

## 2. The One River EA Process

### 2.1 Goal of the One River EA

The One River EA's overall goal was to develop a comprehensive One River Master Plan, in consultation with First Nations, Métis, and public and agency stakeholders, that would support an implementation strategy for integration of various projects within the One River study area. These projects were to represent both infrastructure needs and the community's overall social, recreational, cultural, environmental, and economic vision for the River. As part of the EA process, findings from other studies, plans, and projects were taken into consideration to create various approaches and select preferred options based their net social/cultural, environmental, technical, and economic values and impacts. The Master Plan recommends various projects to form a basis for future planning and project implementation.

#### 2.1.1 One River EA Problem/Opportunity Statement

The Problem/Opportunity Statement for an EA is a clear, concise description of the issue(s) that need to be considered as part of an EA process. The ultimate goal of an EA is to deliver an outcome that addresses and resolves the problem/opportunity statement. Based on early stakeholder engagement and background information, a One River EA Problem/Opportunity Statement was prepared, which recognized the collective responsibility of all stakeholders in maintaining and enhancing these “*shared natural, cultural, recreational and aesthetic resources*”. Through the public consultative process carried out in Stage 1 and through endorsement by the study Steering Committee the EA Problem/Opportunity Statement (Phase 1 of the Class EA process) was confirmed.

The detailed problem/opportunity statement that was defined is as follows:

***“The river that flows through London’s downtown has many names:***

- ***Deshkan Ziibiing (known to the Anishnaabeg and Lenape of the Great Lakes);***
- ***Kahwy^hatati (ONYOTA:KA); and,***
- ***The Thames (John Graves Simcoe)***

***This river is both our inheritance and our living legacy. It is our collective responsibility to maintain and enhance this shared natural, cultural, recreational and aesthetic resource. The One River Master Plan Environmental Assessment will consider the area historically influenced by the Springbank Dam and will provide a plan that coordinates critical infrastructure projects in ways that improve the overall health of the river, identifies and creates an understanding of potential impacts these projects may have on downstream communities, species at risk and/or endangered species and where possible avoids them and respects the vision of Back to the River’s “The Ribbon of the Thames” concept plan. This study, in the context of many other ongoing initiatives, will preserve for future generations this valuable resource and allow people of all abilities to enjoy and access this designated Canadian Heritage River.”***

The above statement was developed based on a review of the information provided during the various stakeholder engagement sessions held in 2016, as well as the background information available, the study objectives, and the input from the March 8, 2016 public meeting. This statement has also been endorsed by City Council.

### 2.2 Objective of the One River EA

The objective of the One River EA was to identify, evaluate and describe a range of recommended projects, plans and policies within the One River Study area to address identified infrastructure needs and that support the community's overall social, recreational, cultural, environmental, and economic vision for the Thames River.

As part of the EA process, policy and recommendations from other studies, plans, and projects were taken into consideration in selecting a preferred One River strategy based on their net natural, social/cultural, and technical/economic impacts. Key resources incorporated into this EA process included:

- The London Plan which has identified the City’s vision and directions for growth,
- the TVCP recommendations that relate to the riverfront environment, accessibility and recreational use objectives, and;
- the “Back to the River” design that provided an award-winning concept for The Forks of the Thames.

The One River EA recommendations form part of the implementation of the vision and objectives for the Thames River put forward in The London Plan, The TVCP and the “Back to the River” design.

**2.3 Ontario’s Environmental Assessment Act**

Ontario’s *Environmental Assessment Act* (EAA) was passed in 1975 and was first applied to municipalities in 1981. The EAA requires the study, documentation, and examination of the environmental effects that could result from projects or activities (Province of Ontario, 2010).

The objective of the EAA is to ensure that the possible effects of these projects are considered early in the planning process, when concerns may be most easily resolved, and to select a preferred alternative with the fewest identified impacts.

