Millennium Water

The Southeast False Creek Olympic Village
Vancouver, BC

2010 GLOBE Awards for Environmental Excellence
Excellence in Urban Sustainability
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Executive Summary

Millennium Water, the home of the Vancouver 2010 Winter Olympics, is part of a larger overall development program initiated by the City of Vancouver to revitalize the historic industrial lands on the South shore of False Creek. The redevelopment of these lands has been the focus of intense public discussion and debate for the past two decades and numerous planning teams and political masters have added their mark to what is now the approved Southeast False Creek Official Development Plan (ODP).

Southwest False Creek borders the southeast shore line of False Creek and is part of a broader mixed use community that stretches from First Avenue back through the lower light industrial and commercial precinct into the Broadway retail and commercial corridor and beyond to the residential enclave of Mount Pleasant. The area is interconnected to the downtown core by mass transit systems at Main Street (the Expo Line) and the recently completed Canada Line at the southern Cambie Street bridgehead.

The Downtown Core is now the home to better than 100,000 residents whose impact on the dynamic and functionality of the city has been quite profound. SEFC is the last significant waterfront development in the central city and completes the living edge from Granville Island to the large residential development along Main Street that forms the eastern edge of the False Creek inlet. Key components of the site and its context are:

- The new community connects the existing Granville Island and the West False Creek residential neighbourhood with the high-rise towers that form the ‘Gateway’ into the City center from the East.
- The new community is linked into the central city business and entertainment core with two rapid transit lines, water based taxi services, an extensive seawall pedestrian and bicycle system, a streetcar link to Granville Island and a planned link past the Olympic Village to Science World, Chinatown, Gastown and back to the transportation hub at Waterfront Station. As a consequence, dependence on motor vehicle transportation has been significantly reduced.
- The new community connects the existing Granville Island and the West False Creek residential neighbourhood with the high-rise towers that form the ‘Gateway’ into the City center from the East.

The Village comprises 1100 units of residential accommodation including 252 units of rental housing and 60,000 of retail space at the heart of the development

- Community amenities are provided in support of the broader community and include:
  - Community center with gymnasium, meeting rooms and exercise facilities
  - A large day care facility with outdoor play space
  - A facility in support of non-motorized boating which will be limited to the eastern reaches of the False Creek basin
  - A restaurant operated by the City of Vancouver.

- The Village has been developed to meet the CASGBC LEED® Gold standard and two buildings, namely the community center and multi unit net zero building will meet the LEED® Platinum standard.

- The US Green Building Council has awarded the precinct with the LEED® ND Gold designation.

Millennium Water has been developed to incorporate numerous innovations in planning, design and community building and makes use of passive design as a key component of the reduction in energy and resource use. The project includes creative approaches to site infrastructure, the control and management of stormwater as well as innovative approaches to energy conservation and generation. Environmental sustainability by decreased resource consumption was achieved by implementing a number of site-wide strategies, including:

- The widespread adoption of passive design elements that reduce building energy needs.
- Utilization of innovative technology that take advantage of renewable sources of energy, including the Neighbourhood Energy Utility, which uses heat from waste sewage to heat water, and solar absorption technology used to mitigate building heating and cooling needs.
- The use of resource monitoring systems within suites to build awareness and responsibility towards individual resource use.
- Utilization of high efficiency radiant heating and cooling systems.
- Extensively integrated rainwater capture systems, including green roofs and cistern systems, storing rainwater for non-potable uses such as irrigation and toilet flushing, significantly reducing reliance on potable city water.
- A stormwater mitigation system that includes the use of bioswales and artificial wetlands to treat runoff prior to exploitation into False Creek and create powerful and aesthetic public amenities.
- The use of permeable surfaces to reduce stormwater runoff (100% of surfaces in SEFC).

Innovation that combines environmental sustainability with the creation of a livable, vibrant community was the focus of Millennium Water at SEFC. These integrated values provided the design and execution mantra for this new development, demonstrating a futurisic version of how communities will look, function, and in turn, impact social and environmental concerns.
Clockwise from top: Gull chairs on the sea wall at noon; a place to rest after cycling the extensive sea wall pedestrian and bicycle corridor; Seawall amphitheater: Creating community space that is artful, beautiful and functional; Aquabus stationed at a dock nearby; Play area for children with a naturalistic touch using logs and rocks; View of the Southeast False Creek seawall.
Community Profile

Millennium Water represents the first stage of the Southeast False Creek development. Slated for completion by 2020, the entire Southeast False Creek development will represent approximately 6 million feet of development, comprising homes for a community of 12,000 to 16,000 people in some 7,200 residential units. The completed development will maintain goals of environmental sustainability, livability and vibrancy outlined within the ODP while providing community provisions such as childcare facilities, an elementary school, public plazas, promenades and pedestrian connections to Greater Vancouver, and an extensive park system totaling over 10 hectares.

