

# Water Resources **Redevelopment Strategy**

July 2016







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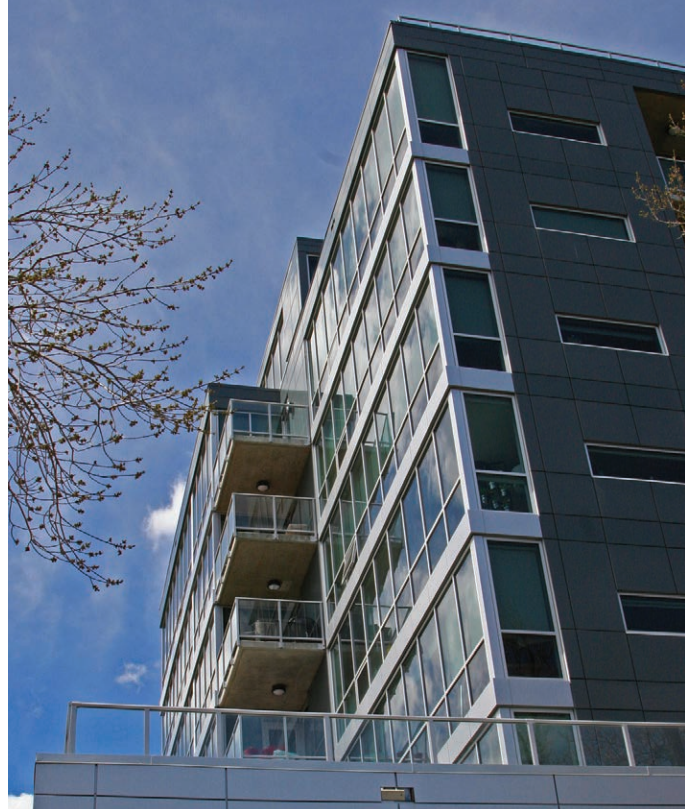
## Supporting Growth

The City of Calgary is responsible for managing and coordinating the planning and investment of infrastructure needed to accommodate growth. Calgary has experienced substantial growth and a shift in the way the city grows. Over the last five years, the developed areas of Calgary captured 32 per cent of The City of Calgary's population growth. **Intensification** and **redevelopment** drives much of the growth in existing developed areas, as redevelopment interest and investment from private development continues to increase in established communities throughout Calgary. Over the next 50-60 years, Calgary is forecast to grow by another 1.3 million people. In the next five years alone, we will grow by 118,600 people.

Water Resources supports the strategic intensification of developed areas within The City of Calgary, in alignment with the goals of the Municipal Development Plan (MDP) (2009). The MDP encourages redevelopment within existing developed areas of Calgary to make the best use of existing land, reduce the cost of City services, to locate residents closer to where they work, shop and play, and to make walking, cycling, and transit more attractive. Over the next 60 years, the MDP includes goals to see The City of Calgary endeavour to accommodate 50 per cent of the city's population growth in developed areas, requiring additional infrastructure investment to support these goals.

This Redevelopment Strategy sets out Water Resources' specific objectives and actions aimed to support strategic intensification of developed areas within The City of Calgary and will improve the approach used to accommodate and support redevelopment. Supporting redevelopment and strategic intensification of existing developed areas will allow Calgary to continue to grow and prosper.

*Supporting redevelopment and strategic intensification of existing developed areas will allow Calgary to continue to grow and prosper*



**Intensification** – building to accommodate increased population

**Redevelopment** – any new construction on a site that has pre-existing uses





## Redevelopment Key Achievements

Water Resources has a variety of initiatives and processes currently in place to help facilitate and accommodate redevelopment.



### **We replace and upgrade existing infrastructure**

When redevelopment occurs in a mature neighbourhood with original infrastructure that is near or at the end of its life cycle, Water Resources replaces the infrastructure and upgrades the capacity to enable redevelopment. The City has a redevelopment program in place as part of our ongoing operations to enable this to occur, at times with minimal or no costs to developers.

