IDAHO WASHINGTON AQUIFER COLLABORATIVE
EFFICIENT IRRIGATION AND LANDSCAPE DESIGN STANDARDS

July 23, 2018

Idaho Washington Aquifer Collaborative
Attn: Dan Kegley, President
PO Box 1822
Post Falls, ID 83877
Submitted Via Email: dkegley@spokanecity.org

Dear IWAC Panel Members:

Thank you for the opportunity to submit this proposal for landscape architecture and land use planning professional services for the Model Efficient Irrigation and Landscape Design Standards project. We understand the affiliated members of the Idaho-Washington Aquifer Collaborative are seeking a partner to aid in the preparation of model ordinance language for use by municipalities and water purveyors on the Spokane Valley-Rathdrum Prairie Aquifer (SVRPA). The model language is intended to promote water use efficiency in landscape irrigation.

AHBL is perfectly suited to be IWAC's partner in developing model language for landscape water conservation. As an interdisciplinary firm, we blend irrigation and landscape design experience of our landscape architects and irrigation designers with our land use planner's experience in amending landscape and irrigation codes. We have worked with more than 40 jurisdictions in Washington and California to integrate water efficient landscape practices into local codes and standards. AHBL is also a leader in sustainable design strategies and has been sought out repeatedly to guide sustainable development and policy throughout Washington State.

When crafted correctly, efficient irrigation and landscape design standards can serve as important tools for region-wide water conservation. Successful efficient irrigation and landscape design standards blend land use, environmental, and engineering standards into a single chapter. To that end, we envision efficient irrigation and landscape design standards will likely include the following:

- **Applicability.** It will be important to define when the efficient irrigation and landscape design standards will be applicable. Will there be an exemption for new single-family lots on existing lots of record? Will land disturbing activities that warrant a grading permit automatically necessitate the need for compliance with the efficient irrigation and landscape design standards? How will schools and parks be dealt with?

- **Lawn as a percentage of new site landscaping.** Lawn areas are the single largest consumer of non-agricultural, irrigation water for most water purveyors. Restrictions on the amount of lawn within a new or redevelopment project is a concept that has been successfully integrated into efficient irrigation and landscape design standards and used during a municipality's land use/site plan review phase.

- **Designation of irrigation needs.** Landscape design should reflect the needs of the end user. To that end, the design of a site may include both high and low irrigation landscaping. The efficient irrigation and landscape design standards will identify the irrigation needs for plantings so that the designer can compare the site's needs with allowed consumption.

- **Irrigation design.** Minimizing the irrigation needs through the use of drought tolerant landscape represents half of the design effort; design of the irrigation system represents the balance of the design effort. Sections of an efficient irrigation and landscape design standards dealing with irrigation design are typically quite detailed and include definitions for irrigation controllers, heads, pipe, and valves for both traditional and drip systems.

827 W First Avenue, Suite 220
Spokane, WA 99201-0518
509.252.5019 TEL
509.315.8862 FAX
www.ahbl.com

- **Qualifications for designers.** The design of a water-efficient landscape is technical in nature. Most successful efficient irrigation and landscape design standards describe the minimum qualifications for a designer so that the design of the irrigation system is efficient and minimizes water loss and leakage.

- **Definitions.** Efficient irrigation and landscape design standards require definitions to ensure that plan submittals are complete.

It is important to note that model-efficient landscape ordinances typically do not regulate the aesthetic design of the site, the location of the landscaping, nor the overall quantity of the landscaping on a site. Design standards found within a landscape chapter of a local zoning code specify criteria for landscape design and buffers. The purpose of a water-efficient landscape code is to ensure that the landscapes that are designed use water wisely. To achieve these goals, we propose the following approach to the Scope of Work.

APPROACH TO SCOPE OF WORK

TASK 1 - LITERATURE REVIEW

AHBL staff will review and summarize current literature and state of the practice for water-efficient landscape codes. Water efficient landscape ordinances are not new; such provisions have been an element of California law since 1990. Arizona, Utah, and other states and municipalities have standards as well. These jurisdictions provide a wealth of information and resources to this effort.

Our deliverable will include:

- Summary memorandum detailing water-efficient landscape practices and the manner by which they are implemented and enforced for new and redevelopment projects.

TASK 2 - DRAFT MODEL EFFICIENT IRRIGATION AND LANDSCAPE DESIGN STANDARDS

AHBL staff will a prepare a refinement of the draft Model Efficient Irrigation and Landscape Design Standards based on the literature review performed under Task 1 and coordination with the client. The draft Model Efficient Irrigation and Landscape Design Standards will address:

- Applicability
- Percentage of lawn as new site landscaping.
- Designation of irrigation needs.
- Irrigation design.
- Qualifications for designers.
- Definitions.

Our specific approach to this task will include the following:

1. Work with appropriate Idaho Washington Aquifer Collaborative (Collaborative) members to review the literature review performed in Task 1 to establish the framework for the draft Model Efficient Irrigation and Landscape Design Standards.
2. Prepare a draft Model Efficient Irrigation and Landscape Design Standards for review by members of the Collaborative.
3. Revise the draft Model Efficient Irrigation and Landscape Design Standards based on comments by Collaborative members.

Our deliverables will include:

- Draft and final Model Efficient Irrigation and Landscape Design Standards for adoption by municipalities in Idaho and Washington.
- A decision table for tracking of revisions and/or decisions made during review of the draft ordinance by Collaborative members. The decision table will be updated continually through the project to provide the rationale for proposed amendments.

[OPTIONAL] TASK 3 - STAKEHOLDER ENGAGEMENT

The intent of Optional Task 3 is to engage key stakeholders and policy makers as is envisioned within the specifically identified goals of the Model Efficient Irrigation and Landscape Design Standards. Because no two municipal codes are identically organized, the purpose of this task is to prepare an Adoption Toolkit describing how to customize the Model Efficient Irrigation and Landscape Design Standards to facilitate integration into local codes. As part of this task, AHBL staff will:

1. Prepare an Adoption Toolkit describing how to customize the Model Efficient Irrigation and Landscape Design Standards to facilitate local adoption.
2. Conduct Workshop with Local Communities Describing the Efficient Irrigation and Landscape Design Standards and the Tools Available for local adoption.

Approach to Work

Our deliverables will include:

- Adoption Toolkit for integrating the Model Efficient Irrigation and Landscape Design Standards into local codes and standards.
- Workshop attendance, facilitation, and meeting notes associated with the introduction of the Model Efficient Irrigation and Landscape Design Standards and Adoption Toolkit.

