



Cedar Creek and Southside Park Pond

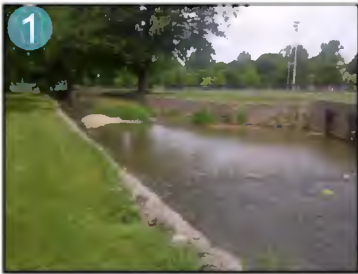
Municipal Class EA

Public Information Meeting
Tuesday, December 13, 2011

AECOM


WOODSTOCK
ONTARIO CANADA

Study Area



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Existing Conditions – Natural Environment



Terrestrial features

- Manicured landscape with mature planted trees.
- Majority of tree species located on the west side of Cedar Creek: freeman's maple (*Acer x freemanii*), red pine (*Pinus resinosa*), bur oak (*Quercus macrocarpa*), norway spruce (*Picea abies*), white ash (*Fraxinus Americana*), black walnut (*Juglans nigra*), sugar maple (*Acer saccharinum*), scots pine (*Pinus sylvestris*), and weeping willow (*Salix alba*).
- No species at risk recorded in the area.

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Existing Conditions – Natural Environment

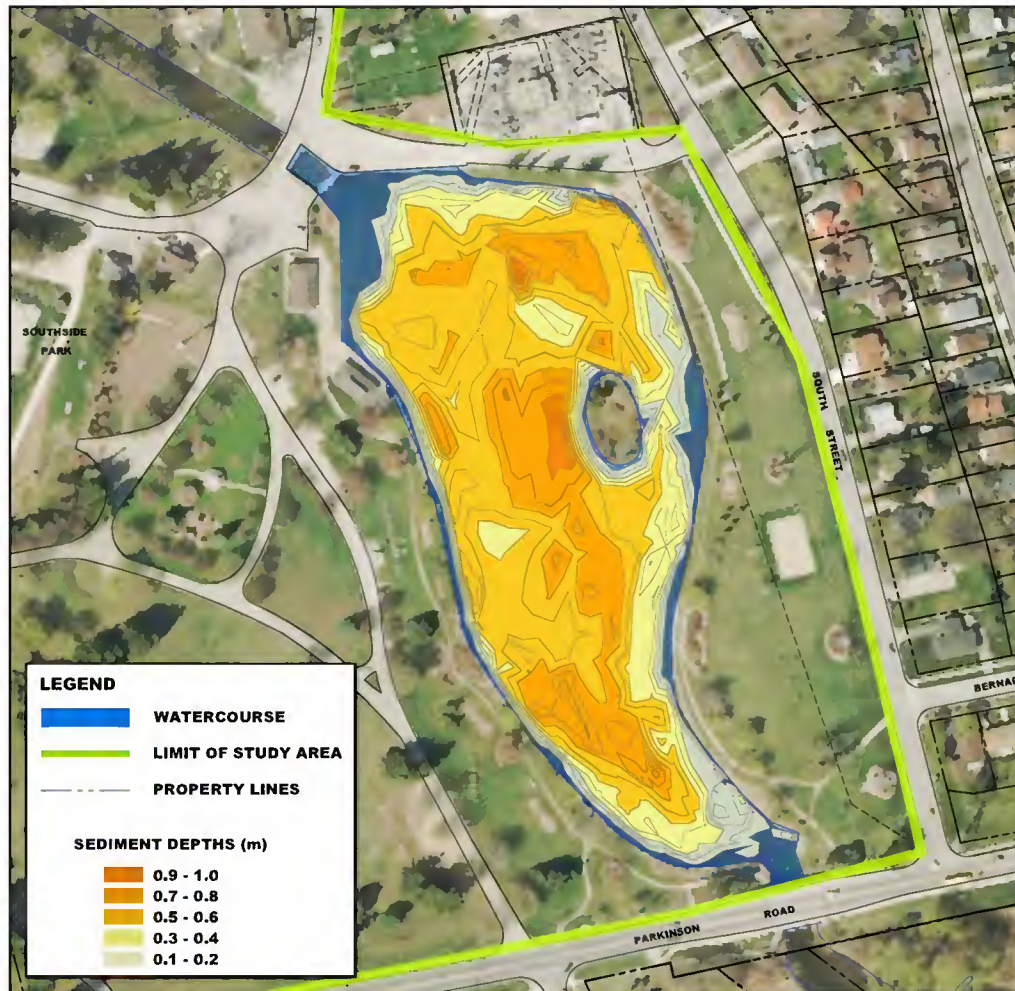


Fish community

- Diverse range of cool- to warm-water species present in Cedar Creek at Southside Park.
- All species recorded are common and widespread in distribution.
- Fish barriers currently restrict fish passage upstream.
- Sports fish found in the creek include Northern Pike and Largemouth Bass.
- Habitat restoration work completed by UTRCA in 2004 including establishing rocky riffles in creek downstream of Pond and installing bioengineering on creek banks through Cedar Creek Golf Course (upstream of Southside Park).

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Existing Conditions – Water Quality



Report Card

UTRCA Report Card gives Cedar Creek an overall grade of D for surface water quality with no improvement over time. Water quality downstream of Southside Pond in Cedar Creek generally exhibits poor water quality. Issues within Cedar Creek include impoundment, bank erosion, low vegetation cover and impacts of unmitigated stormwater inputs.

2009 Water Quality Study