The EAA defines “environment” very broadly:

- *Air, land, or water*
- *Plant and animal life, including humans*
- *Social, economic, and cultural conditions that influence the life of humans or a community*
- *Any building, structure, machine, or other device or thing made by humans*
- *Any solid, liquid, gas, odour, heat, sound, vibration, or radiation resulting directly or indirectly from human activities*
- *Any part or combination of the foregoing, and the interrelationships between any two or more of them, in or of Ontario*

In applying the requirements of the EAA to projects, two types of EA planning and approval processes are identified in the Municipal Engineers Association’s (MEA’s) Municipal Class EA document (MEA, 2000, as amended in 2007, 2011 and 2015):

Individual EAs (Part II of the EAA): *“Projects for which Terms of Reference and an individual EA are carried out and submitted to the Minister of the Environment Conservation and Parks, (MECP) for review and approval.”*

Class EAs: *“Projects are approved subject to compliance with an approved Class EA process; provided that the appropriate Class EA approval process is followed, a proponent will comply with the requirements of the EAA.”*

## 2.4 Environmental Assessment Process

The One River EA was undertaken according to the five phases of assessment defined in the MEA's Municipal Class EA Document (MEA, 2000, as amended in 2007, 2011, and 2015) and illustrated in Figure 2-1:

- Phase One: Definition of the Problem
- Phase Two: Identification and Assessment of Alternative Solutions, and Selection of a Preferred Solution
- Phase Three: Identification and Assessment of Alternative Sites/Design Concepts, and Selection of a Preferred Site/Design
- Phase Four: Preparation of an Environmental Study Report (ESR)
- Phase Five: Implementation