Reimbursable Expenses

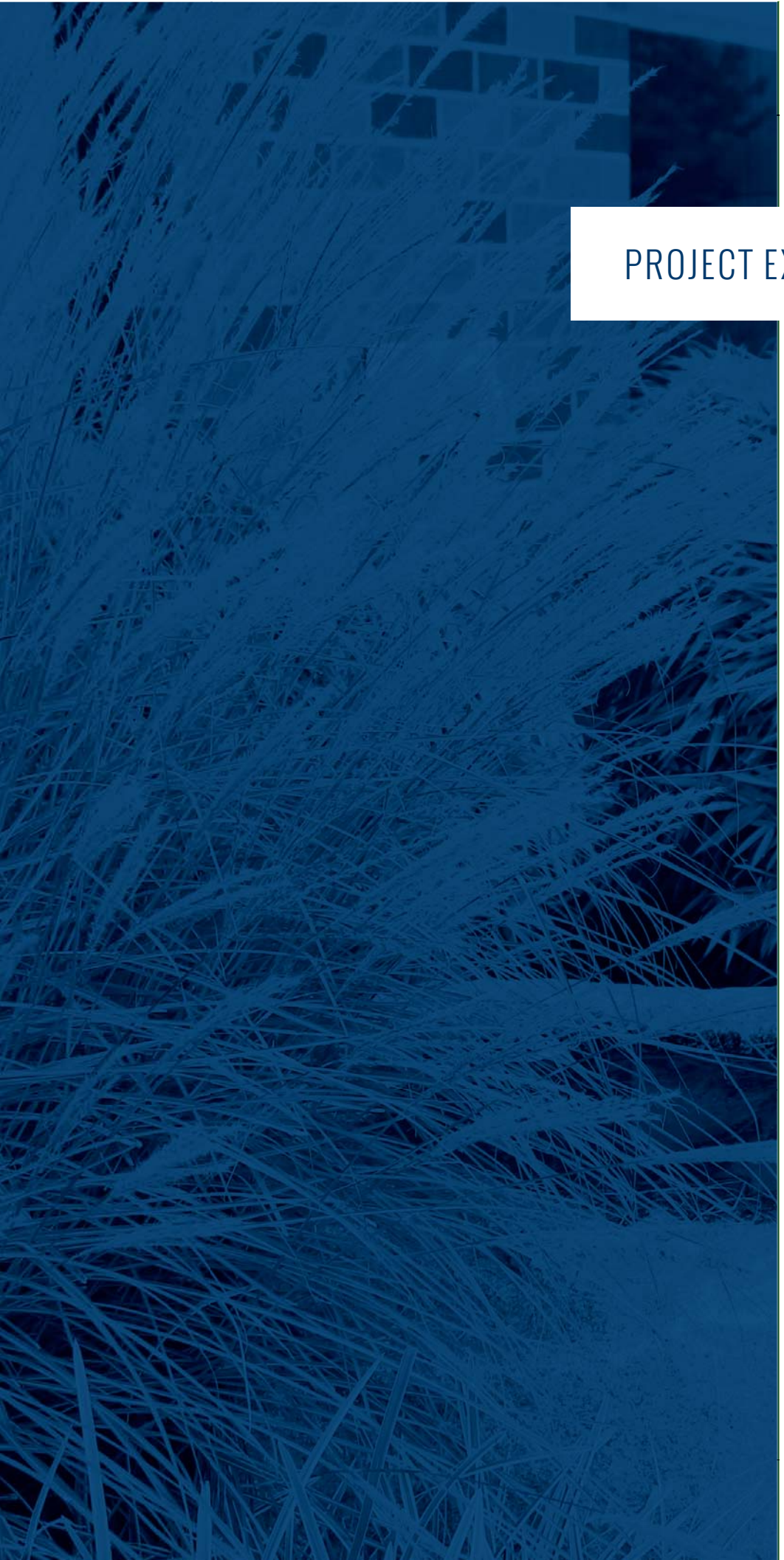
This line item will include costs associated with expenses related to this scope of work. Examples of project-related expenses may include printing, travel, literature for citation within the literature review and report, fonts, and graphics.

On the following pages, we have detailed our relevant project experience and qualifications of our key personnel. We look forward to hearing from you as the selection process proceeds.

Sincerely,

Craig Andersen, PLA, LEED AP
E: candersen@ahbl.com | **T:** 509.252.5019
827 W First Avenue, Suite 220
Spokane, WA 99201-0518

PROJECT EXPERIENCE



CASQA Proposition 84 LID Code Updates

MODIFIED LANDSCAPE CODES & STANDARDS TO ENCOURAGE WATER-EFFICIENT PRACTICES

AHBL provided technical assistance to 25 cities and counties throughout California to modify landscape codes and standards to water-efficient and low impact development practices into local codes. This project involved assisting Phase II permittees with amendments to landscape-related codes and standards for compliance with Permit Condition E.12.J(ii)(a) of General Permit No. CAS000004, which requires the review of local planning and permitting process to identify gaps or impediments impacting effective implementation of the post-construction stormwater requirements.

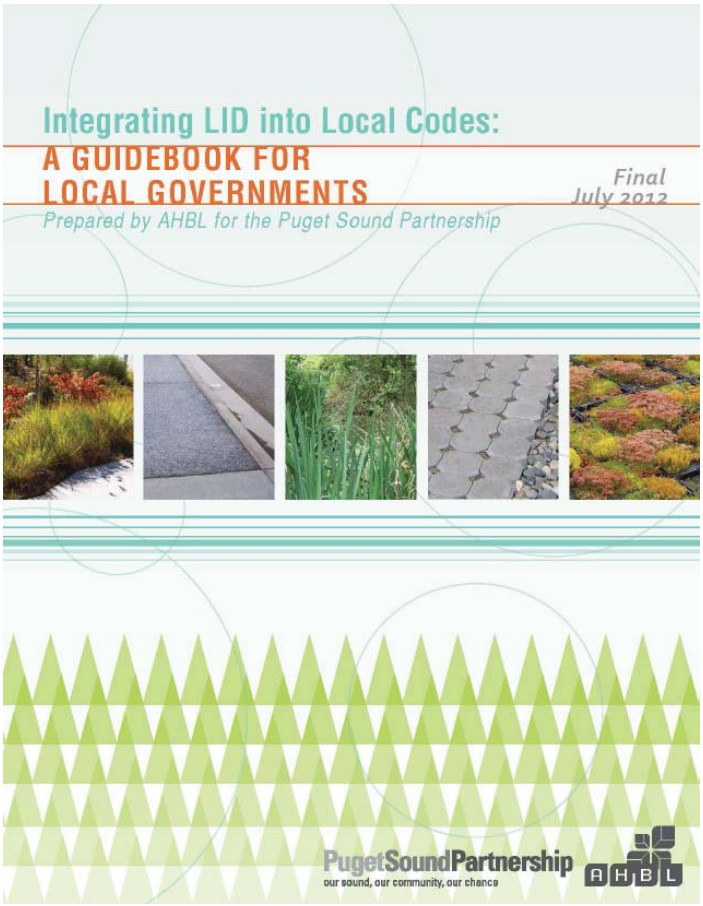
During the course of this project, California experienced the worst drought in its history. In 2015, Governor Jerry Brown instituted mandatory water reductions of 25 percent and issued an executive order (EO B-29-15) that amended the numeric targets and requirements of the State's Model Water Efficient Landscape Ordinance.

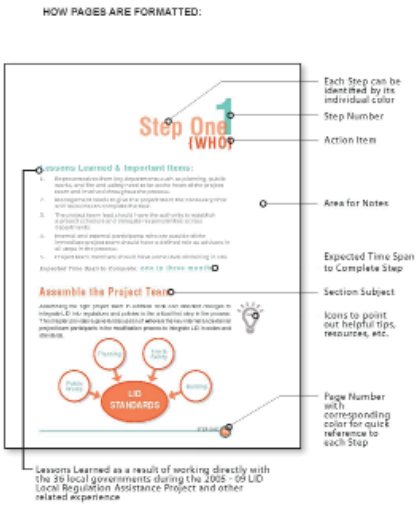
AHBL's work involved the melding of the NPDES Permit requirements with the amended standards from the new model Water Efficient Landscape Ordinance. The modifications to the Water Efficient Landscape Ordinance involved lowering the maximum reference evapotranspiration for residential and non-residential projects which resulted in changes to the maximum applied water allowance.