As the first completed phase, Millennium Water offers some 1.4 million square feet of commercial and residential space, representing over 1,100 residential units. Designed as a complete community, this neighborhood offers accessibility to a wide range of social niches as well as providing residential, economic, and recreational opportunity to its residents and to the greater Vancouver community. Design of the community was done in a manner that acknowledges the high aspirations of environmental sustainability set for development with the realization of a healthy, functional, socially equitable neighborhood.

These features include:

- Parkscape that serves as community amenities, functions to treat stormwater from the site, and restores urban ecology through the provision of green space (such as Hinge Park and Habitat Island).
- Further community amenities including a fully functional community centre, a large daycare with outdoor play spaces, a recreational boating facility, public plazas and art spaces, a commercial district and provisions for an onsite primary school; close proximity to cultural and social amenities offered by the Greater Vancouver community.
- The opportunity for urban agriculture through extensive residential gardens, green roofs and the potential for a centralized farmer’s market.
- Broad connections to multiple modes of transportation including two rapid transit lines, a water-based taxi, a streetcar link to Granville Island, and extensive bicycle and pedestrian pathways all designed to reduce reliance on personal motor vehicles.
- Buildings that conform to a minimal LEED® Gold Standard, with the overall community striving for LEED® Gold (including a Net Zero Senior’s Center).
- A Neighborhood Energy Unit that recovers heat from sewage.
- Buildings that use 40% less energy than conventional buildings through the implementation of passive design strategies and innovative heating technology, while providing a healthy indoor environment with site-wide natural ventilation, natural sources of light and the use of non-toxic finished to minimize material off-gassing.
- Rainwater capture for use in irrigation, evaporative cooling and non-potable uses within buildings, reducing reliance on potable City water and managing stormwater discharge into the False Creek Basin.
- A mix of housing types, including market, affordable, rental, and Senior’s housing, providing social integration within the community.
- An overarching residential plan based on a village model, with employment opportunity, schools and occasion for social integration all within the dense local community.
Illustrative Materials

Aerial view of Southeast False Creek taken from City of Vancouver archives.

Southeast False Creek in 1978 (above) and 2003 (below) taken from the Cambie Street Bridge.

Early Design Concepts.

Southeast False Creek in Context. Official Development Plan (ODP) for Southeast False Creek.

Official Development Plan (2017) for Southeast False Creek.

Aerial View of Millennium Water.
This schematic shows four different building typologies from an energy systems perspective, and how they are all connected to the district heating and cooling system.

Above: Solar arrays on the Community Centre overlooking North False Creek and BC Place; Community Centre during construction.

Above: The capillary mat heating system is one of the passive design strategies at Millennium Water; Radiant heating and cooling using passive design.

Above: Solar Panels at the Net Zero building at Millennium Water.

Above: Artist’s rendering of the Energy Centre; Schematics of the Neighbourhood Energy Utility (NEU).
Above: An illustrative plan of the Olympic Village by landscape architects Durante Kreuk highlights the intensity of vegetation on the rooftops throughout the site. Combining intensive and extensive green roofing, fifty percent of the overall area is vegetated. Rainwater Harvesting in Millennium Water; Rainwater circulation diagram shows how rainwater is captured, stored, circulated and used within a typical building.

Clockwise from left: Parcel 6 courtyard; Filtration ponds in Parcel 6; Reflecting ponds at Parcel 4; circulates stored rainwater to ensure it stays clean. Hinge Park, a community park that acts as a meadow to filter stormwater from the site.

Millennium Water
The Southeast False Creek Olympic Village, Vancouver, BC
Above: Habitat Island was constructed to make up for habitat that was lost when another area of the False Creek shoreline was filled to enable development. The island includes vertical snags, native vegetation and a natural shoreline, which has attracted bald eagles and a variety of waterfowl.

Durante Kreuk were playful in their approach to green roof design. This aerial view of Millennium Water shows plants placed into shapes showing motifs of Olympic athletes playing hockey, curling, and competing at luge.