### **We plan for future growth**

Water Resources works with Planning and Development to understand how and where future growth is likely to occur. We use this information to develop our Water and Sanitary Long Range Plans, which identify what capital infrastructure upgrades will be required to support growth and when we will fund the upgrades.

### **We hear from and serve our customers**

Water Resources looks for synergies with existing infrastructure improvement projects. We track previous redevelopment applications and look for strategic upgrade opportunities in areas undergoing redevelopment.

Water Resources uses 311 data to confirm if customers are experiencing servicing issues in their community prior to undertaking infrastructure upgrades.

The Community Drainage Improvement (CDI) Program, Lot Drainage project and Integrated Stormwater Management Studies help Water Resources pro-actively plan capital investment and serve our customers throughout the City.



### **We collaborate**

Water Resources coordinates with other City departments to align the timing of capital projects, including work in redevelopment areas.

Water Resources works with Transportation Planning, such as where roads will be resurfaced and/or expanded, to upgrade required infrastructure where other work is already going to take place to minimize overall infrastructure costs for citizens.

### **We strive to provide certainty**

The City Centre Levy Program provides certainty for developers in the downtown area, knowing that they only have to contribute to the existing levy and not be worried about any significant (and unexpected) cost for upgrades.



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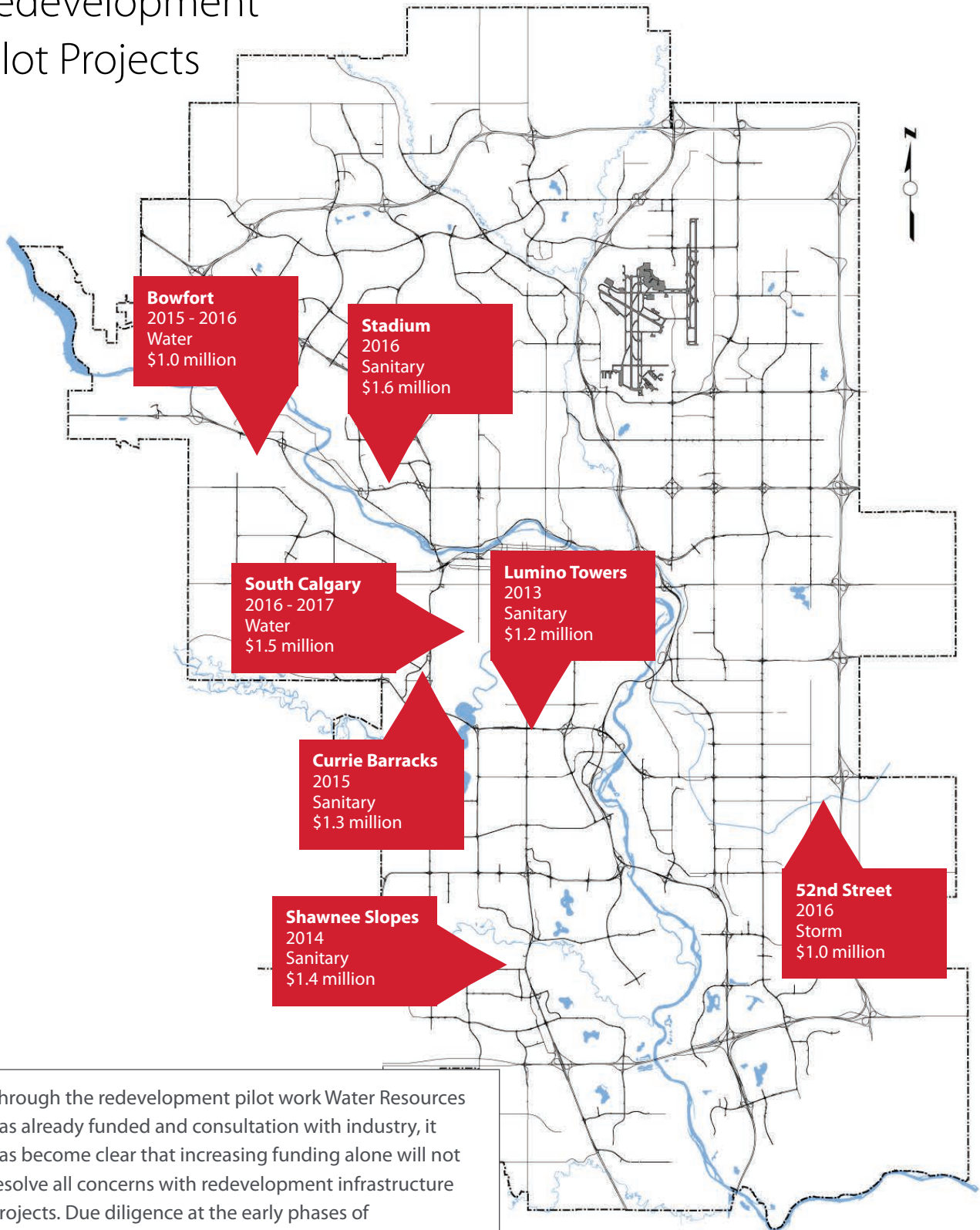