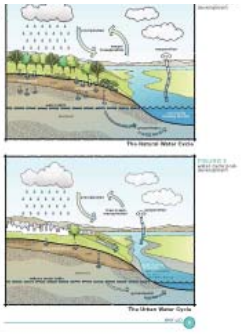
After analyzing impediments and opportunities for compliance, AHBL staff conducted on-site meetings to discuss the opportunities and begin the process of preparing amendments to various codes and standards. The result was the preparation of a variety of regulatory and technical resources including: water-efficient landscape code revisions and/or new chapters; bioretention standard drawings and details; complete/ Green street drawings/sections; stormwater chapters including language for alternative compliance; planting lists; maintenance agreements and performance protocols; and staff reports for use during the adoption phase. Additionally, our staff participated in the training of local staff (and outside stakeholders).

Integrating LID into Local Codes: A Guidebook for Local Governments

AHBL WROTE THE BOOK ON INTEGRATING LID INTO LOCAL CODES







AHBL has significant experience is preparing model ordinances, templates, and technical guidance for use and customization by cities and counties. AHBL's expertise in amending municipal codes for a variety of cities and counties in Western Washington was recognized by the Puget Sound Partnership when it hired AHBL to prepare a guidebook for integrating low impact development principles and BMPs into local codes. The result was the publication of Integrating LID Into Local Codes: A Guidebook for Local Governments (Guidebook), which shared the lessons learned from AHBL's technical assistance to 36 Puget Sound cities and counties that integrated green infrastructure practices into local landscape and stormwater codes and standards.

This work involved the preparation of amendments to municipal code chapters covering clearing and grading, landscaping, tree retention, impervious surface coverage, site plan approval, streets, utilities, and subdivision design. AHBL's expertise with code amendments for these topics made its selection for this project a natural fit.

Washington State Department of Ecology staff was so impressed with the Guidebook that it became official guidance within the Phase I and Phase II Western Washington NPDES Municipal Stormwater Permits (Special Conditions S5.C.5.b.i and S5.C.4.f.i, respectively) for the requirement that permittees integrate low impact development best management practices (BMPs) and principles into local codes and standards.

In addition to the preparation of the Guidebook, AHBL staff trained local government staff and solicited public comments on the Guidebook at meetings in Mount Vernon, Poulsbo, Tacoma, and Vancouver.

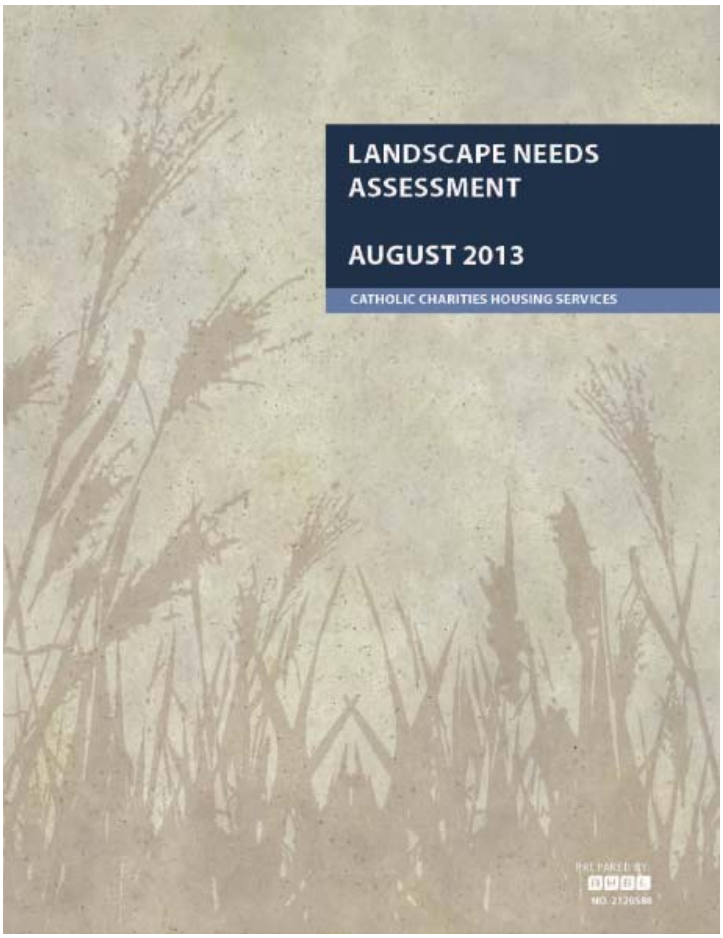
Catholic Charities Housing Services (CCHS) Irrigation & Landscape Audits

IRRIGATION AUDITS FOR 10 SITES RESULTED IN MORE THAN $20,000 ANNUAL WATER USE SAVINGS

CCHS Landscape Action Plans

Catholic Charities Housing Services provides Central Washington with affordable housing. With nearly 32 service locations and almost 48,000 people served annually, the agency remains a testimony to its ongoing mission of, “Bringing Hope to Life.” AHBL’s staff has provided landscape design for more than a dozen CCHS properties, working closely with maintenance and asset management staff to develop robust drought-tolerant plantings and water-efficient irrigation systems.

In 2012, CCHS asked AHBL to review their portfolio of 14 apartment sites and provide Landscape Capital Needs Assessments for each site. What quickly became apparent was that each site suffered from a lack of understanding of best practices for landscape maintenance. Craig used the assessments to prepare a detailed landscape management plan for all CCHS properties. The plan included monthly maintenance tasks and schedules, procedure descriptions, and resources for maintenance supplies. Since the majority of CCHS’ maintenance staff are native Spanish speaking, the manual was provided in both English and Spanish. The maintenance plan was implemented in 2013 and starting seeing immediate success. Landscapes were more lush, lawns in better shape, and with less staff maintenance time.



CCHS Irrigation Audits

Building upon the success of the Landscape Maintenance Manual, in early 2016 CCHS asked AHBL to look into how to reduce their irrigation water and maintenance costs for their 10 most costly sites. We completed irrigation audits and recommissioned each system. Irrigation audits were complete using the Irrigation Association’s guidelines to review each site, calculate system performance, and prepare new controller schedules. We also prepared irrigation maintenance guidelines in English and Spanish for each site. Recommissioning the irrigation systems has been a massive success for CCHS with over $20,000 in water use savings by the end of the year.

Landscape condition prior to Assessment.