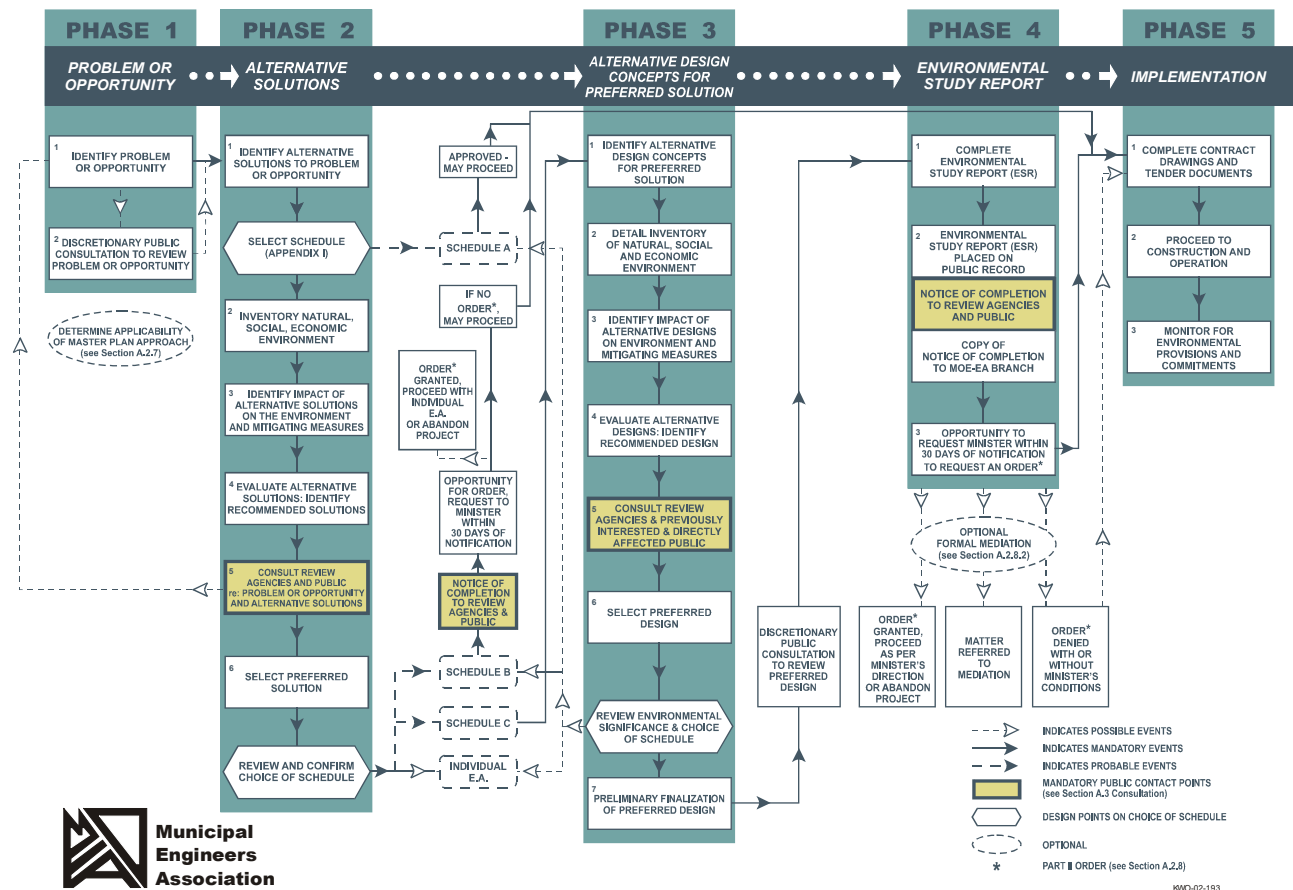


Figure 2-1: MEA Municipal Class EA Process

The Class EA document categorizes projects as Schedule A, B, or C, depending on their characteristics. The schedule under which a project falls determines the planning and design phases that must be followed (MEA, 2000, as amended in 2007, 2011, and 2015):

- 1) Schedule A projects are minor operational and upgrade activities and may go ahead without further assessment once Phase One of the Class EA process is complete and the project is reviewed, and a solution is confirmed.
- 2) Schedule B projects must proceed through the first two phases of the process. Proponents must identify and assess alternative solutions to the problem, inventory impacts, and select a preferred

solution. They must also contact agencies and affected members of the public. Provided that no significant impacts are found, and no requests are received to elevate the project to Schedule C or undertake the project as an Individual EA (Part II Order), the project may proceed to detailed design (Phase five).

If there are major issues that cannot be resolved upon completion of the final ESR, individuals may request the MECP to require the proponent of the study to comply with Part II of the EAA. Upon receiving a Part II Order Request, the Minister reviews the request and study information, and makes one of the following decisions: deny the request, refer the matter to mediation, or require completion of an Individual EA. Many factors are considered by the Minister in making decisions, including the adequacy of the planning process, the potential for significant adverse environmental effects after mitigation measures are considered, the participation of the requester in the planning process, and the nature of the request (MEA, 2000, as amended 2007, 2011, and 2015).

## 2.5 One River Master Plan Process

The One River Master Plan consists of three primary components. The One River Master Plan components include:

- Springbank Dam
- The Forks of the Thames
- River Management Plan

The MEA Master Plan process provides two common approaches for projects referred to as Approach 1 and Approach 2. Approach 1 completes phases 1 and 2 the Municipal Class EA process with the master plan completing a broad level assessment requiring more detailed investigations for specific projects identified within the master plan. Under Approach 1, the master plan document is made available to the public for 30 days and is approved by city Council. Approach 2 also completes phases 1 and 2 of the Municipal Class EA process but is executed at a level of detail to complete the requirements for Schedule B projects.

The River Management Plan of the One River EA followed Approach #1 of the MEA's Municipal Class EA process and meets the requirements for Phases 1 and 2. The Springbank Dam and Forks of the Thames projects followed Approach #2 of the MEA's Municipal Class EA process and meet the requirements for Phases 1 and 2 of the EA process and the level of investigation and documentation is sufficient to fulfil the requirements of a Schedule B project.

The overarching "One River Strategy" incorporates the recommendations for the River Management Plan as well as the selected preferred alternatives for the Springbank Dam and Forks of the Thames. Projects recommended in the River Management Plan component of the One River Strategy may require more detailed investigations to fulfil the specific recommended Schedule requirements as applicable. The Schedule B Forks of the Thames and Springbank Dam projects can be taken forward to the next steps involving design and construction.

