

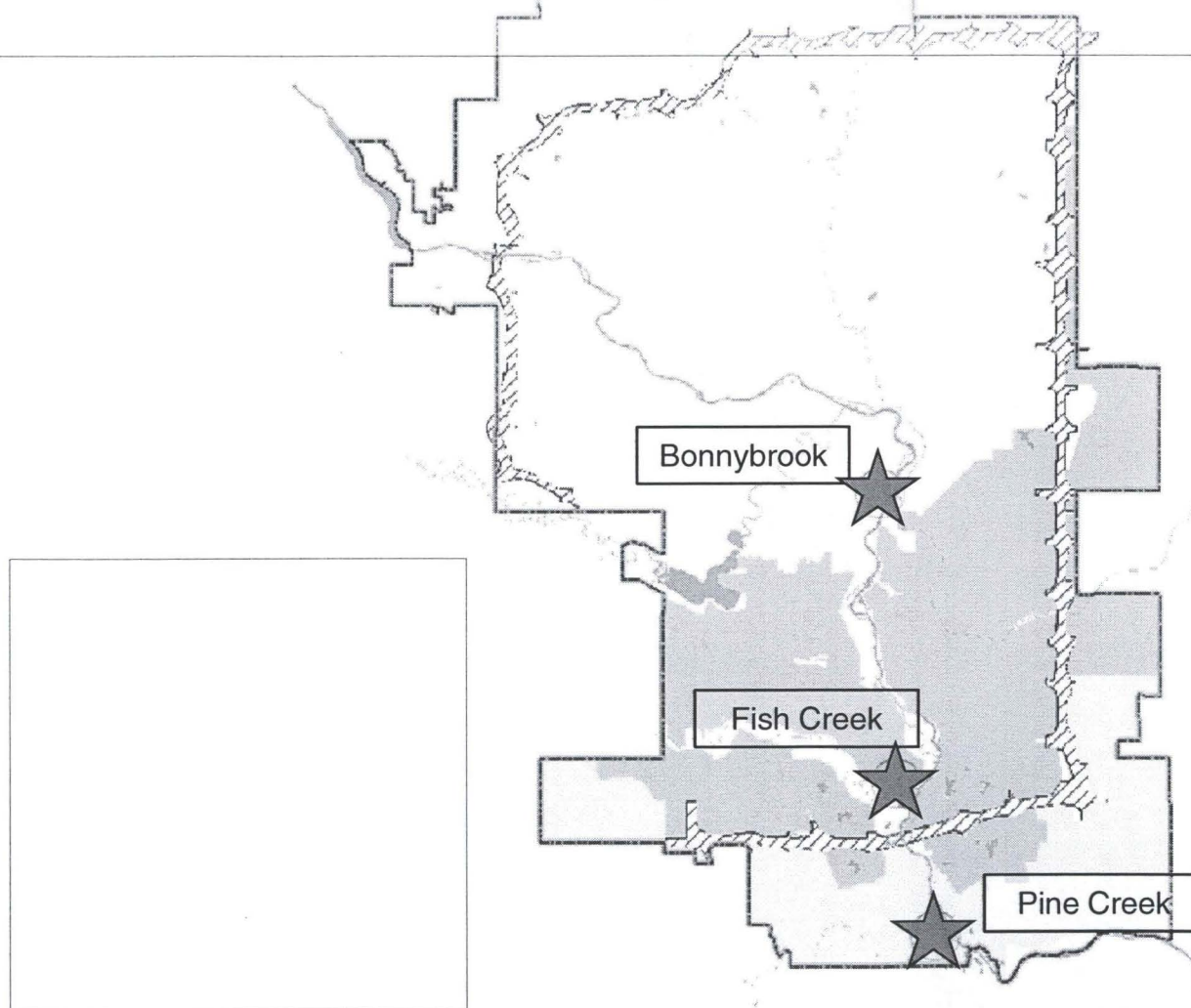


# **Bonnybrook Wastewater Treatment Plant Capacity Upgrade & Expansion Program**

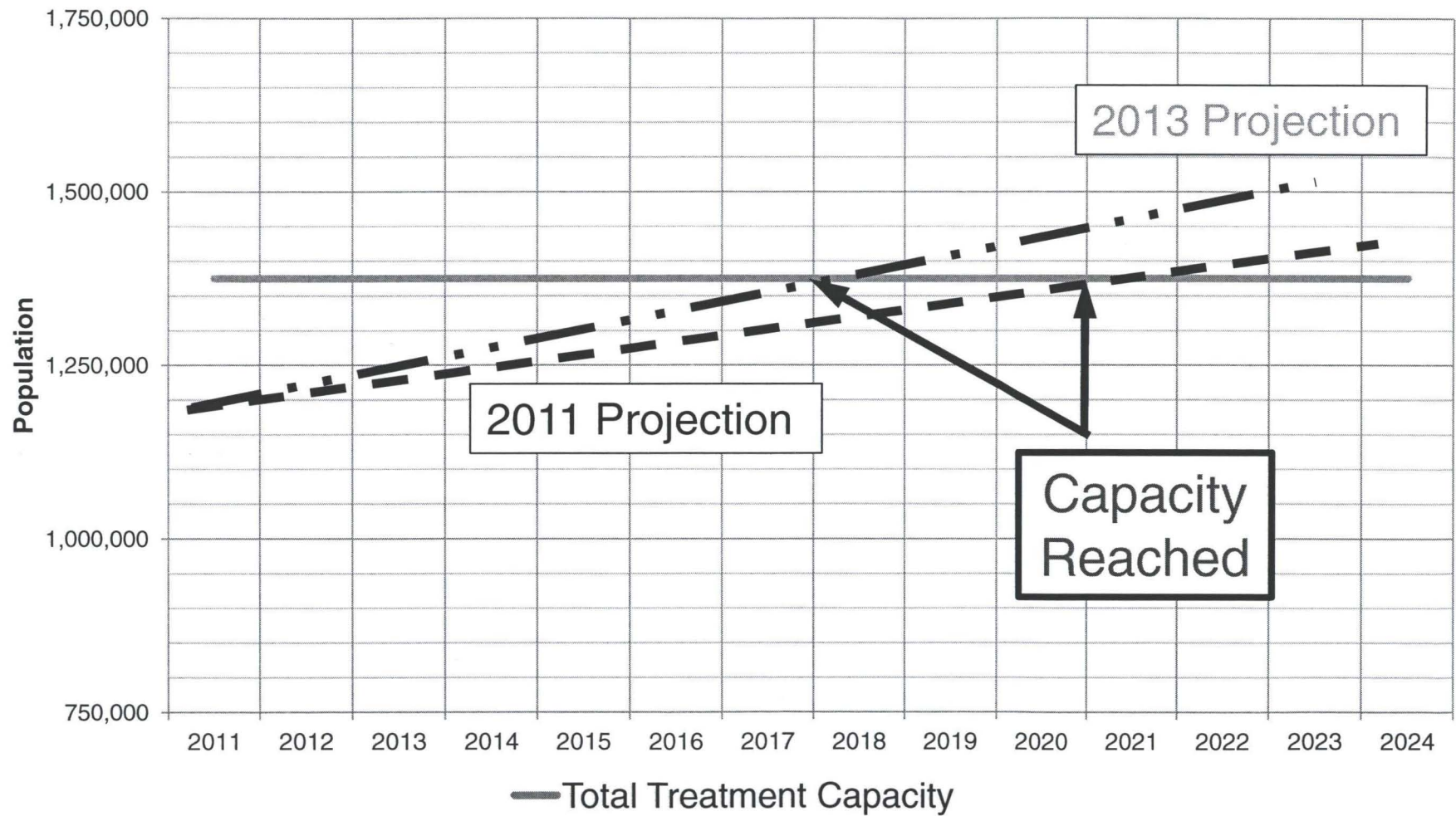
**UCS2014-0025**

**2014 March 17**

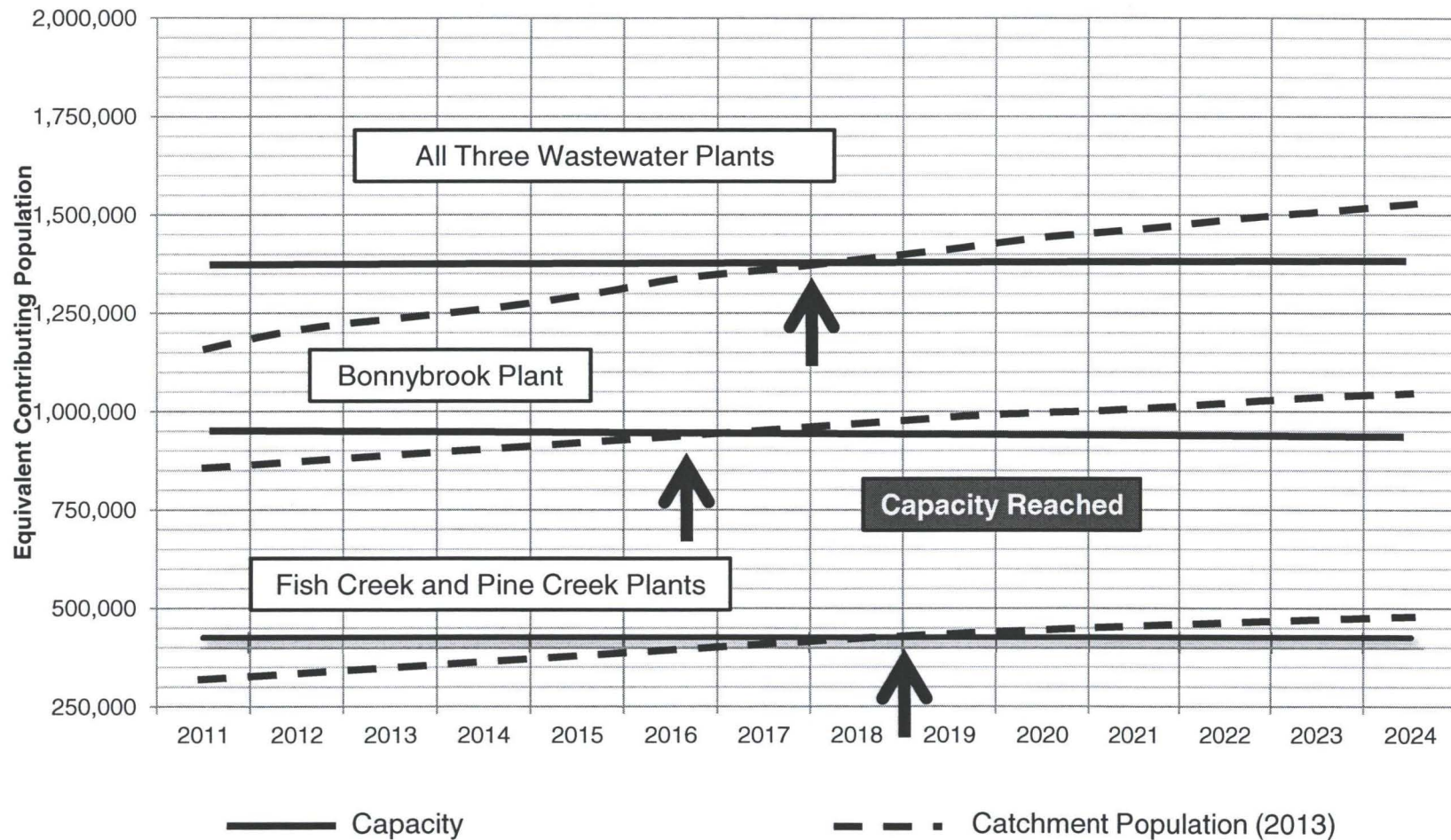
# Treatment Plant Subcatchments



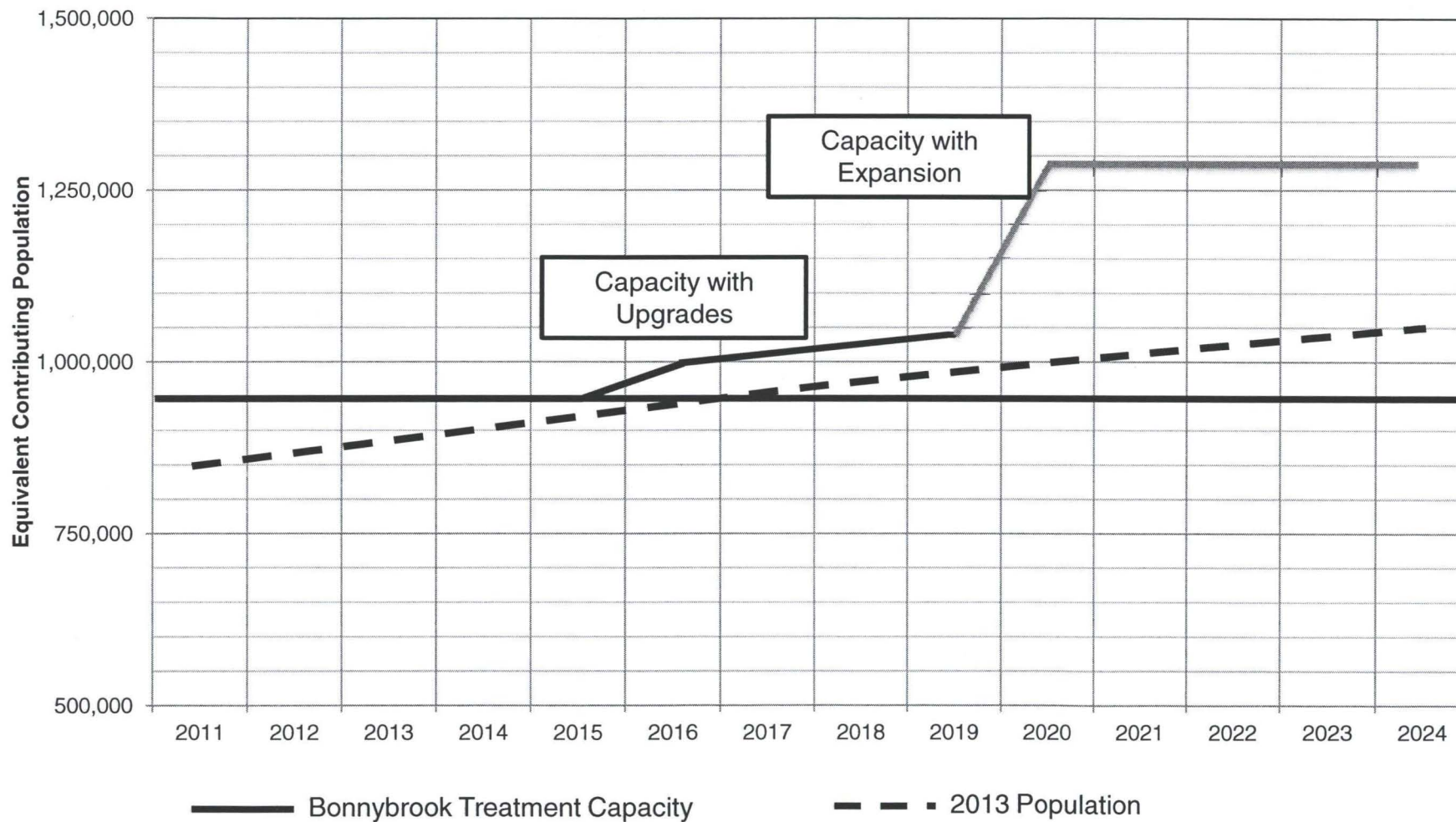