Spokane Landscape Resource Management Plan

COMPREHENSIVE PLAN CAPTURES ACCURATE COST OF MAINTENANCE

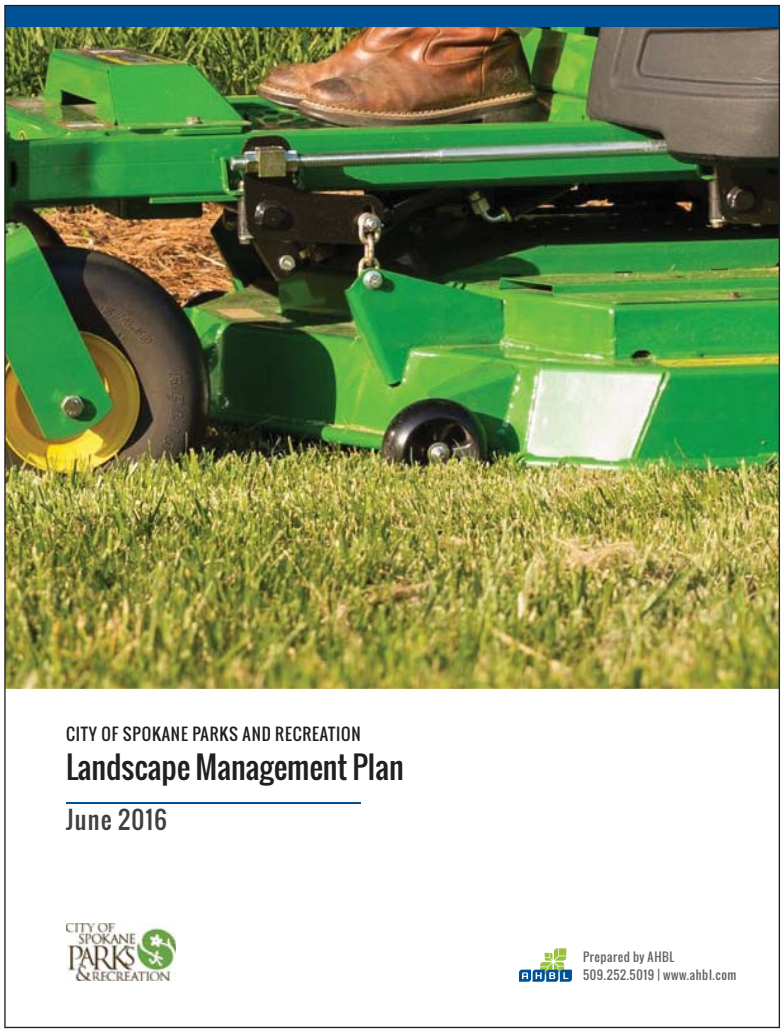
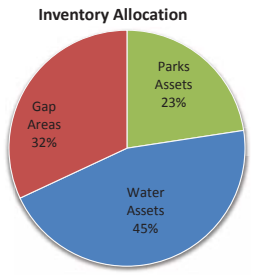
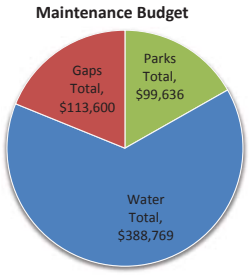
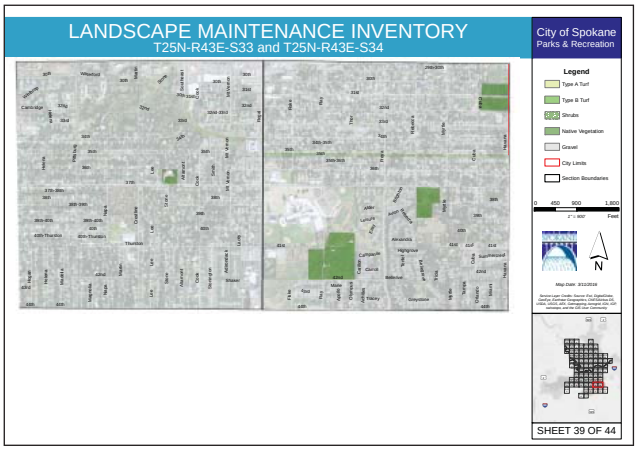


Table 1 - Maintenance Summary		
Description	**Area**	**Budget**
Current Park Operations Maintenance	106.57 acres	$99,636
Additional Water Department Maintenance Assets	214.45 acres	$388,769
Identified Gaps	150.72 acres	$113,600
Total	**471.74 acres**	**$602,004**







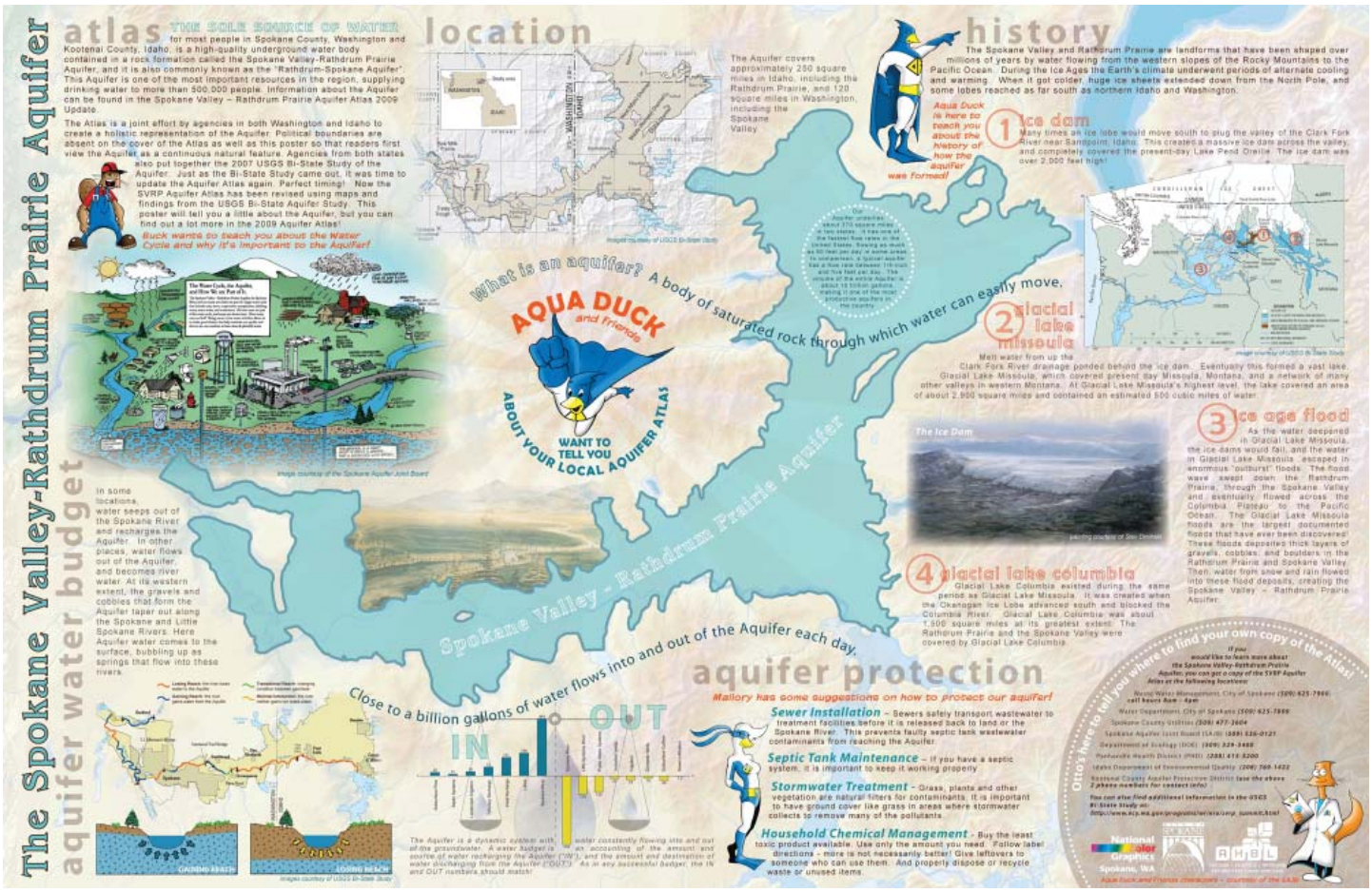
In order to more accurately determine the true cost of landscape maintenance, AHBL was asked by the City of Spokane to prepare a Landscape Asset Inventory of City-owned facilities and rights-of-way currently maintained by the Water, Streets, and Parks Departments. Each asset was assigned a level of maintenance service "Mode," dictating frequency and types of maintenance tasks. The inventory was used as the basis for a Landscape Resource Management Plan that informed the City of the tasks and budgets necessary to cover staffing, materials, and equipment necessary to maintain these City landscapes.