### **We learn through doing**

Water Resources has invested in redevelopment infrastructure pilot projects. We are using these projects to better understand what infrastructure investments are needed, how infrastructure may act as a barrier to redevelopment, and how funding can be used to remove barriers to support redevelopment.

In certain cases, Water Resources was able to fund the upgrades and eliminate barriers to redevelopment applications moving forward. The historical costs for redevelopment pilot project upgrades over the last three years are shown on the map (both developer and city investments are shown):

# Redevelopment Pilot Projects



Through the redevelopment pilot work Water Resources has already funded and consultation with industry, it has become clear that increasing funding alone will not resolve all concerns with redevelopment infrastructure projects. Due diligence at the early phases of redevelopment projects and better access to information early on by industry are equally, if not more, important to project success.



## How Other Cities Manage Redevelopment

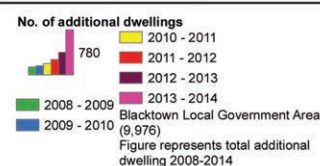
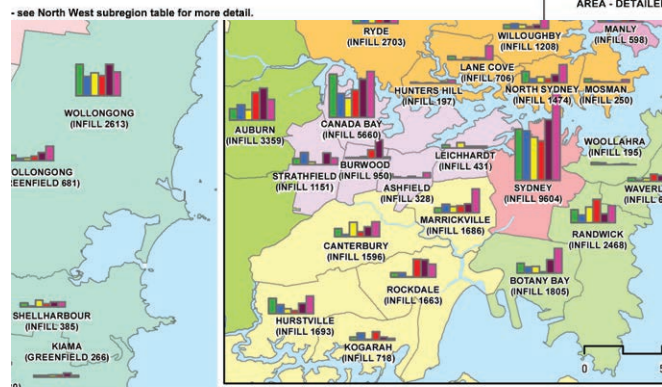
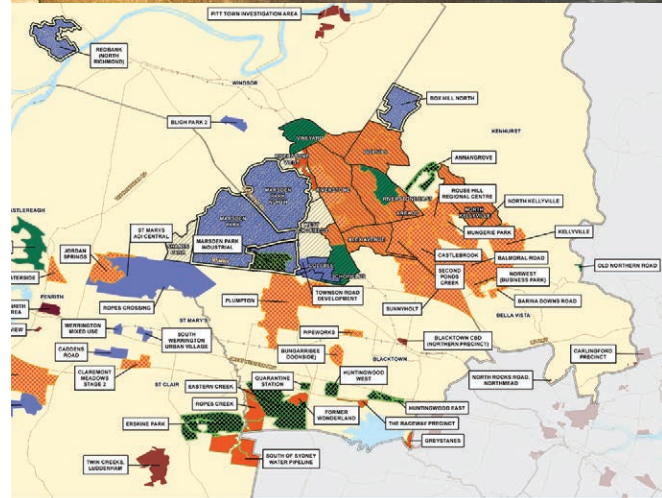
### Phoenix, Arizona

Faced with similar questions from the development industry in Calgary, Phoenix, Arizona created an online portal with infrastructure information made publicly available for sections of its downtown. Information available included sizing, age, and material of infrastructure, in addition to any known information regarding constraints or upgrades planned. The information covered limited geographic areas. In speaking with staff involved with the project, it was noted that the most important aspect was increased communication between city administration and industry in order to respond to questions at the due diligence phase of development.