Seawall viewings of Southeast False Creek; Rooftop plantings will be automatically irrigated when required using stored rainwater.

From top: Hinge Park; An art installation of an old watermain in Hinge Park; concept drawing of Hinge Park.
Stakeholder Documentation

Historically, the southeast shore of False Creek acted as an industrial hub, the site of a busy wartime shipyard, steelworks and salt processing facilities. The gradual cessation of industrial activity within False Creek left a quasi-abandoned contaminated brownfield bearing the marks of its industrial past. From this vacated area grew a vision of development, encompassing the idea of a thriving mixed used community that embodies the best practices in environmental sustainability, technological and design innovation, as well as collaboration at all levels of participation.

The process of bringing Southeast False Creek from a vacant brownfield to a model sustainable community began with planning designations originating within the Vancouver City Council of the 1991, who declared that the acquired Southeast False Creek lands be redeveloped into a residential community informed by notions of environmental sustainability and sustainable urban design. The process towards the development of a Policy Statement was molded by extensive public consultation and discussion between design team members, including architects, engineers, developers, and planner-regulators. This included the SEFC design charrette, which brought together industry professionals, the City, and experts in sustainable urban design to identify key performance targets and design strategies, as well as input from an advisory group composed of interest groups and professional associations. The resultant SEFC Policy Statement gave 14 key parameters for development, outlining sustainability, cultural viability, social equitability, and livability goals for SEFC. The SEFC Policy Statement became the foundation for SEFC development, subject to public review and revision from industrial stakeholders, and evolving into the Official Development Plant (ODP) that would act as the blueprint for the site development.

The ODP adopted by City Council in July 2005 acted to define social, environmental, and economic sustainability goals for SEFC development. Foremost was the desire to create a complete community that would uphold the highest elements of urban livability and environmental sustainability.

The design team for Millennium Water sought to work within the guidelines set out by the ODP, refining these strategies in a way that demonstrated the desire to create ‘a new way of living in a city.’ Collaboration, integration, and consultation informed Millennium's sustainable design strategy, relying on an Integrated Design Process including consultants, external stakeholders, and industry experts as well as extensive public consultation to arrive at a final organic vision of Millennium Water at SEFC as the community of the future.

A complete community that would uphold the highest elements of urban livability and environmental sustainability.
Core Application

URBAN PLANNING

Vancouver’s recent urbanism renaissance is recognized for the invention of high density/ mixed use development that enhances streetlife by infusing residential energy. This strategy has proved immensely successful in the downtown peninsula, where the West End and Central Business District are generally characterized by towers and street scale podiums.

As attention turned to the development of the Southeast shore of False Creek, where much of the land is owned by the City of Vancouver, it became important to determine whether form should follow finances (the creation of value) or follow context (the creation of place). City staff had explored this critical city-building question prior to the awarding of the 2010 Olympic Games. During that time, advocates from the design professions recommended new approaches to density and form as an extension of SEFC’s industrial heritage—qualities that had not been evident in the downtown peninsula. The design profession challenged staff, and City Council, to deliver significant urban densities while reinforcing the integrity and identity of the lower-scaled character prevalent on this last undeveloped tract of land within False Creek.

Notwithstanding the challenging Olympic time line, Council agreed, concluding that ‘authentic sustainable place-making must drive design intent.’ The invention of new lower-scaled mid-rise buildings was coupled with innovative approaches to public realm design, including open spaces, streets and the waterfront. This has produced a distinctive Olympic Village neighbourhood centre (The Shipyard) whose identity will be reinforced by subsequent neighbourhoods (The Workyard and the Railyard) towards an honest and contemporary expression of a uniquely Canadian West Coast sustainable urban lifestyle.

A Place “Where People Live, Work, Play, and Learn”

The Official Development Plan (ODP) for SEFC set the bar high for integrated neighbourhood sustainability. The plan embraced the SEFC Policy Statement incorporating an unprecedented level of commitment to sustainability. The plan established an urban design foundation, determining the configuration of the neighbourhood’s parcels, parks, rights-of-way, public amenities, densities and massing. The SEFC ODP bylaw was approved by Vancouver City Council at a public hearing on March 1, 2005 and enacted on July 19, 2005.

The City’s goal was to develop a mixed use neighbourhood with a diversity of residential applications. The development was to accommodate people of all incomes and ages, with family housing as a priority. This ambitious vision was to create “a place where people live, work, play, and learn in a neighbourhood designed to maintain and balance the highest possible levels of social equity, livability, ecological health and economic prosperity.” 12 urban design principles detailed in the ODP provided a basis to govern the site’s physical form and character.