The Landscape Resource Management Plan (LRMP) consisted of three parts: An inventory and assessment of current landscape assets and identified gaps; a plan for budgets, personnel, materials and equipment to maintain those assets; and anticipated budgets and operational needs for future landscape assets.

The Landscape Asset Inventory and Assessment is a physical asset inventory of City-owned property and rights-of-way requiring landscape maintenance. The inventory was prepared using existing City resources, including geographic information system (GIS) information of current maintenance locations, practices, and costs. GIS information consisted of asset shapefiles for maintained streets and sites provided by the City GIS Department. City staff from the Parks, Streets, and Water Departments identified existing maintenance areas and gaps where maintenance is needed. AHBL then organized each asset into one of five Landscape Types based on the type of maintenance required. City Staff assigned a Level of Maintenance Service expectation to each asset based on Landscape Type, the property's visibility, and acceptable maintenance budgets.

Spokane Aquifer Atlas

EDUCATIONAL WATER MANAGEMENT RESOURCE FOR ALL AGES



The goal of the Spokane Valley-Rathdrum Prairie Aquifer Atlas Education Poster was to serve as a stand-alone educational poster as well as a companion piece to the recently updated Aquifer Atlas prepared by the City of Spokane and the 2007 USGS Bi-State Aquifer Study. The Spokane Valley-Rathdrum Prairie Aquifer is a high quality aquifer that spans over 250 square miles located in both states of Washington and Idaho. The City of Spokane hired AHBL to design the poster to highlight key subjects presented in the Atlas and Bi-State Study to help educate a broad audience about the Aquifer, such as where it is located, the history of its origin, its significance to the public and the environment, how it can be protected, and where to find out additional information. The poster was designed to appeal to young children for the use in schools as well as act as an informative document to be used in public agencies and for the general public. A balance of informative text, maps and charts, and illustrations were used to peak interest and educate the reader in an interesting and fun manner.

Eastern Washington LID Guidance Manual

COLLABORATIVE DOCUMENT PROVIDING LID GUIDANCE AND PLANNING

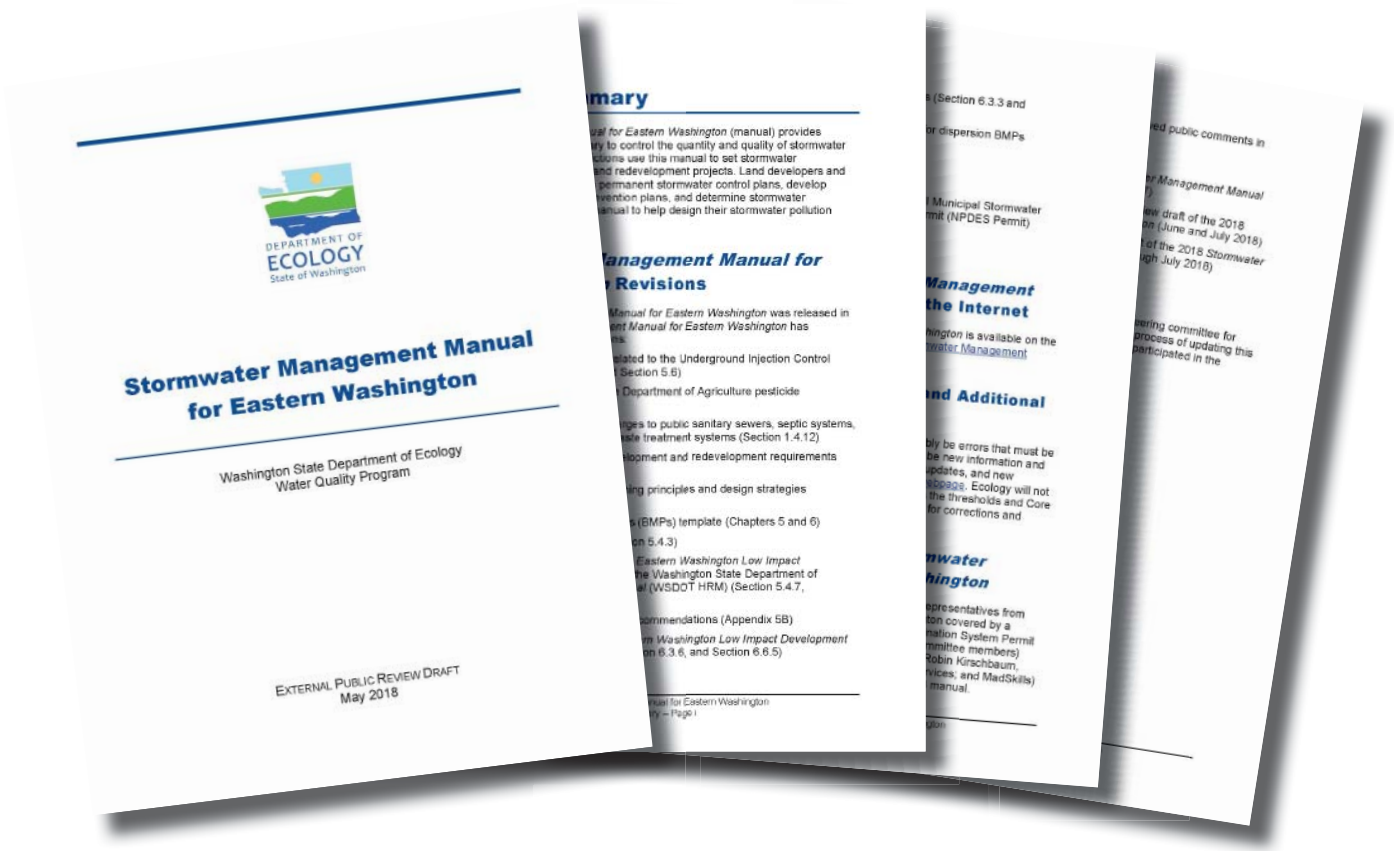
The Eastern Washington Low Impact Development Guidance Manual (LID Manual) was the collaborative product of Spokane County, the Washington State Department of Ecology, Washington State University, the Washington Stormwater Center, the Eastern Washington Phase II Municipal Stormwater Permittees and AHBL.