### Sydney, Australia

Sydney Water produced a Growth Servicing Plan, outlining the utility's decision making framework for investing in urban growth for five years (2014 – 2019) and mapping of infrastructure investment by community. Information is provided for redevelopment areas within existing communities. Their infrastructure plans use planning forecasts to pro-actively anticipate areas of redevelopment or intensification and direct infrastructure funding to support these areas as needed.

Equally important, the mapping produced by Sydney Water clearly articulates knowledge of system capacity; a tiered structure of descriptions identifies communities where infrastructure is in place to support additional intensity or growth, where local upgrades may be required, where work is planned for future upgrades, and where major work required to support redevelopment or intensification would be a developer responsibility.



NEW CONNECTIONS BY FINANCIAL YEAR 2008 - 2014



## The Redevelopment Dialogue

The following points were gathered through conversation with industry and internal stakeholders:

- Any potential infrastructure upgrade that may be required to support a redevelopment project poses possible risk to the project's schedule and cost.
- Accessing available infrastructure information may not be an easy to navigate or a clear process for those unfamiliar with redevelopment or working with and in the city. Where to look, who to contact, and which questions to ask may be challenging.
- When an unplanned infrastructure upgrade is identified during a redevelopment project already in progress, it may be unclear where responsibility falls for funding and constructing any additional upgrades required.
- The impacts of multiple redevelopment projects may make it problematic to allocate specific costs to an individual redevelopment project.
- Required infrastructure upgrades to support a redevelopment project may occur far from the site subject to redevelopment.