Water quality is generally poor throughout the creek and broad scale initiatives are required to provide benefit. Bacteria, nutrient and metals all have high concentrations and efforts to reduce inputs including limiting access to geese, removing pet waste runoff, limiting fertilizer runoff and education on stormwater drains would be recommended.

Existing Conditions – Water Quantity

Hydrology and Hydraulics

Cedar Creek watershed covers an area of 95km², flowing from Norwich Township and South-West Oxford to Woodstock where it flows into the South Thames River. The mean annual flow is 1.0 m³/s measured at the gauging station in Southside park. This is 3% of the flow to the Thames downstream of London.

Channel Form

Cedar Creek downstream of Southside Park Pond has been straightened and hardened. This limits fish habitat and natural processes that, mitigate water quality and erosion issues.

Dam Operations

Southside Park Dam is operated by lowering the water level through the winter and increasing the water level after snowmelt in spring. This produces an unnatural flow regime that can impact aquatic habitat.



Floodplain Issues

Presently the Regulation limit shows that the flooding impacts in the study area would predominantly be limited to park.

Existing Conditions – Social

Southside Park

- 26.7ha park
- Contains Pond and Cedar Creek
- Picnic areas and shelters
- Sports fields (baseball, soccer, volleyball, lawn bowling, cricket)
- Passive recreation areas
- Play areas
- Southside Aquatic Centre
- Concession building

Land use

- Predominantly an urban area consisting of single family residential surrounding the park
- Close proximity to schools and golf course



Problem Statement

Cedar Creek and the Pond within Southside Park are susceptible to many environmental stressors that have resulted in poor water quality, sediment accumulation in the pond and negative impacts to fish habitat. The area also presents potential safety issues as a result of the proximity of steep creek banks to the recreational areas. The study focuses on alternatives to improve the health and safety of the water course within a highly visible recreation area in Woodstock.