## 2.6 Two Stage Process

The options for The Forks of the Thames and River Management Plan components of the EA are dependent on the future water level of the Thames River, and therefore rely on the future status and function of the Springbank Dam. To inform the development and evaluation of options for The Forks of the Thames and the River Management Plan it was necessary to finalize the status and function of the Springbank Dam. To first address the status and function of the Springbank Dam, the One River Master Plan EA was conducted in two stages as illustrated in Figure 2-2.

- **Stage 1:** The objective of Stage 1 was to select a preferred option for the future status and function of the Springbank Dam with respect to reinstatement or decommissioning.

- **Stage 2:** Once the option for the Springbank Dam future status and function was selected, Stage 2 EA components included:
  - The River Management Plan, which consist of different types of projects related to infrastructure and river improvements,
  - The Springbank Dam Schedule B EA and;
  - The Forks of the Thames Schedule B EA.

The study areas specific to the two Schedule B projects are illustrated in Figure 1-1. The project timeline showing significant project milestones, events and the two-stage process is illustrated in Figure 2-3.

## 2.7 Study Team

The One River EA Master Plan study was conducted under the guidance of the City of London Steering Committee with the assistance of a consultant project team. The One River Study Team consisted of:

### City of London Project Team

- One River Project Manager – Ashley Rammeloo, Manager, Engineering
- One River Project Coordinator – Daniel Hsia, Water Demand Manager, Water Engineering

### One River City Steering Committee

- Kelly Scherr – Managing Director of Environmental and Engineering Services and City Engineer
- Scott Mathers – Director of Water and Wastewater
- John Fleming – Managing Director of Planning – City Planner
- Scott Stafford – Managing Director of Parks and Recreation
- Andrew Macpherson – Manager, Planning – Environmental & Parks Planning

### Consultant Project Team

- Tom Mahood – JACOBS
- Laurie Boyce – JACOBS
- Mitch Jewson – JACOBS
- Jillian Schmitter – JACOBS
- David Van Vliet – Matrix Solutions
- Amanda McKay – Matrix Solutions
- John Parish – Matrix Solutions
- John MacDonald – Matrix Solutions
- Arnie Fausto – Matrix Solutions
- Lisa Prime – Prime Strategy & Planning
- Jim Faught – LURA
- Liz Nield – LURA

## 2.8 Implementation of the One River Environmental Assessment

### 2.8.1 Environmental Assessment

This Master Plan level EA components in Stage 1 and the Schedule B components in Stage 2 were initiated at the commencement of the project and followed the process outlined in the Municipal Engineers Association's (MEA's) Municipal Class EA document (as amended in 2007, 2011, and 2015) for EAs. The MEA EA guidelines provided the initial guidance on the tasks to be completed for the One River EA and then the scope of work to be completed was tailored to meet the specific requirements of the One River EA. A collaborative public and stakeholder consultation process as well as engagement with First Nations were key components of the EA. Consultation and engagement activities included:

- **Mailing List:** Agencies and other stakeholders were identified in consultation with the City, and a study mailing list was generated. The mailing list was updated regularly throughout the study

following Public Information Centers (PICs) and as members of the public contacted the EA project team.