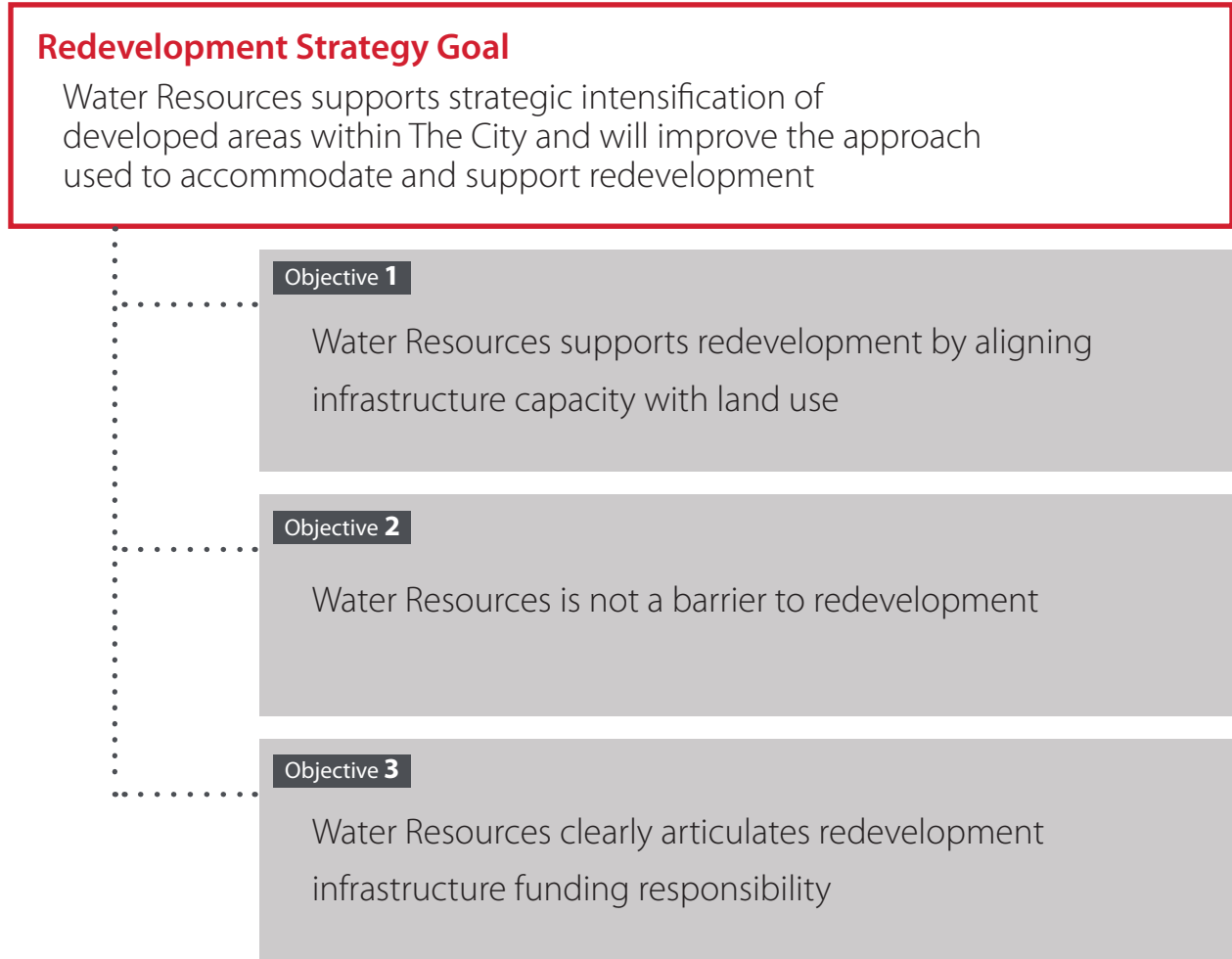


- When a neighbourhood begins to redevelop and an older single-family home is replaced by a new home or duplex, the impacts to the infrastructure in the community are often minimal. When this happens multiple times in the same neighbourhood, the cumulative impacts of these small-scale developments on existing infrastructure may become more complex to manage.
- Planning for redevelopment infrastructure is different than planning infrastructure for new communities. It may take time before a community sees an increase in population sufficient to trigger redevelopment related upgrades, making it difficult to assign costs to initial phases of redevelopment.
- Water Resources relies on information from other business units and industry to anticipate where redevelopment growth may occur. The timeliness and quality of these external inputs has a direct impact on our ability to plan for future redevelopment infrastructure needs.
- Future infrastructure planning typically revolves around larger-scale infrastructure. The infrastructure more common to redevelopment projects is smaller in size and may not be identified in our long range plans before specific redevelopment projects are proposed.
- Due diligence, which includes early access to infrastructure information, is a shared responsibility between industry and The City.
- Redevelopment projects occur throughout various Calgary neighbourhoods. It is important for Water Resources to be able to flag communities where redevelopment is already occurring and align funding accordingly.
- The City's approach to funding redevelopment is still evolving, as is Water Resources' role in funding smaller local upgrades. As such, the budgeting process for redevelopment infrastructure investment is not as clearly defined as it is for new community infrastructure. Redevelopment infrastructure funding may need to adjust to accommodate this evolution.



# Water Resources **Redevelopment Strategy**

This Redevelopment Strategy outlines nine specific actions that will support strategic intensification of developed areas within The City of Calgary and will improve the approach Water Resources uses to accommodate and support redevelopment. Under the Redevelopment Strategy goal that aligns with the goals of the Municipal Development Plan, three objectives have been established for Water Resources to guide redevelopment:





# Water Resources **Redevelopment Strategy**

By the end of 2018, Water Resources will deliver nine specific actions, supporting Calgary to continue to grow and prosper. These key actions are needed to address the shared concerns identified and advance redevelopment and strategic intensification of existing communities within The City.