## Total Treatment Capacity



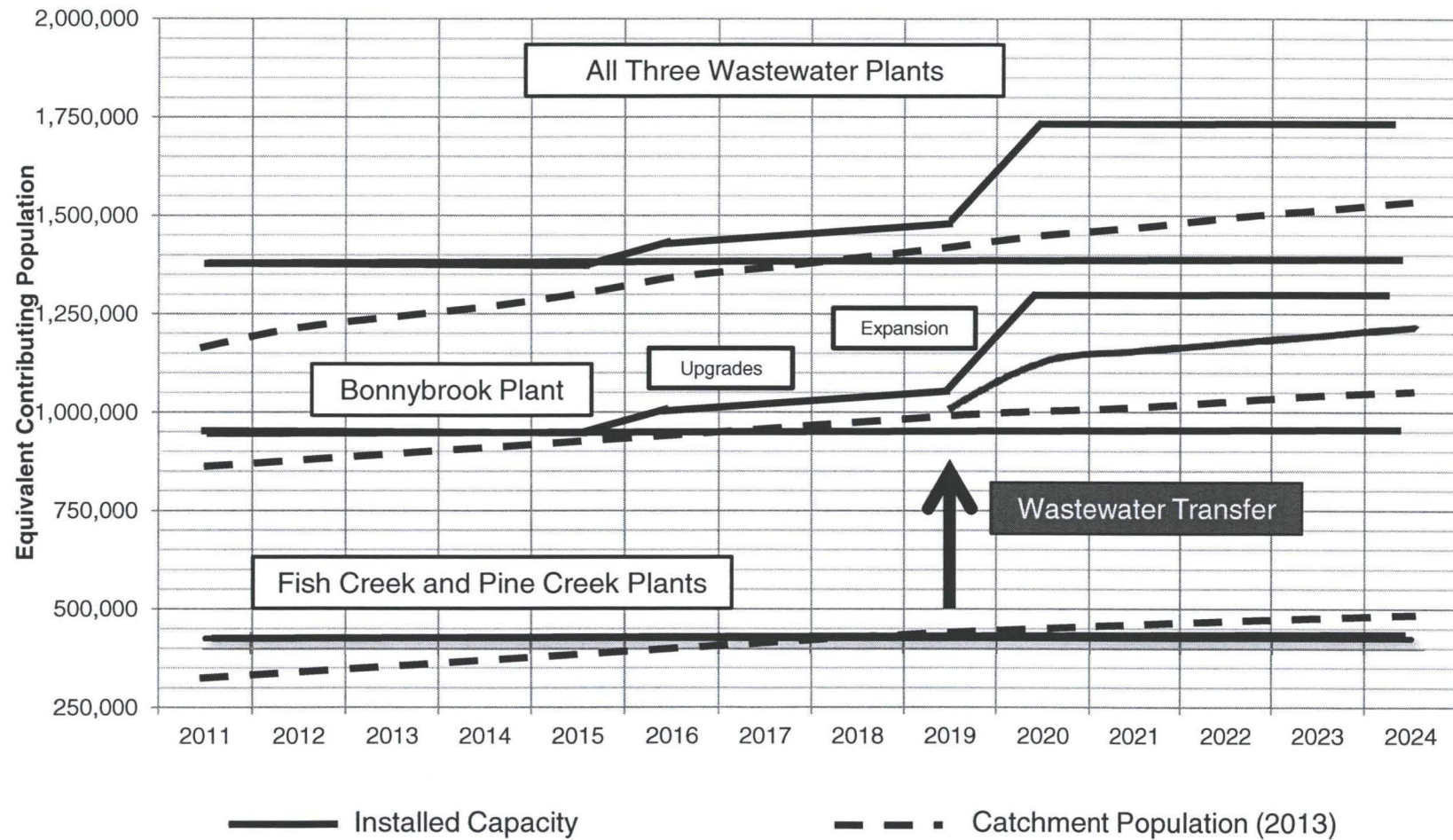
# Treatment Capacity



## Bonnybrook Wastewater Treatment Plant Capacity and Population Growth



## Upgraded Treatment Capacity



## **PROGRAM DRIVERS (2015-2024)**

**Maintain  
Assets**