The LID Manual provides technical guidance for the design and sizing of LID practices to meet the Department of Ecology's 2004 Stormwater Management Manual for Eastern Washington. It also establishes goals, objectives, and design criteria for individual LID practices to achieve the flow reduction and water quality treatment standards for eastern Washington. AHBL prepared chapters covering Intent of LID Best Management Practices; Planning for Low Impact Development; LID Design Process; Design Fact Sheets; and Appendices.

Our scope of work also included providing educational outreach to eastern Washington jurisdictional staff, consultants, and elected officials on the contents of the draft LID Manual.

2018 Stormwater Management Manual for Eastern Washington Update

AMENDMENTS COVERING A WIDE RANGE OF CODES AND STANDARDS



The Stormwater Management Manual for Eastern Washington provides important guidelines, procedures, and technical information for the planning, design and maintenance of stormwater facilities in eastern Washington. The manual, last updated in 2004, is tailored to the specific climate, hydrologic, and geologic conditions of eastern Washington. The latest design, construction, operation, and maintenance guidance are being incorporated for stormwater Best Management Practices (BMPs) regarding LID facilities, including permeable pavement, bioretention, and tree retention/tree planting, among other BMPs. Updated Underground Injection Control (UIC) guidelines and requirements are also being integrated into the manual. AHBL is working collaboratvicely with our partners to review and provide input on the BMPs, especially for Runoff Treatment Facility Design (chapter 5) and Flow Control Facility Design (chapter 6). In addition to contributing authorship, the project also includes outreach and internal team facilitation for the project team comprised of Ecology staff, consultants, and 16 Steering Committee members representing the region.

Hazel's Creek Regional Conservation Area

MASTER PLAN OFFERING LID IMPROVEMENTS AND RECREATION

AHBL provided planning, landscape architecture, and graphic design services to the City of Spokane to update the Draft Hazel's Creek Regional Drainage and Conservation Area Master Plan and design the Phase I pedestrian improvements. These additions encourage the implementation and adoption of prevailing LID methodologies and provide recreation opportunities for the open space.

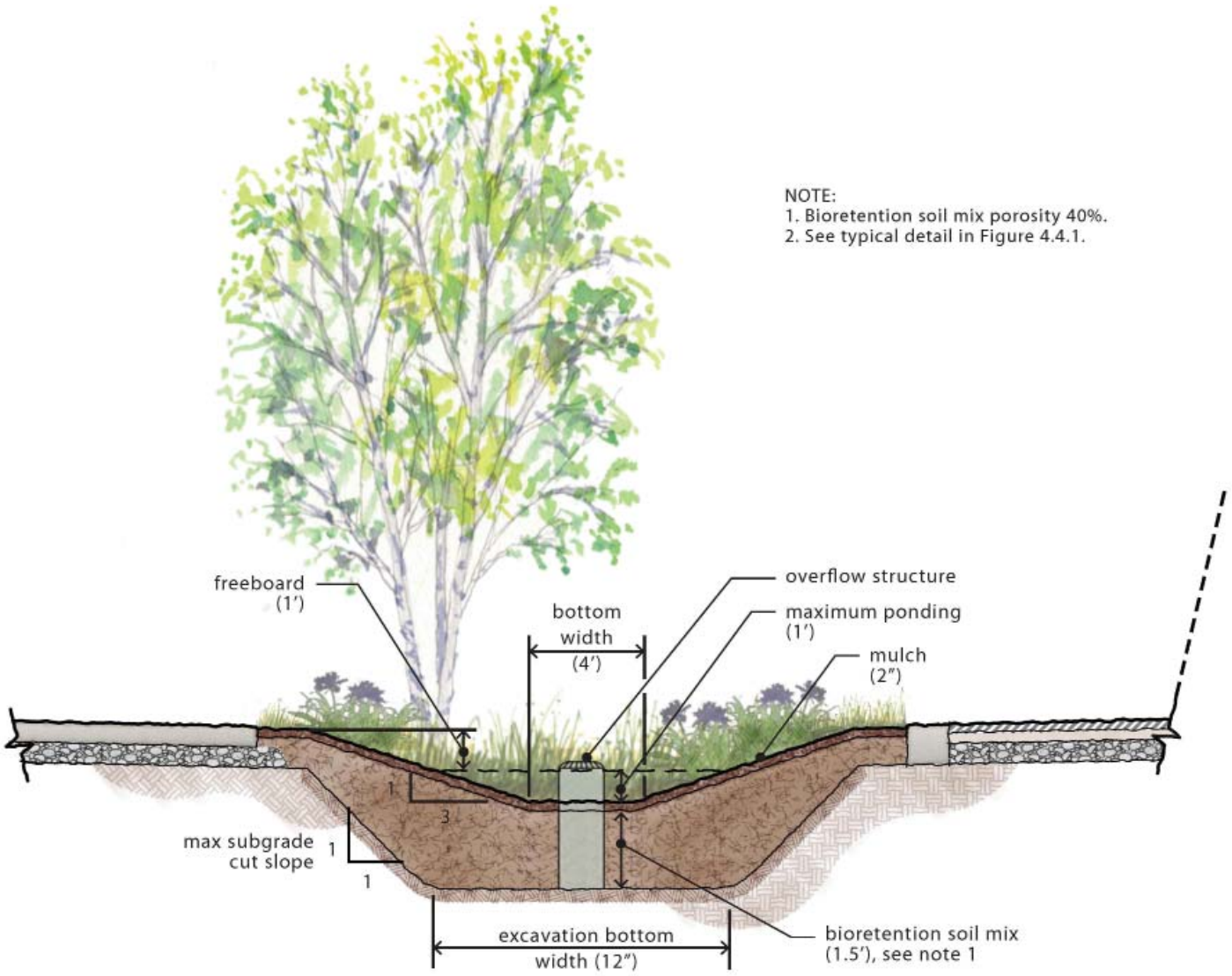
Hazel's Creek provides community recreation and education opportunities, natural wetlands, and wildlife enhancements, and demonstration of LID techniques. Additionally, stormwater wetlands and a detention and infiltration system manages the sub-basin's stormwater runoff.

Several presentations were given to City staff and the public regarding the project and its development process, and design charrette was held with the local neighborhood residents and adjacent high school.

AHBL developed conceptual design, design development and bid documents. The final design includes approximately 1.5 miles of trails that loop throughout the area. The trail system is a combination of gravel paths, permeable concrete, and an engineered wood fiber surface over geotextile fabric. We also completed a maintenance manual targeted towards the City Wastewater Department who is maintaining the site.

Bellevue Land Use Code Amendments

UPDATED AMENDMENTS TO CODE TO INTEGRATE GREEN INITIATIVES



AHBL recently completed amendments to the City of Bellevue's Land Use Code and Transportation Code to integrate green infrastructure practices. In accordance with a number of project requirements set forth by the municipality, AHBL prepared amendments to a variety of codes including the City's landscaping, parking, site design, and right-of-way construction standards. Amendments to the City's Comprehensive Plan were also prepared to ensure that there was policy support for the code amendments.

