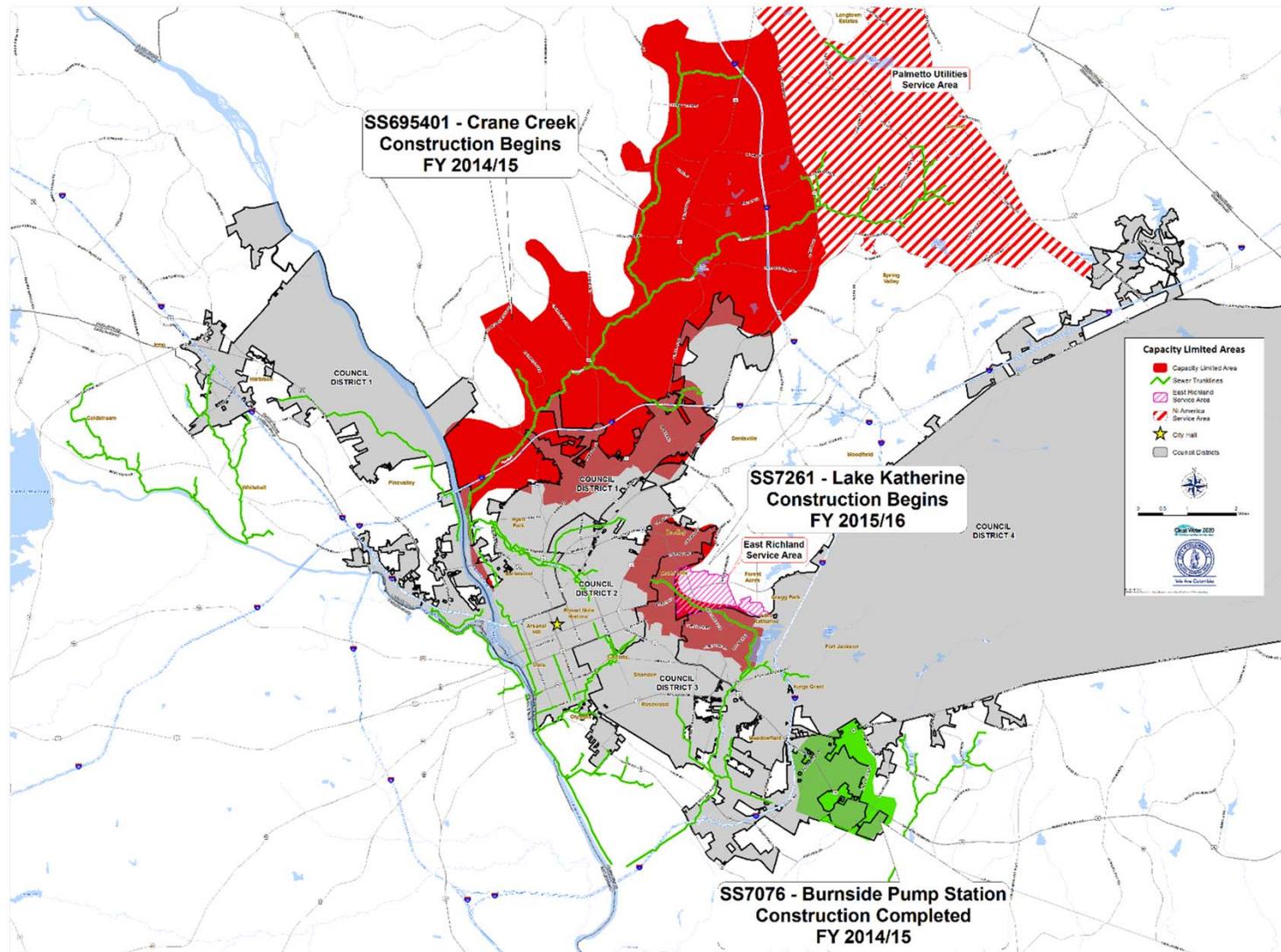
### **12. I'd like to know more about this hydraulic model. When does the City use it to determine if there are capacity issues?**

The City is currently in the process of developing a hydraulic model for the entire system. Portions of the model have already been developed and may be used to examine projects. This model will be continually improved as the City gathers more system data.

### **13. I'd like to request a CAP review, a Pre-CAP review, or get more information on this program.**

For more information on the CAP program or to request a review of your project, contact us at 545-3400.