1. Overall basin form legibility
2. Distinct neighbourhood precincts
3. Integrated community
4. Street hierarchy
5. Connected public open spaces and parks
6. Integrated transit
7. Vibrant commercial heart
8. Waterfront animation
9. Clustered community services
10. Heritage recognition
11. Incremental varied development
12. Demonstrated sustainability
The principles in the SEFC Policy Statement informed the approach to sustainability in the ODP. The plan encompasses social, economic and environmental sustainability with each Policy Statement principle addressed at length and integrated throughout.

**Social sustainability**: goals include affordable housing and access to nutritious food, health care, safety and childcare facilities. In addition, employment, education, arts, culture and recreation are discussed under the umbrella of “enhancing human capacity.”

**Economic sustainability**: includes a focus on long-term economic viability and security, local self-reliance, an ecological economy that supports green business and technology, and economic advantage linked to the benefits of social and overall environmental sustainability.

**Environmental sustainability**: the ODP, with the SEFC Green Building Strategy provides specific guidelines to inform the approach to land use, buildings and environmental sustainability.

The development program expanded beyond the private residential realm to include significant public amenities—available to all residents, and a commercial center aimed at creating the feeling of a ‘Village’ that would eventually be the focus for the anticipated community of 16,000 residents. These amenities include:

- A 44,000 square foot community center with a 6,000 square foot day care center, boating support, recreational facilities, and restaurant.
- The restored Salt Building incorporating recreational facilities focused around gathering and entertainment such as a Brew Pub.
- Extensive park space integrated into the transportation and stormwater management systems along with a fully integrated seawall with real access to the waters edge.
- A Neighbourhood Energy Utility drawing some 65% of the community energy from waste sewer heat.
Memorable experiences are directly related to places and time. There is a certain symbiotic relationship between the creation of memories and the influence of the physical environment, built or natural, upon human activity. It is therefore important, in the "creation of place," to recognize this influence and understand how to properly shape perception and experiences through effective urban design.

The necessary ingredients of placemaking include a cogent ensemble of buildings that shape spaces through their form, scale, materiality and detailing, combined with an effective response to human comfort with respect to sun, noise and smell, providing a theatrical backdrop for the observation and enjoyment of human interaction.

Urban design excellence may instead be best achieved by being purposefully incomplete, especially if the physical change is happening rapidly without the benefit of time’s patina (the establishment of “context”). Incompleteness, and related unpredictable opportunities for use and participation, may best lead to places that become memorable, because they will evolve towards something more authentic over time through ongoing intervention, programming and use, and as such have the more profound impact on community.

Placemaking is only achieved if connections to place are developed through the creation of significant meaning and memory. As such, this translates into a community that values and respects human and ecological health benefits.

The idea of Village respects both the need for livability along with the opportunity for economic value—bringing the residents closer to the center of employment in the central business district while also providing employment opportunities within the village center.

The supporting infrastructure is designed with innovation and creativity in mind—cognizant always of the contribution to public realm and the sense of place. This is evident in the design of road ways, sidewalks, public parks and the seawall. All were conceived to inspire interest and involvement from the residents and visitors. Hinge Park acts as a stormwater management system and a demonstration of how water is treated and how it contributes to the life force of nature.

Each of the infrastructure systems contributes to the overall economic value of the project—creating and contributing to the lifestyle and economic well-being and value of the community, as such demonstrating the replicability of this approach to sustainable community building.

INTRODUCTION OF SYSTEMS

The development of the Southeast False Creek ODP underwent one of the most extensive planning and stakeholder reviews of any development area in Vancouver. This process took almost a full decade before the final approved plan was accepted by City Council. This process was guided by successive Councils and planning teams culminating in the proposal call for site development that followed from the award of the 2010 Winter Olympics to Vancouver.

Through this process the City of Vancouver adopted a series of Sustainable Community initiatives including the Green Building Strategy and the commitment to LEED® building design.

The Millennium Water Olympic Village project began with an Integrated Design Workshop attended by some 120 interested contributors and members of the project team—including the design team, the builders and the approving authorities. This group also drew from community based expertise in the planning and implementation of Sustainable Communities and Green Building design. The workshop was facilitated by CMHC and orchestrated by Vancouver’s Lighthouse Sustainability center working with Bill Reed as the chair. The participants attended an extensive briefing on the history and background and the City of Vancouver expectations for the project before being divided into select groups

Placemaking is only achieved if connections to place are developed through the creation of significant meaning and memory.
to focus on a range of key issues. From these ‘blue sky’ sessions a series of key objectives and performance indicators were established and the teams went on to evaluate how each strategy might integrate into a collective approach to the development of the community.