- **Notice of Commencement:** A notice was published in local newspapers and on the City’s website and social media accounts, and sent to agencies, First Nations, and stakeholders identified in the study mailing list by mail, email, or both.
- **Comments and Feedback:** Comments and feedback received from agencies, First Nations, stakeholders, and members of the public were collected, considered and documented throughout the EA.
- **Project Meetings, First Nations Engagement, and Stakeholder Consultation:** Meetings were facilitated to provide updated study information and receive comments and guidance throughout the study. Meetings were held with the following committees and stakeholder groups:
  - **Steering Committee** – Meetings took place with the City Steering Committee to provide project updates, receive comments and feedback, and coordinate project efforts and recommendations with City departments.
  - **Agency Committee** – Meetings took place with the City, UTRCA; MECP, Ministry of Natural Resources and Forestry (MNR), Lower Thames Valley Conservation Authority (LTVCA); and the Department of Fisheries and Oceans (DFO) to receive comments and receive regulatory guidance throughout the project.
  - **First Nations and Metis** – The City engaged with the local First Nations and Metis throughout the study, providing study updates and relaying feedback to the project team. The Project Team also hosted Information Centers with First Nations.
  - **Community Group Consultation** – Meetings took place with a number of community and local special interest groups (such as Nature London, Thames River Anglers, and London Rowing Club, among others) to receive comments and feedback on the project.
- **Public Information Centers:** Three PICs were held for this project as well as six pop-up consultation events. The first PIC focused on Stage 1 of the EA and presented options for the Springbank Dam’s future status. The second PIC presented Stage 2 efforts including alternatives for a free flowing Springbank Dam, The Forks design, and the River Management Plan. The third PIC presented the preferred alternatives for the Springbank Dam, The Forks design, and the River Management Plan.
- **Notice of 30-day public comment period:** The City issued this notice to solicit comment from stakeholders and the general public on the draft EA report and recommendations.
- **Notice of Project Completion:** The EA is completed with the Notice of Project Completion and the completion of the 30-day public comment period and after addressing any Part Two Order requests.

**2.8.2 Existing Environment Conditions**

During Stage 1 of the EA, the study team collected and reviewed the background information and historical environmental data associated with the One River study area. This task identified the scope of the field studies necessary to support the characterization of the One River study area, meet the requirements of the City of London environmental management guidelines, and support the development and evaluation of dam options in Stage 1. Background environmental data was compiled, necessary field studies were conducted, and assessments were completed in 2017. The information was documented in the Stage 1 draft River Characterization report that was subsequently updated and finalized in Stage 2. The River Characterization report is included in Appendix A-1.

The initial background review in Stage 1 focused on a review of historical reports relevant to the study effort and various publications that provided insight into the public’s understanding and commitment to the project goals. The Stage 1 review was refined to concentrate on relevancy to the Springbank Dam options evaluation so additional background review remained, following Stage 1, for the River Management plan options and the Schedule “B” project components.



Further background review specific to the investigations carried out on the dam during the years since it initially failed was included in the background document collection and review for Stage 2. Additional structural information and local natural heritage and recreational use information was required to be collected in more detail in Stage 2 to support both the dam and the Forks Schedule “B” project scopes. The Stage 1 and Stage 2 background ecological assessment information is included in the Natural Heritage Setting report in Appendix A-2.

### 2.8.3 River Characterization Assessment

In Stage 1 and Stage 2 of the One River EA, the study team completed a river characterization of the One River Study Area. The objective of this effort was to describe the existing river conditions within the study area, specifically relating to the changes in hydraulics and geomorphology that have occurred since the Thames River has been free flowing due to the non-operation of Springbank Dam. The outcome of this report provides context and an understanding of the current and potential future character of the river as it works to adjust to the new sediment and flow regimes.

The following components are included in the river characterization:

- **Hydrology** – summary of the flow conditions within the Thames River including descriptions of flooding, wastewater assimilation, surface water takings
- **Hydraulics** – evaluation of hydraulics (depth, velocity and shear stress) using both 1D and 2D models for a range low and high flow conditions
- **Geomorphology** – assessment of erosion areas, bank and bed substrate and channel forming hydraulics
- **Water Quality** – assessment of the water quality in the Thames River before and after dam failure

The River Characterization Report for Stage 1 and Stage 2 is included in Appendix A-1.

### 2.8.4 Natural Heritage Assessment

In Stages 1 and 2 of the One River EA, the study team conducted a natural heritage assessment of the One River study area to support the Master Plan and Schedule B project requirements. The objective of this assessment was to understand the existing ecological conditions in the Thames River and adjacent valley corridor. The outcome of this assessment also provided an overview of opportunities and constraints that existed within the One River Study area relating to ecology. The following components were included in the Natural Heritage Assessment:

- **Terrestrial Environment** – description of the vegetation, wildlife and terrestrial wildlife habitat that have been documented within the study area
- **Aquatic Environment** – description of the aquatic habitat, fisheries and mussel communities that have been documented within the Thames River
- **Species at Risk and Species of Concern** – evaluation and description of the confirmed and potential species at risk that have been documented or have to the potential to occur within the study area
- **Significance and Function** – assessment of the significant natural heritage features and functions within the study area

The Stage 1 and Stage 2 detailed natural heritage assessments are included in the Natural Heritage Setting report in Appendix A-2.