AHBL staff conducted SEPA environmental review of the proposed amendments, hosted three open houses, and engaged in a variety of briefings, meetings, and public hearings with the City's Transportation Commission, Planning Commission, and City Council. The code amendments were adopted by the Bellevue City Council on November 21, 2016.

Sammamish Municipal Code & Stormwater Manual Updates

MODIFIED CODES MAKE LID THE PREFERRED APPROACH TO SITE DEVELOPMENT

AHBL worked with the City of Sammamish to integrate green infrastructure practices into the City's codes and standards to make low impact development (LID) practices the preferred approach to site development. This work has involved the preparation of a city addendum to the 2016 King County Surface Water Design Manual (KCSWDM) and the preparation of amendments to various chapters of the Sammamish Municipal Code including its landscape code. Additionally, there was substantial public outreach effort to embrace the sustainable practices.

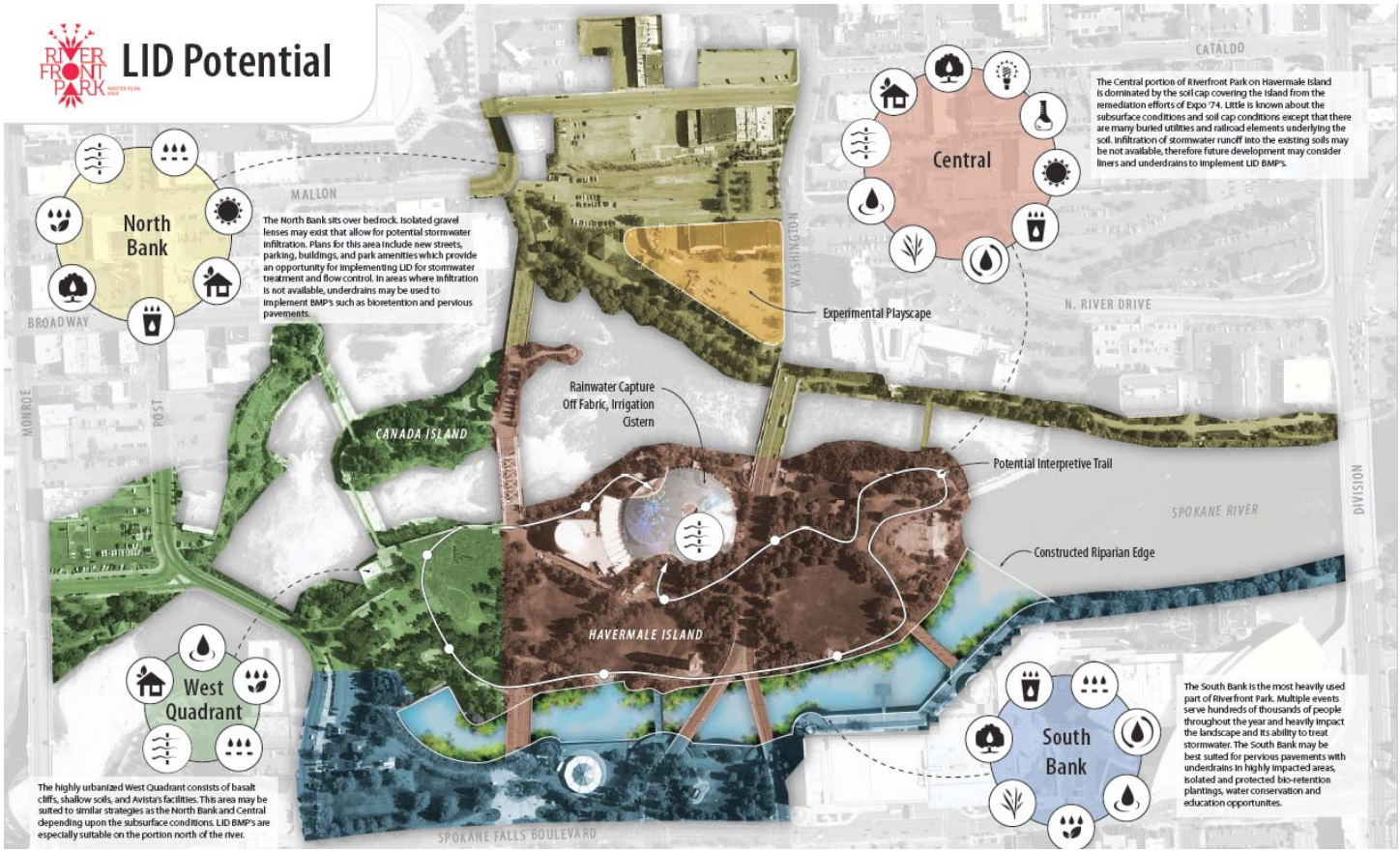
AHBL's work began with the preparation of a gap/opportunity analysis of its codes and development standards to ensure there were no barriers to the use of green infrastructure practices as well as opportunities within the City's zoning code to reduce impervious surface coverage and native vegetation loss.

AHBL assisted the City in forming a technical stakeholder committee comprised of engineers, stormwater designers, landscape designers, developers, and environmental group representatives to provide feedback on potential changes to the City's codes.

AHBL staff prepared amendments to the Sammamish Municipal Code based on the results of the gap/opportunity analysis and facilitated their adoption. AHBL also prepared materials associated with the adoption of new development regulations, including SEPA non-project environmental checklists, Department of Commerce notices of intent to adopt new development regulations, and staff reports summarizing proposed code changes and their impacts. The Sammamish City Council adopted the amendment package on 12/13/2016.