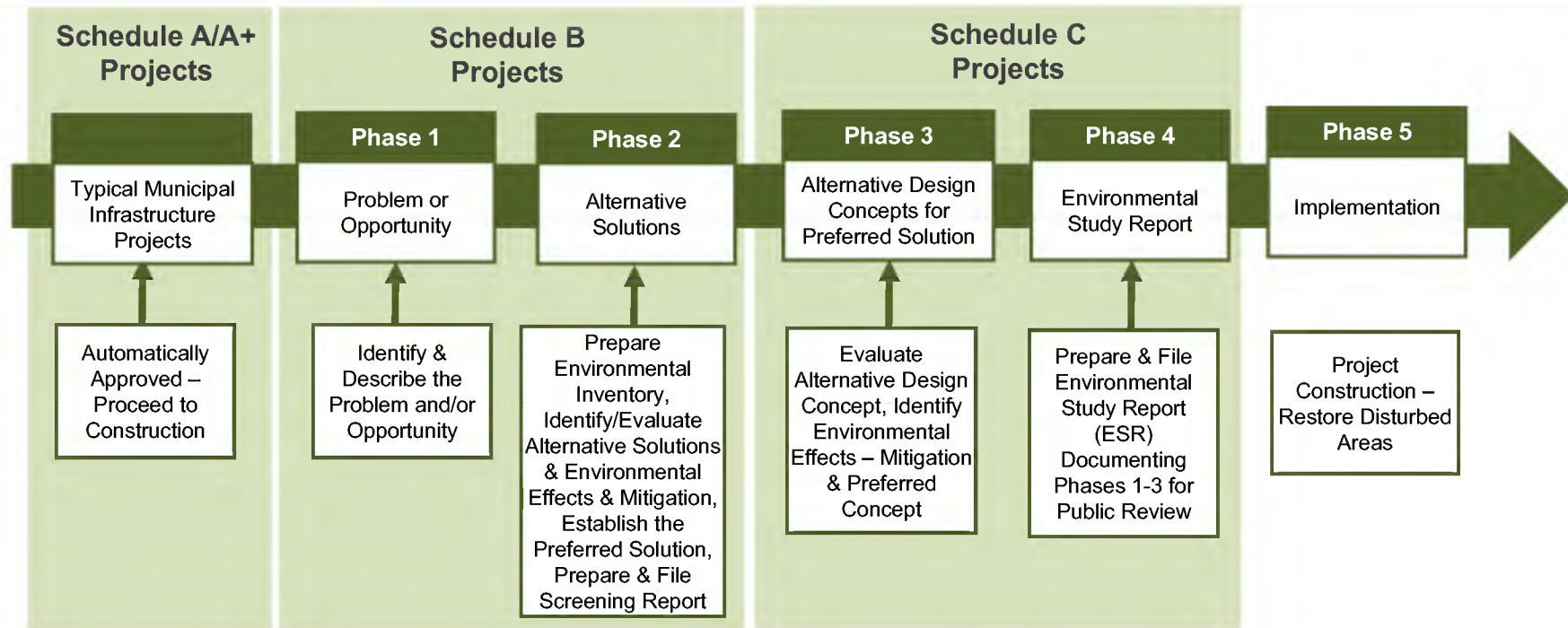
Project Objectives



- Identify remedies to improve water quality, benthics invertebrates and ultimately fish populations in the creek and pond.
- Identify methods to improve fish passage by mitigating the impacts of the barriers.
- Reduce potential for flooding resulting from possible changes to the creek and pond.
- Engage stakeholders throughout the process to provide input to the project to develop appropriate solutions or initiatives.
- Provide a landscape which ensures public safety, utility and recreational activities.
- Provide sustainable environmental management by utilizing an ecosystem approach to design.