OBJECTIVES	ACTIONS
<p><b>Objective 1</b></p> <p>Water Resources supports redevelopment by aligning infrastructure capacity with land use</p>	<ul style="list-style-type: none"><li>• Implementation Plans</li><li>• Infrastructure Studies</li><li>• Infrastructure Investment Plans (IIPs) List</li></ul>
<p><b>Objective 2</b></p> <p>Water Resources is not a barrier to redevelopment</p>	<ul style="list-style-type: none"><li>• Infrastructure Information Mapping</li><li>• Due Diligence Support</li><li>• Community Programs</li></ul>
<p><b>Objective 3</b></p> <p>Water Resources clearly articulates redevelopment infrastructure funding responsibility</p>	<ul style="list-style-type: none"><li>• Criteria</li><li>• Delineated Responsibility</li><li>• Funding Tools</li></ul>



# Water Resources **Redevelopment Strategy**

## Objective 1

Water Resources supports redevelopment by aligning infrastructure capacity with land use

The actions below will identify upgrades in pilot redevelopment areas, evaluate the system's performance, share infrastructure knowledge and improve understanding of the upgrades.

### **1.1 Implementation Plans**

Implementation Plans will be created as an appendix to Area Redevelopment Plans or Local Area Plans to outline approaches or processes to deliver the required infrastructure associated with the land use plans. This will include scope and timing of infrastructure upgrades, and identify which upgrades are to be funded by the City or industry, phasing of the upgrades and other considerations that would enable development to proceed.

Water Resources and Planning will pilot this concept on three Main Street areas by Q2 2017. Information on the growth projections for residential and employment populations and the proposed land uses over time will be used as the input to the analysis. This analysis will inform infrastructure upgrades triggered and proposed phasing. The content of the Implementation Plan will be determined in consultation with industry, and is expected to be used by Water Resources and industry as a roadmap for infrastructure upgrades required to support redevelopment.

### **1.2 Infrastructure Studies**

- Redevelopment Master Drainage Plans

A scoping study for Redevelopment Master Drainage Plans will be developed to support drainage improvements in areas undergoing redevelopment and intensification. While Master Drainage Plans are not currently required in redevelopment areas, the cumulative impacts of redevelopment may be better managed through comprehensive drainage solutions that consider neighbourhood scale improvements, and lot level improvements.

- Water and sanitary infrastructure studies

Water Resources will continue to keep track of redevelopment applications and initiate local level studies in areas where we are seeing continued pattern of redevelopment. These studies will look to

# Water Resources **Redevelopment Strategy**

pro-actively identify unknown capacity constraints, and determine strategic infrastructure investments to address these capacity barriers.

## **1.3 Infrastructure Investment Plans List**

Infrastructure Investment Plans contain information on future infrastructure projects to be executed through the 2015-2024. These investments support future growth and redevelopment throughout the city. Maps prepared using this information are publicly available and show the specific locations of each project along with timing for delivery. The timing of investment described by IIPs lists ensures serviceable land supply is maintained and sets out future infrastructure plans, based on land use planning.

Water Resources Infrastructure Investment Plan is currently for 2015-2024. This list will be updated to include identified redevelopment upgrades and shared with industry. The list will also be reviewed and updated over 2017/2018. A new list will be prepared for 2019-2022 under the next budget cycle approval process .

### **Objective 2**

Water Resources is not a barrier to redevelopment

The following actions will provide transparent access to available utility information, which will improve system understanding by industry and help developers plan redevelopment in alignment with infrastructure capacity.

## **2.1 Infrastructure Information Mapping**

Water Resources will prepare maps containing existing infrastructure information. Asset characteristics such as age, material, and size will be made publicly available. Additionally, known infrastructure constraints and pipe conditions in adjacent areas will be included enabling more thorough due diligence investigation. This information will assist in providing transparent access for all developers.



# Water Resources **Redevelopment Strategy**

The plan is to map a pilot redevelopment area, where The City has seen, or expects to see, a number of development applications. We will share the produced map with industry and evaluate the value of this information.