It was recognized from the project outset that the objectives would only be achieved through a fully integrated approach that begins with innovative attitudes to site planning, site infrastructure and passive design and is then followed by the development of building designs and systems that built on the basic integration with the site wide infrastructure. This process occurred with the aspiration to embrace environmental stewardship along with social stewardship and financial sustainability.

This approach could only be taken given the City of Vancouver’s commitment to the development of the Neighbourhood Energy Utility and the further application of innovative approaches to stormwater collection and treatment. Further the City committed to a new form of development not previously applied in Vancouver that essentially followed the more traditional European city planning model of zero lot line mid-rise development with inner block courtyards. This model of development gave direction to the vision of more socially integrated living environment supported by carefully manicured public spaces and recreational amenities that would support this increased density.

The planning process embraced the need to fully integrate key land use parameters with the transportation opportunities and to build on the integration of stormwater treatment with public parks and recreational facilities.

Throughout the planning and design the City planning team and Millennium’s consultant team worked to explore, develop and implement design solutions that focused on integration across the six themes of energy, land use, waste water, transportation, the natural environment and financial stability. In particular:

- Land use integration focused on the relationship between residential opportunities and employment in the downtown core—supported by the transportation opportunities that exist and are planned for the site. There are multi modal connection for public transit, bicycles, pedestrians and water born transit that all interconnect with the site, directly into the downtown commercial core.
- Housing choices and distribution across the site focus on the creation of a diverse and multi-level social community with ample provision for children, seniors and families. The building designs do not distinguish between these housing types and considerable care has been taken to create a diverse and highly articulated architecture that creates a sense of mixed and dynamic community.
- The infrastructure provided by the city focused on the provision of district energy and local stormwater run-off provided opportunities within the buildings and public spaces for innovative and sustainable solutions. The thermal utility allowed the building designers to evaluate and apply low temperature radiant technologies that increased the efficiencies available across the site. This built on the use of passive design as a means of controlling energy and resource consumption.
- The redevelopment of the natural environment—long destroyed by the industrial past allowed the development of natural bioswales for the treatment of stormwater run off. Further the historic shoreline was enhanced through the development of new island habitat for wild life in order to replace shoreline lost to infill along the seawall edge of the Olympic Village site. This Habitat Island has already drawn spawning fish and BC birdlife to its shores.
- Within the buildings the key environmental drivers have been carefully integrated to provide a solution that optimizes both energy consumption while providing the highest possible level of individual comfort. These systems combine together passive approaches to form and function while improving building envelope performance and installing systems with multiple levels of control that respond directly to occupant comfort needs.
- The design also fully integrated the use of green roofs to reduce heat island effects while using rainwater run off from these areas to significantly reduce potable water consumption. Stored rainwater is used for toilet flushing and is integrated into the evaporative cooling ponds that modify the internal courtyard environments.
- The parkade exhaust systems are integrated into the waste heat recovery and cooling systems and this heat is used to precondition the potable water used for domestic consumption. This system integrates four different functions together—parkade ventilation, cooling heat sinks, cooling heat recovery and domestic hot water.
Each of the systems provided has an aggregated impact on the financial performance of the building systems and on the longer term costs to the occupant. While at this stage in the evolution of sustainable community building the capital cost has been higher than the cost of conventional construction, much of this cost can be attributed to the learning curve and knowledge building amongst the design team and the general contractors and trades. It is anticipated that the type of assessment and knowledge sharing available through the project documentation, in particular The Challenge Series, will ensure that greater financial benefits accrue to the developer, builder and owner as these technologies become more integrated and interdependent.

It is to be noted that the City of Vancouver has already incorporated a number of innovations developed at Millennium Water into policy documents. In particular approaches to passive design, area measurement and the use of high performance exterior insulated wall systems have been covered and are freely available to interested parties. The Net Zero senior citizens building on Parcel 9 provides an excellent learning environment to foster the City’s movement towards a zero carbon building form.

The Challenges Series—sponsored by the design and construction team and supported by CMHC and Environment Canada along with the City of Vancouver and BC Hydro capture technical innovations while challenging the building design and construction community to meet the issues of climate change, resource depletion and the creation of socially and economically sustainable communities.