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Municipal Class EA Process

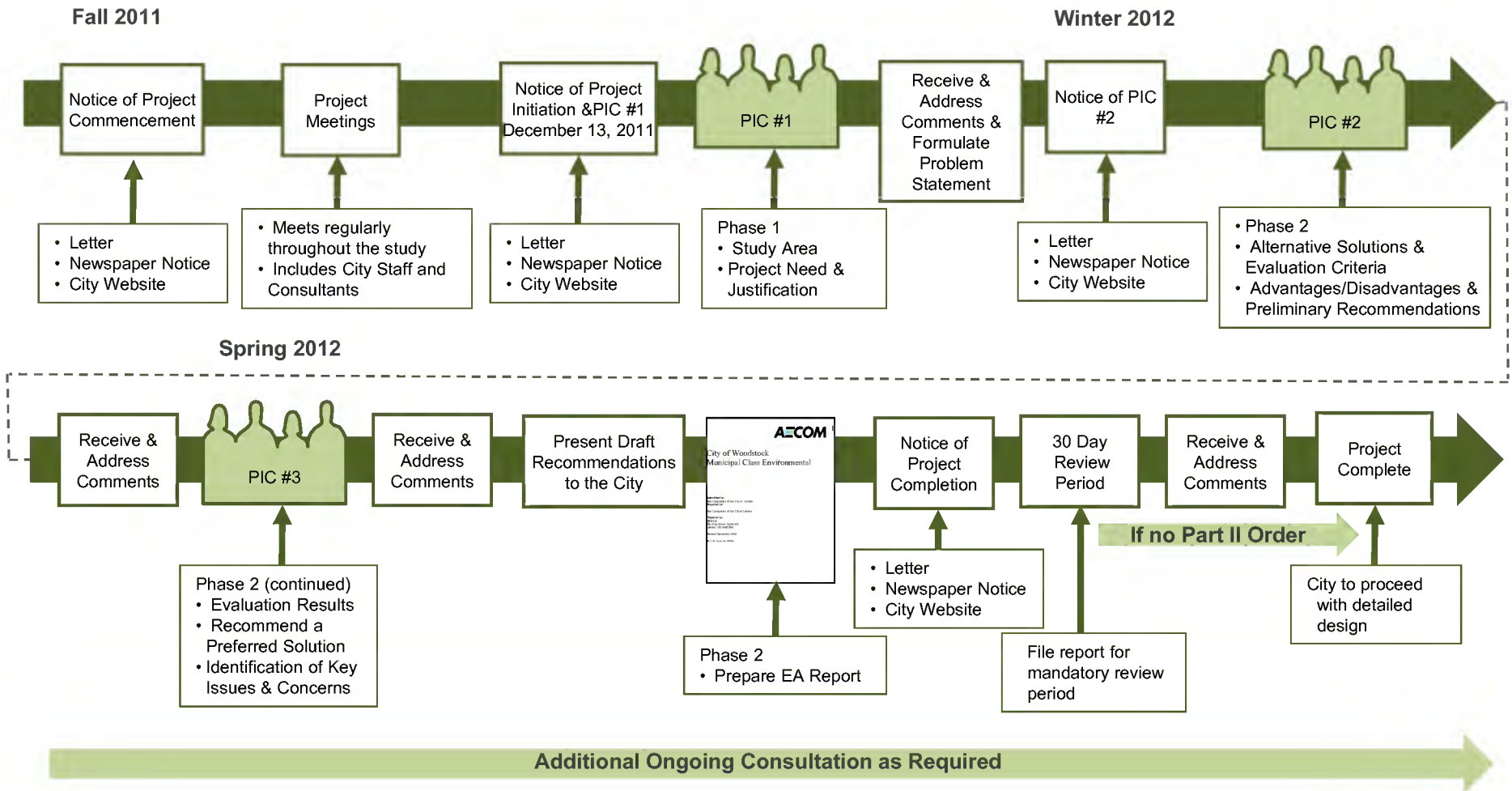


A five phase planning process which:

- Identifies **reasonable solutions** to the Problem;
- Considers **advantages and disadvantages** including net environmental effects;
- Requires **public consultation**;
- Provides clear documentation that describes the decision making process.
- This study will follow **Schedule 'B'** requirements;
- Complete **Phases 1 & 2**; and
- File a Screening Report for a **30 day review period**.

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Public Consultation Process



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Possible Alternative Solutions

Cedar Creek

- Do Nothing
- Rehabilitate Creek in Existing Alignment
 - Reduce slope on banks and create low flow channel with series of riffles and pools
 - Remove weirs and barriers to fish passage
- Realign Creek
 - Provide more sinuous planform for creek
 - Reduce slope on banks and create low flow channel with series of riffles and pools
 - Remove weirs and barriers to fish passage



Southside Park Pond

- Do Nothing
- Rehabilitate Existing Pond
 - Remove existing sediment and create sediment forebay to provide for easier future maintenance
- Remove Dam and Pond
 - Remove dam and create creek channel through the park
 - Restore pond area as parkland
- Remove Dam and Create Offline Pond/Wetland
 - Remove dam and create creek channel through the park
 - Create an offline pond and wetland area in remaining existing pond area
- Remove Dam and Create Online Pond
 - Remove dam and create creek channel through the park with widened online pond area
 - Restore remaining exiting pond area as parkland

Environmental Components

In Phase 2 of the Class EA process, an inventory of the **social, natural, technical** and **economic** environments of the project are determined. This inventory will be used to develop criteria to evaluate the alternative solutions. Please help us understand your issues and/or concerns for the following environmental components.