If the feedback is positive, Water Resources will continue mapping remaining high interest market areas and share them with industry.

## **2.2 Due Diligence Support**

Water Resources sees value in providing a corporate dedicated resource to respond to industry inquiries regarding servicing requests or infrastructure capacity requests. Water Resources will have a dialogue with Planning and Development on this possibility. This support work will build upon the information already made available through the above noted mapping resource, enabling timely delivery of information often requested in advance of land purchase. Water Resources will provide more clarity as to what information can be provided and how industry can access this information. This could be accessed online or in printed formats.

## **2.3 Community Improvement Programs**

Water Resources will continue to support a variety of community-specific programs such as Integrated Stormwater Management (iSWM), Community Drainage Improvement (CDI), and Lot Drainage Improvement (LDI) programs to continue to address issues and facilitate redevelopment throughout Calgary. The iSWM program will explore the interdependencies between the City's different stormwater objectives and solutions that address stormwater management in existing communities from a holistic perspective. Through pilot iSWM studies, it is expected that an integrated approach will be considered when studying existing communities in the future.

CDI looks at studying existing areas with known drainage problems and identifies solutions, thereby reducing flooding and improving the Level of Service at a community level. These communities will have stormwater infrastructure ready to accommodate redevelopment.

Similarly, LDI program will help improve drainage system but on a lot level. The new in-fills will have clear expectations related to grade and drainage pattern change, therefore, redevelopment of these small-scale sites will have guidance on stormwater management of their sites.

# Water Resources **Redevelopment Strategy**

## **Objective 3**

Water Resources clearly articulates redevelopment infrastructure funding responsibility: industry or the City

These actions will offer a consistent approach to approval and funding for redevelopment upgrades, and advance the funding tools.

### **3.1 Criteria**

Redevelopment evaluation criteria was developed and shared with Established Area working group founded by the Calgary Growth Strategies team. It is envisioned that it will be used to assist in evaluating priority and potential for strategic infrastructure investment. The criteria will be applied to a few pilot redevelopment applications to assess its value and usefulness. It will then be revised, as needed. While this tool is not intended to provide a score card, it will be useful in sharing with industry the considerations Water Resources uses in evaluating potential redevelopment investment. This tool will be used to ensure strategic alignment with various business units is considered.

### **3.2 Delineated Responsibility**

To provide clear expectations to developers with respect to funding responsibilities, Water Resources will evaluate known redevelopment upgrades and create funding principles based on asset category. Existing and historical infrastructure capacity constraints will be catalogued and grouped based on asset characteristics, as well as other criteria. Water Resources will then develop guidelines establishing redevelopment infrastructure funding responsibility based on these criteria. Funding and delivery of the upgrades will be included in these guidelines, which will be shared with industry. The guidelines will be used in tandem with Evaluation Criteria and will assist in decision-making related to funding for the upgrades.



# Water Resources **Redevelopment Strategy**

## **3.3 Redevelopment Funding Tools**

It is expected that Calgary Growth Strategies will begin developing funding tools for redevelopment areas, as well as updating the Centre City Levy. Water Resources will play a role in both of these initiatives. Until the funding tools have been developed, Water Resources will continue using our redevelopment program fund to address some infrastructure barriers to development.



## **Looking Ahead**

The Redevelopment Strategy supports the alignment with the Corporate Growth Strategies. Water Resources is looking forward to collaborating with internal and external stakeholders on implementing the Redevelopment Strategy. The Strategy is expected to improve communication between The City and industry, help removing the servicing constraints, and encourage redevelopment in strategic areas.

The actions developed in this Strategy will be monitored and success reported to industry on a quarterly basis, through the Established Areas working group. The lessons learned through pilot projects will help revise and adjust redevelopment actions to improve the Strategy outcomes. This strategy remains a flexible, evolving road map to improving our approach to managing redevelopment.