**Sufficient capacity enables preventative maintenance, providing flexibility for shutdowns.**

**Regulatory &  
Environmental  
Protection**

**Renewal of Operating Approval in 2018, which will result in more stringent effluent quality requirements.**

**Services**

**Increases flood resiliency of BBWWTP processes.**

**Growth**

**Upgrades and expansions are required to accommodate growth.**

# Two-Pronged Approach

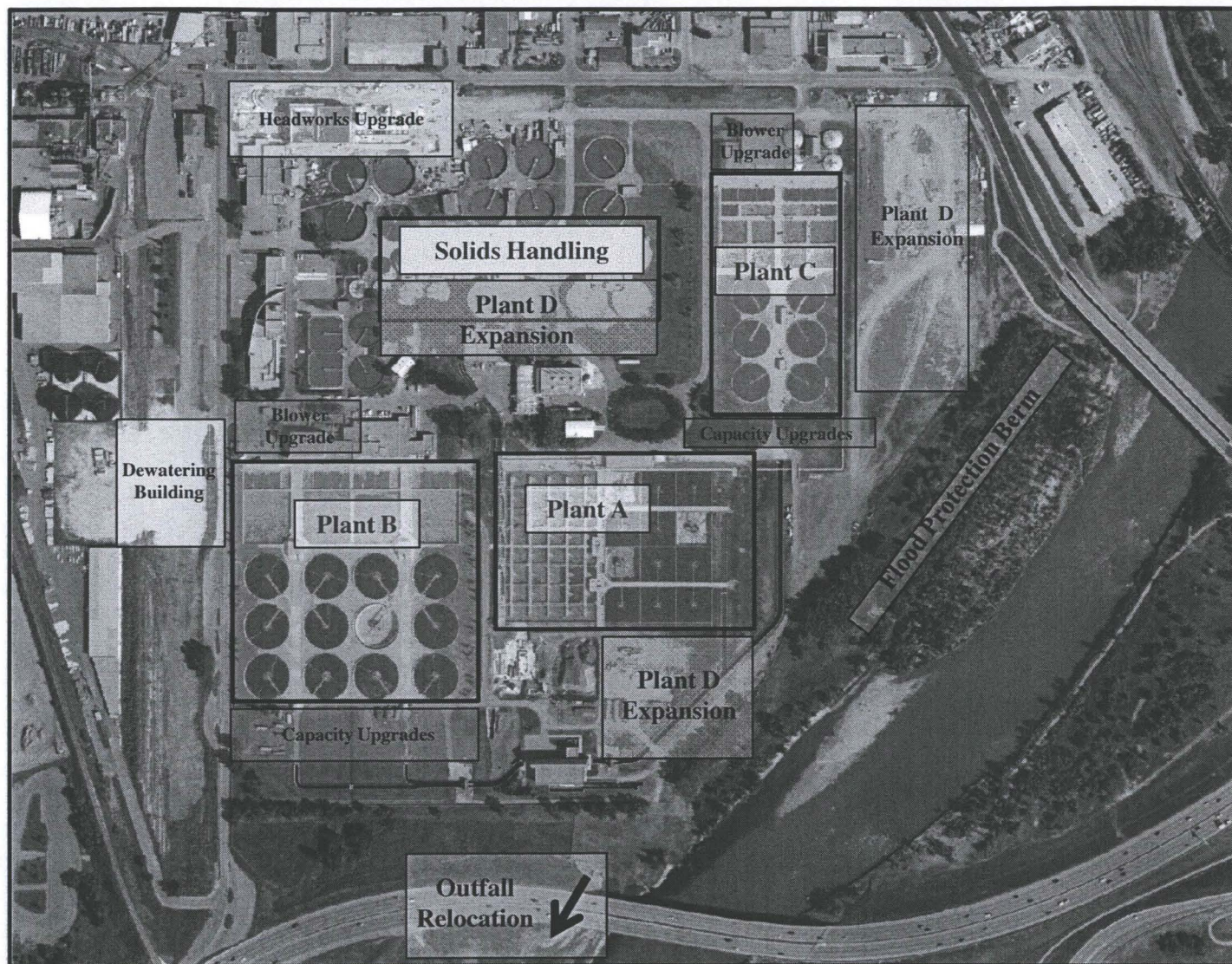
## **BBWWTP Capacity Upgrades:**

- Incremental capacity gains between 2016 and 2019
- Support short term growth until Plant D constructed
- Upgrades to secondary treatment processes
- Total estimated cost \$117 M (Class 4 conceptual design)

# Two-Pronged Approach

## **BBWWTP Plant D Expansion:**

- Planned for implementation by 2020
- Supports long term growth until approximately 2032
- Expand primary, secondary and tertiary treatment processes to increase capacity and improve effluent quality
- Upgrades to plant electrical systems
- Flood resiliency, including relocating the outfall
- Total estimated cost \$690 M (Class 5 order of magnitude)