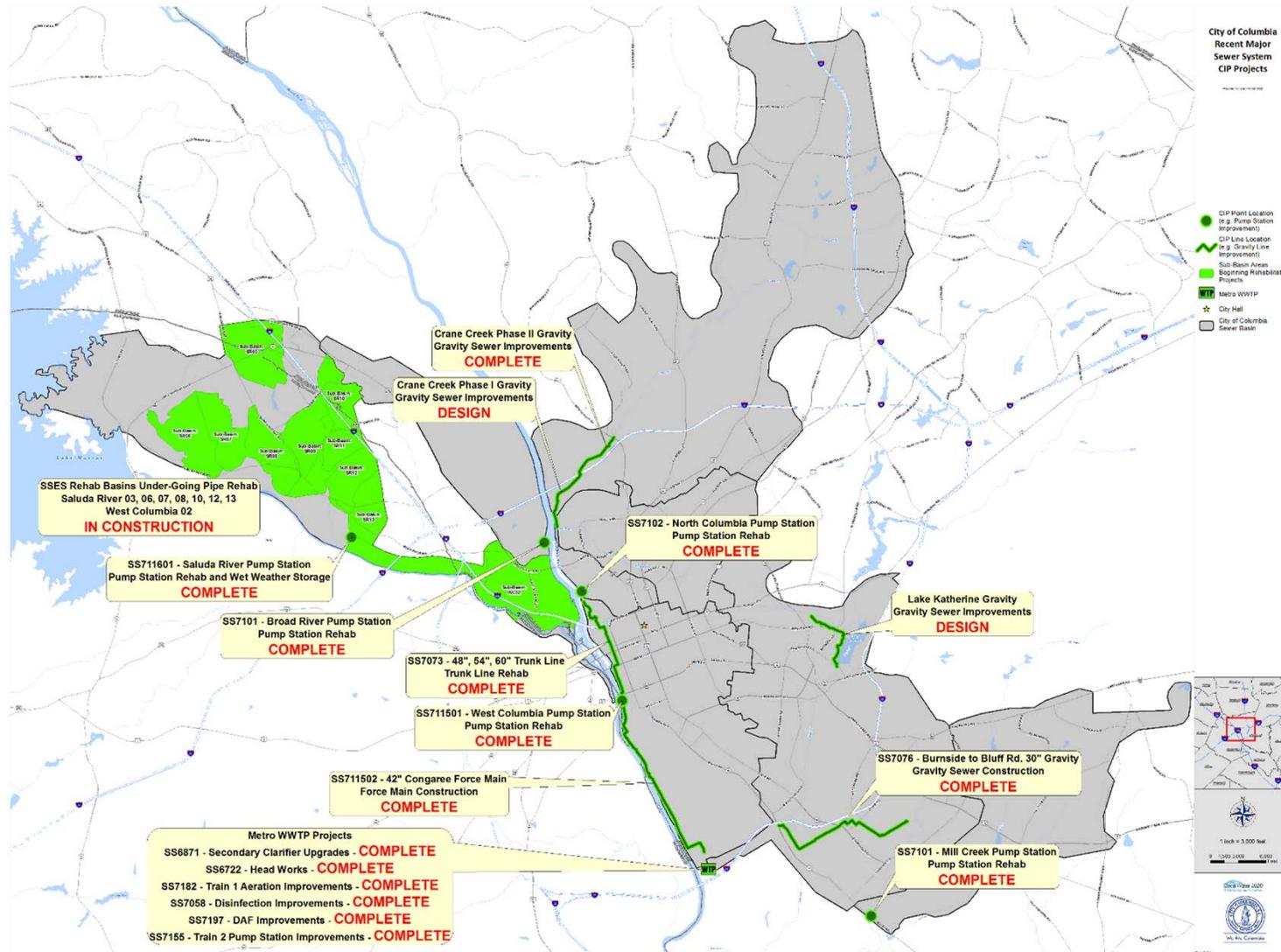
# Map of Current Capacity Limited Areas



The Crane Creek Basin and areas around Lake Katherine (shown in red) currently are sewer capacity limited. Projects are underway in both areas to address these limitations. The Burnside area (shown in green) had capacity limits lifted after a capacity enhancing project was completed in November, 2014.



# Map of Capacity Enhancement Work To Date



The City has completed 15 capacity enhancement projects with several more in design or under construction. The completed projects have contributed to a 70% reduction in the number of sanitary sewer overflows since fiscal year 2008/2009.

Version: January 29, 2015