# Redevelopment strategy **work plan**

<b>ACTIONS</b>		2016		2017			
<b>Share Knowledge and Communicate</b>		Q3	Q4	Q1	Q2	Q3	Q4
1.1 Implementation Plans	Engage with industry on content of Implementation Plans						
	Include Redevelopment Strategy components into Implementation Plans for Main Streets: <ul style="list-style-type: none"> <li>• infrastructure upgrades scope and timing</li> <li>• budget availability</li> <li>• phasing of the upgrades</li> <li>• other available pertinent information</li> </ul>						
	Seek feedback on value of initial Implementation Plan from industry						
	Apply feedback, revise plan if needed						
	Begin work on additional Implementation Plans						
1.2 Infrastructure Studies	Identify strategic areas for capacity concerns (water and sanitary)						
	Study strategic areas for capacity concerns (water and sanitary)						
	Identify strategic areas to respond to community drainage needs						
	Develop MDP(s) to respond to drainage needs in existing areas						
1.3 IIPs List	Update current Water Infrastructure Investment Plan (WIIP) map identifying Established Areas projects						
	Share WR Capital Plan 2015-2024 (WIIP) with Established Area industry Working Group						
	Share Established Areas growth allocation for infrastructure investments in WIIP with Working Group						
	Monitor redevelopment upgrades identified in development application review, create business cases for construction of identified upgrades						
	Respond to redevelopment market by adjusting the capital budget, ongoing and for 2019-2028 Capital Plan						
<b>Improve Transparency</b>		Q3	Q4	Q1	Q2	Q3	Q4
2.1 Infrastructure Information Mapping	Identify opportunities for knowledge sharing with the industry (asset information, model results, etc.)						
	Identify infrastructure information available for mapping: <ul style="list-style-type: none"> <li>• known capacity constraints</li> <li>• asset age, material, size</li> <li>• asset condition</li> <li>• proposed Capital upgrades or replacements</li> <li>• rule-of-thumb on how to use information</li> <li>• on-going or proposed area boundaries</li> </ul>						
	Map pilot area						
	Engage with industry and seek feedback on value of information and how industry will use the information						
	Apply feedback, revise map, if needed						



# Redevelopment strategy **work plan**

ACTIONS		2016		2017			
		Q3	Q4	Q1	Q2	Q3	Q4
<b>Improve Transparency</b>							
	Complete mapping for remaining priority Established Areas						
	Create communication and database update/maintenance process						
	Develop engagement forum (online/in-person) to share the information with industry						
2.2	Due Diligence Support						
	Discuss the corporate need to liaise with industry on due diligence of development sites and build business case, if required, for a position						
	Build internal expertise within Water Resources to respond to capacity inquiries and reduce risk for developers by early issue identification, resource and assign this work to staff within WR						
2.3	Community Programs	Ongoing work to support Redevelopment Strategy					
	Identify and study areas to improve drainage program (find synergies with iSWM program)	Ongoing work to support Redevelopment Strategy					
	Coordinate efforts with Lot Drainage Program	Ongoing work to support Redevelopment Strategy					
<b>Invest Strategically</b>							
3.1	Criteria						
	Develop redevelopment infrastructure upgrade Evaluation Criteria and determine how criteria will be used in allocation of Water Resources redevelopment funds						
	Refine criteria with internal stakeholders and industry						
	Evaluate proposed projects with criteria to inform overall value of redevelopment funds						
3.2	Delineated Responsibility						
	Monitor and catalogue the infrastructure type, size, location (in relation to development site) and complexity						
	Develop guidelines for funding and/or construction responsibility with industry						
	Evaluate annual staffing capacity of Water Resources to deliver on Established Area Infrastructure Upgrades						
	Share progress updates, outcomes/deliverable with industry						
3.3	Funding Tools						
	Support Calgary Growth Strategies on creation of funding tools for Established Areas (corporate workplan under development)						
	Support Calgary Growth Strategies on revision to City Centre Levy (corporate workplan under development)						
	Support Calgary Growth Strategies on-going engagement with the Established working group	Ongoing work to support Redevelopment Strategy					