Social/Cultural Environment

(has regard for potential effects on residents, neighbourhoods, businesses, community character, social cohesion, community features and historical/archaeological and heritage components)

Natural Environment

(has regard for protecting significant natural and physical elements of the environment – air, land water and biota-including natural heritage and environmentally sensitive policy areas)

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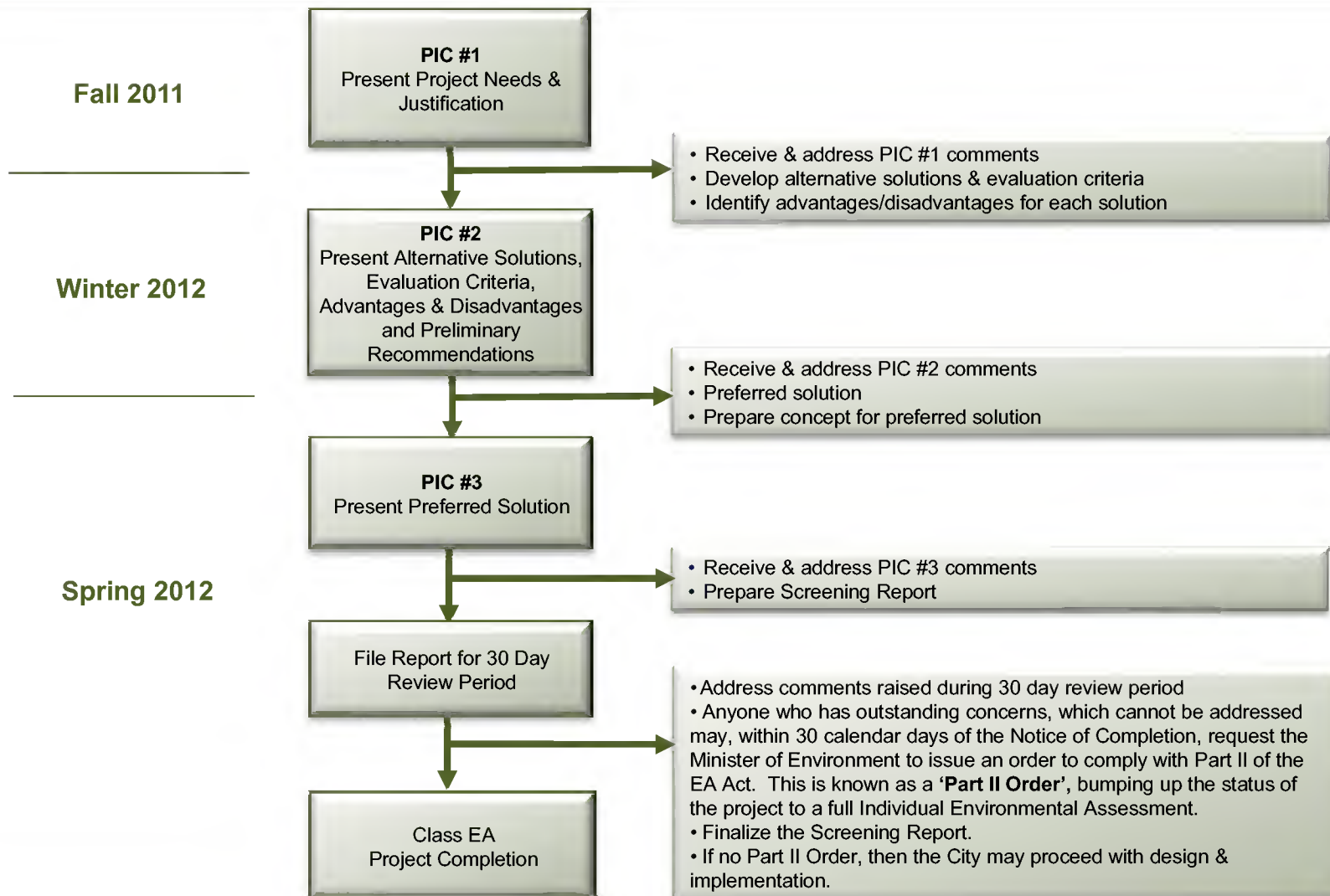
Technical Environment

(has regard for the technical suitability and other engineering aspects of the servicing options)

Economic Environment

(has regard for the potential effect on servicing costs)

Next Steps



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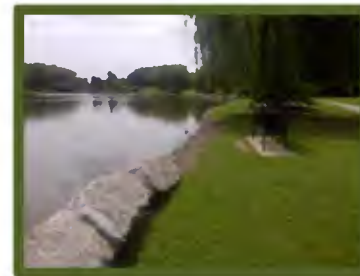
Slide 15

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This seems like a duplicate of slide 11, do we really need both?

webern, 12/1/2011

Contact Information



Please provide us with your input by completing a comment sheet. Your input will help us determine the best course of action for the project.

For further information please contact:

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