### 2.8.5 Archaeological and Built Heritage

The Thames River is a Canadian Heritage River that has been an important cultural feature of the region for more than 11,000 years. It is an area of aboriginal/First Nations and European cultural heritages, and as such has the potential for unknown, yet discovered archaeological resources. A Stage 1

Archaeological Assessment was completed which involved a desktop investigation to review relevant background material information, evaluate the study area's archaeological potential, and provide information to make recommendations regarding the need for additional archaeological work where impacts are anticipated in undisturbed areas. All work met the requirements of the Ontario Ministry of Tourism, Culture and Sport's (MTCS) 2011 Standards and Guidelines for Consultant Archaeologists in accordance with the Ontario Heritage Act. The information was used to aid in the alternatives assessment during Stage 1 of the EA.

The Schedule B project areas for the Springbank Dam and The Forks required a Stage 2 Archaeological Assessment which included test pitting in the areas defined for the two Schedule B projects. This effort was also carried out to meet requirements of the Ontario Ministry of Tourism, Culture and Sport's (MTCS) 2011 Standards and Guidelines for Consultant Archaeologists in accordance with the Ontario Heritage Act.

The Stage 1 and Stage 2 Archaeological Assessment reports have been included in Appendix A-3.

**2.8.6 Forks of the Thames Environmental Impact Study**

In Stage 2 of the One River EA, the study team conducted an Environmental Impact Study (EIS) for The Forks of the Thames. The objective of this EIS was to assess, with a sufficient level of detail, the impacts of the preferred alternative on the natural features and functions within the Forks EIS study area and satisfy the level of detail necessary for a Schedule B EA and the Environmental Management Guidelines of the City. Requirements for the EIS are outlined in the City's Environmental Management Guidelines (Section 1.0) (City of London, 2017) and were consistent with the objectives of The City's Official Plan Environmental Policies.

The objectives of The Forks of the Thames EIS include:

- Defining the natural heritage features (Terrestrial, Aquatic, Semi-aquatic and Species at Risk (SAR)) and functions of the Thames River within the Study Area
- Predicting impacts based on the preferred alternative identified in the One River EA
- Providing mitigation measures during construction, operation, and post construction
- Identifying residual impacts

The Forks of the Thames EIS Report has been included in Appendix A-4.

**2.8.7 Springbank Dam Decommissioning Environmental Impact Study**

In Stage 2 of the One River EA, the Study team also conducted an Environmental Impact Study to examine the impacts of decommissioning the Springbank dam. The objective of this EIS was to assess, with a sufficient level of detail, the impacts of the preferred alternative on the natural features and functions within the Springbank Dam EIS Study Area and satisfy the level of detail necessary for a Schedule B EA and the Environmental Management Guidelines of the City. Requirements for the EIS are outlined in the City's Environmental Management Guidelines (Section 1.0) (City of London, 2017) and are to be consistent with the objectives of The City's Official Plan Environmental Policies.

The objectives of the Springbank Dam Decommissioning EIS include:

- Defining the natural heritage features (Terrestrial, Aquatic, Semi-aquatic and SAR) and functions of the Thames River within the Study area
- Predicting impacts based on the preferred alternative identified in the Master Plan EA
- Providing mitigation measures during construction, operation, and post construction
- Identifying residual impacts

The Springbank Dam Decommissioning EIS Report has been included in Appendix A-5.



### **2.8.8 Springbank Dam Condition Report**

In Stage 2, the Study team conducted a condition review of the Springbank Dam. The purpose of the review was to assess the current condition of the dam at a high level and gather information to support the Stage 2 alternatives evaluation for the dam decommissioning.

The dam condition review report has been included in Appendix A-6.