## Phases

Existing



Capacity  
Upgrades

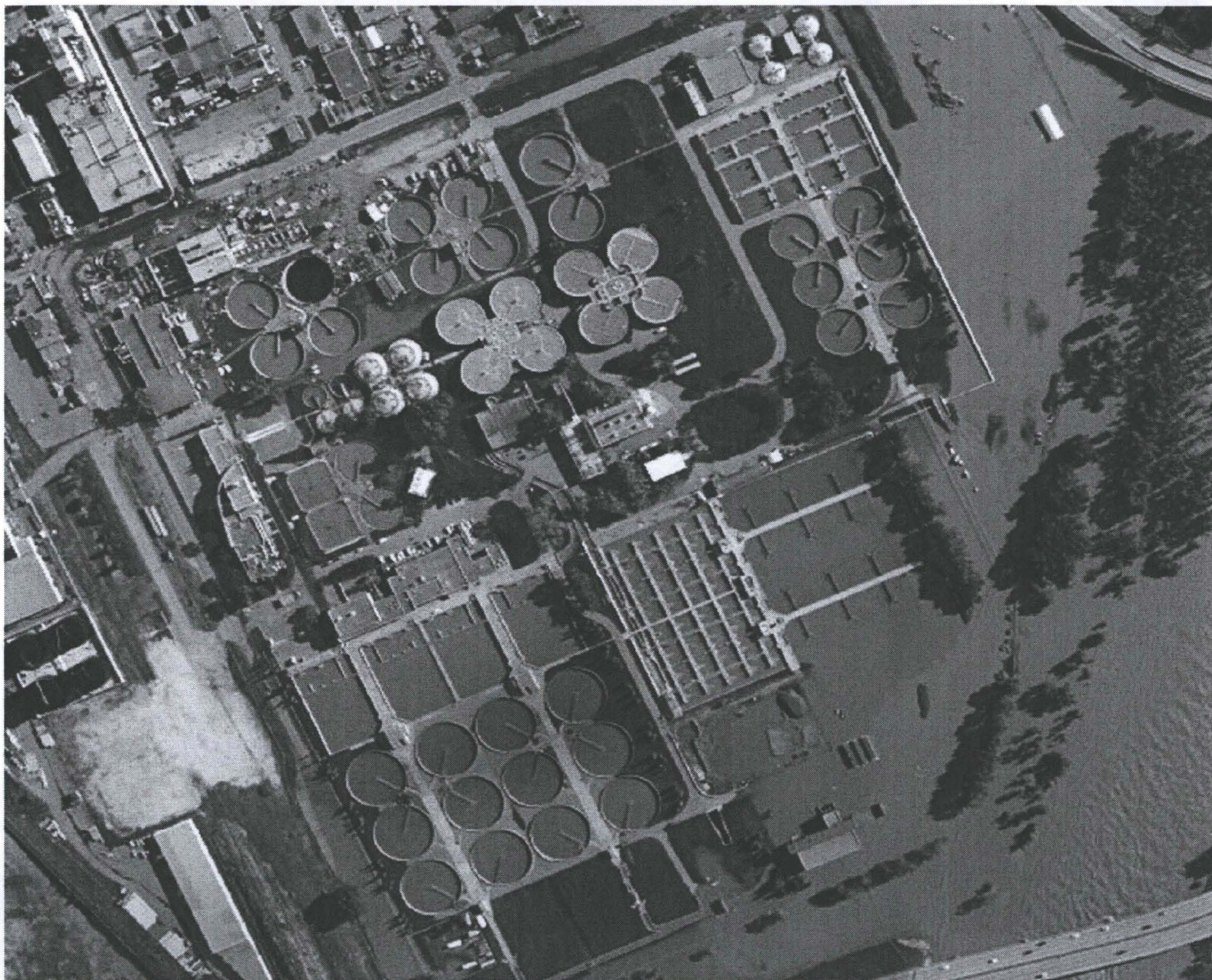


Expansion



Flood  
Protection





UCS2014-0025 Bonnybrook Wastewater Treatment Plant Capacity Upgrade & Expansion Program

THE CITY OF CALGARY

# **Pre-Approval Requirements**

## **BBWWTP Capacity Upgrades**

- Design underway
- Pre-Approval request of \$101.1 M required to secure contractors and equipment purchases

## **BBWWTP Plant D Expansion**

- Preliminary design underway
- Pre-Approval request of \$25.0 M approval required for design services to tender
- Remainder of costs will be included in WIIP/Action Plan

# **Pre-Approval Requirements**

## **BBWWTP Plant D Expansion**

- Preliminary design underway
- Pre-Approval Request of \$25.0 M required for design services to tender in order to maintain schedule
- Remainder of costs will be included in WIIP/Action Plan

# Recommendations

That the SPC on Utilities and Corporate Services:

1. Receive this report for information;
2. Forward this report to the 2014 March 17 Special Strategic Planning Meeting of Council;
3. Recommends that Council approve capital budget for the Bonnybrook Capacity Upgrades and Plant Expansion (Program 894) as per Attachment 4 and direct Administration to prepare Borrowing Bylaw 5B2014 to a maximum amount of \$126.1 million in self-supported debt, such bylaws to be brought forward to Council's 2014 March 31 meeting to give first reading to the Borrowing Bylaw; and
4. Direct Administration to prepare Borrowing Bylaw 5B2014 to a maximum amount of \$126.1 million in self-supported debt, such bylaws to be brought forward to Council's 2014 March 31 meeting to give first reading to the Borrowing Bylaw.

# Questions?