...to explore, develop and implement design solutions that focused on integration across the six themes of energy, land use, waste water, transportation, the natural environment and financial stability.
Supporting Material

AN INTRODUCTION TO THE CHALLENGE SERIES

The Challenge Series is a seven part book that explores the technological, planning and design innovation behind Millennium Water: The Southeast False Creek Winter Olympic Village. Responding to the large learning curve encountered by all parties during the planning and execution of Millennium Water, the design team was motivated to produce The Challenge Series to build capacity and knowledge of green building practices in both the public and private sector, as well as to cement the legacy of the community as one of the first of its kind in North America.

In order to best reflect the novelty and innovation of Millennium Water, the Challenge Series is organized into seven main topics that together defines the sustainable vision of this community. This format, and its free availability as chapters to interested parties through the Challenge Series website, reflects the educational intention of the document; that is, to take the lessons and approaches learned at Millennium Water and make them available in the continuing encouragement of green and sustainable community design.

To date, the Challenge Series website has received some 45,000 page views from 99 countries worldwide, demonstrating the reach and growing interest in green urban technologies and community planning. A recently completed print run of 2,500 copies of the completed Series has attracted interest from industry, government, universities, libraries, and individuals with a personal interest in sustainable urban communities.

...to take the lessons and approaches learned at Millennium Water and make them available in the continuing encouragement of green and sustainable community design.

Chapter One: History + Policy

Comprised of four subtopics, Sustainable Communities, History, Policy and Early Concepts, Chapter One begins by describing the early industrial history of Southeast False Creek. The chapter details the original visions as planning for development in the area progressed, detailing the roots of the defining concepts of sustainability within SEFC.

www.thechallengeseries.ca/chapter-01
Chapter Two: Planning + Olympics
Divided into four subtopics, Planning, Olympics, Development Process and Rezoning, Chapter Two charts the collaboration and consultation stages that comprised the planning foundation of the SEFC development, including the inclusion of Millennium SEFC Properties Ltd as the design team. Developmental aspects behind the decision to host the 2010 Winter Olympic Village on the SEFC site are also explored.

www.thechallengeseries.ca/chapter-02

Chapter Three: Public Space + Infrastructure
Chapter Three addresses four subtopics covering public spaces within SEFC: Placemaking, Parks + Waterfront, Green Infrastructure and Environmental Remediation. Elements of public and community amenities, including parks and public space, are covered, including the preliminary brownfield remediation process and elements of green infrastructure and landscape.

www.thechallengeseries.ca/chapter-03

Chapter Four: Architecture
The four subtopics in Chapter Four, Passive Design, Mixed-Use Design, Community Buildings, and Building Envelope, examine how architectural elements are utilized to meet goals of social and environmental sustainability as well as form the backbone of a healthy, thriving community.

www.thechallengeseries.ca/chapter-04

The design team was motivated to produce The Challenge Series to build capacity and knowledge of green building practices in both
Chapter Five: Energy
This chapter deals with elements of energy through four subtopics: The Neighborhood Energy Utility, Energy Design, Energy Implementation and Resource Management. The technical innovation behind sustainable sources of energy, including solar and heat recovery from waste, and ways of heating buildings is examined from the perspective of Millennium Water at SEFC.

www.thechallengeseries.ca/chapter-05

Chapter Six: Water + Building Landscape
Chapter Six examines Water for Domestic Use, Water on the Land, Green Roofs, and Green Amenities. The extensive implementation of technologies and design features to celebrate and manage water consumption, deal with and treat stormwater, and support community in an aesthetic and functional way through parks and urban agriculture is documented.

www.thechallengeseries.ca/chapter-06

Chapter Seven: Living Today + Tomorrow
Through the topics Interior Design, Health + Accessibility, Net Zero, and Looking to the Future, Chapter Seven explores the legacy of Millennium Water at SEFC. Including an exploration of interior design and personal health, Net Zero construction and the cooperation that drove development, this chapter examines Millennium Water: SEFC as “living proof that a modern neighborhood is available right now.” Mayor Gregor Robertson

www.thechallengeseries.ca/chapter-07

the public and private sector, as well as to cement the legacy of the community as one of the first of its kind in North America.
The City’s ambitious vision was to create “a place where people live, work, play, and learn in a neighbourhood designed
to maintain and balance the highest possible levels of social equity, livability, ecological health and economic prosperity”. 
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