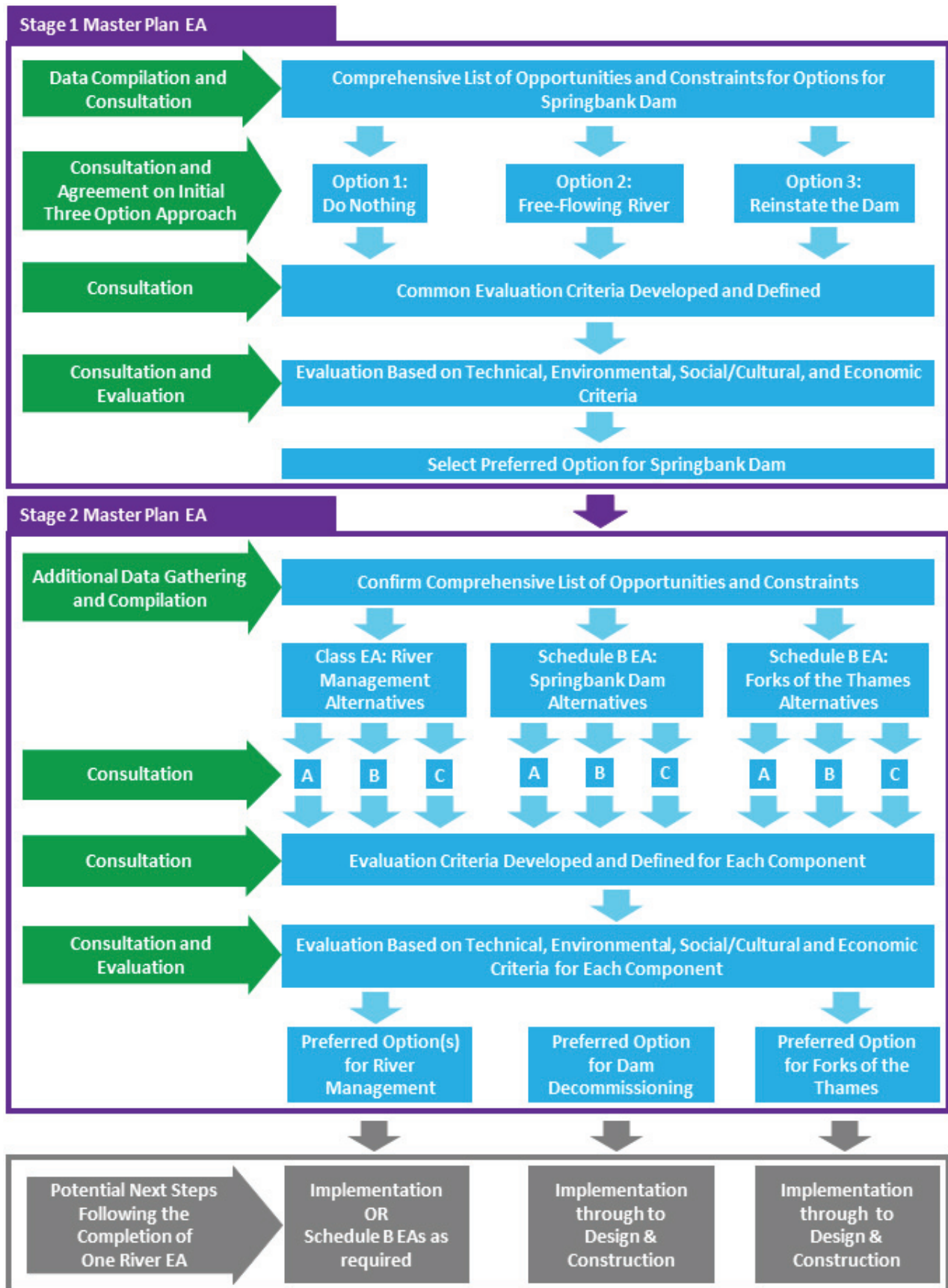
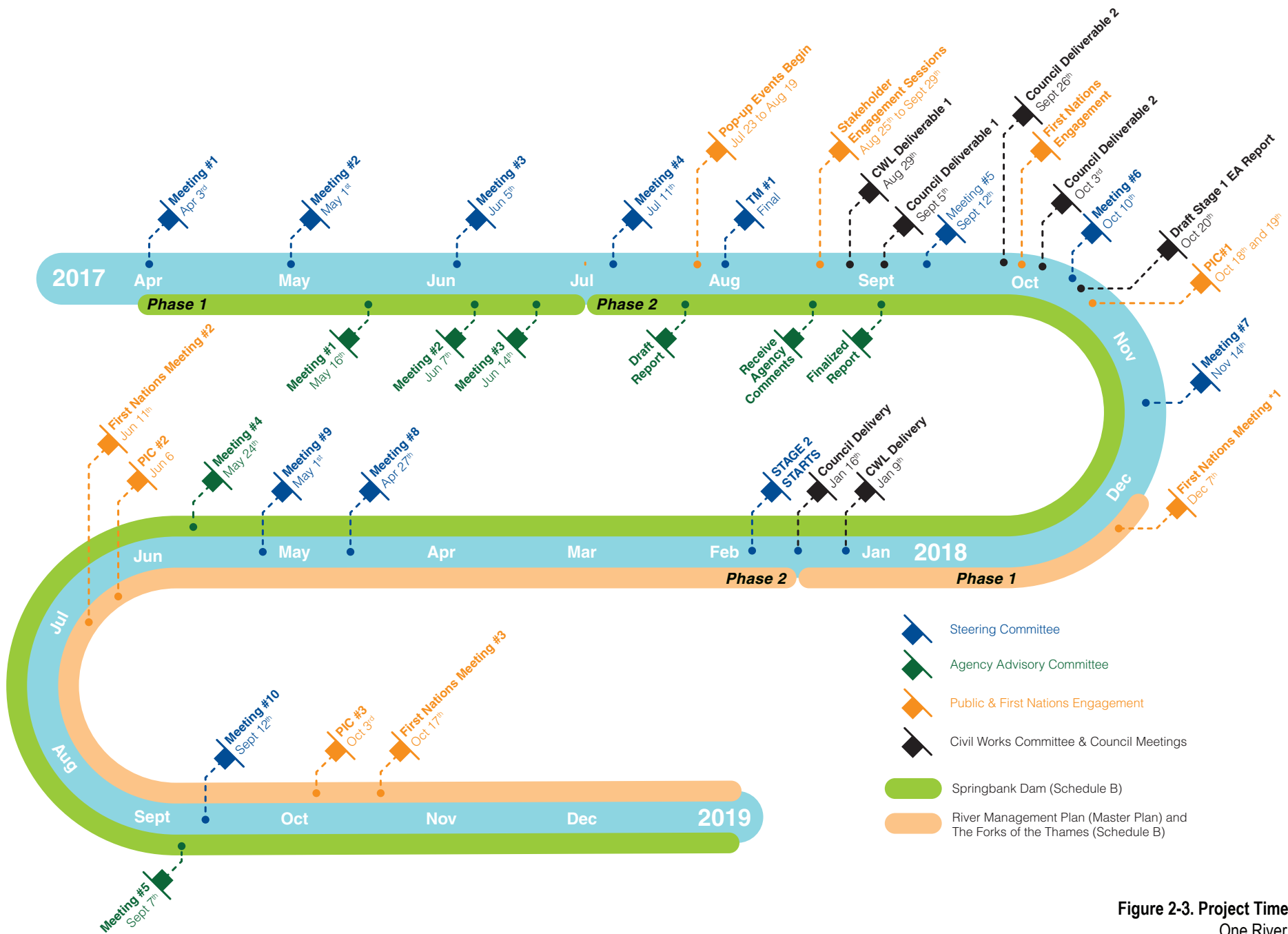


Figure 2-2. One River EA Process

One River EA  
City of London  
London, Ontario



**Figure 2-3. Project Timeline**  
 One River EA  
 City of London  
 London, Ontario