Riverfront Park LID Evaluation

IN-DEPTH ANALYSIS IDENTIFYING LID OPPORTUNITIES AND BMP STRATEGIES

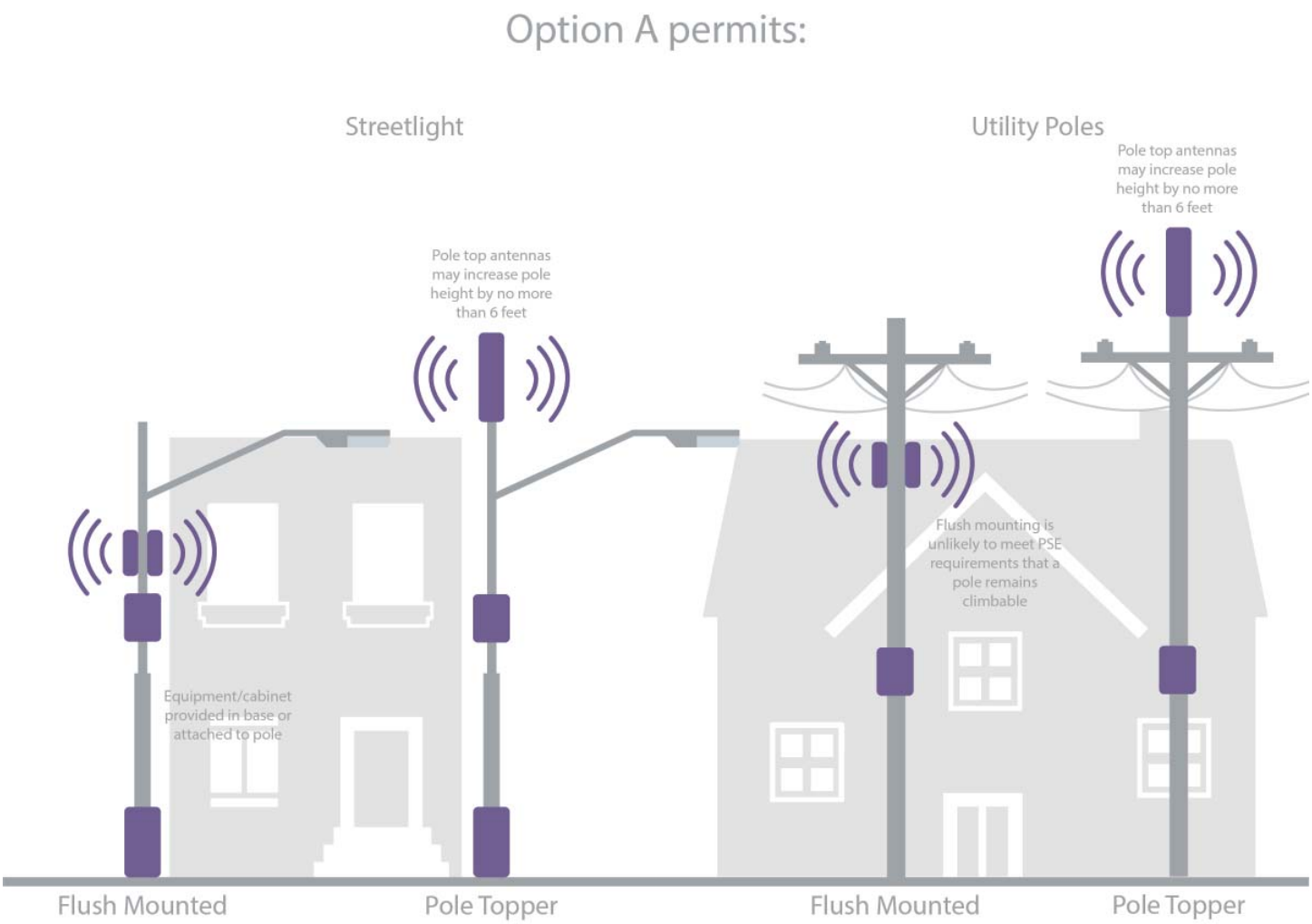


Riverfront Park is a beloved amenity in Spokane's downtown. The 2014 Riverfront Park Master Plan outlined conceptual improvements that resulted from an extensive public outreach effort. As part of this master planning process, AHBL prepared a low impact development (LID) study with the goal of identifying strategies that would improve water quality, reduce maintenance costs, and beautify the park.

AHBL staff reviewed available aerial and GIS information, in conjunction with a review of ground-level site conditions to inform our work to determine appropriate LID Best Management Practices (BMPs). The study recommended that the most appropriate LID BMPs strategies would fall into streetscape applications, parking lot applications and building applications, and would include BMPs such as stormgardens, bioretention, pervious pavements, efficient irrigation, healthy trees, and adaptive re-use of buildings.

Renton Small Cell Ordinance

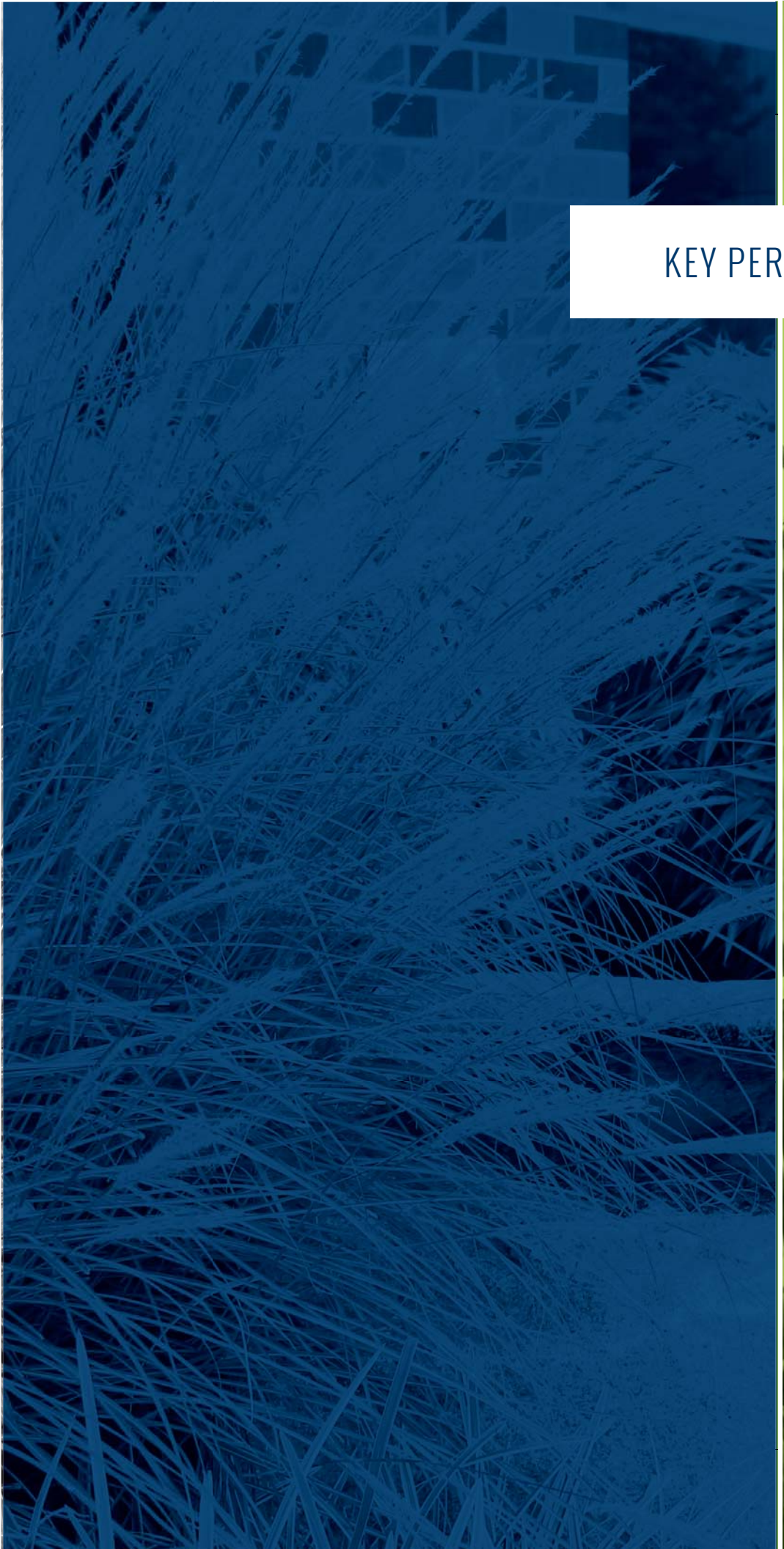
FIRST-OF-A-KIND ORDINANCE TO ALLOW FOR THE PLACEMENT OF SMALL CELL TELECOMMUNICATIONS FACILITIES WITHIN CITY RIGHTS-OF-WAY



AHBL's skill at producing first-of-a-kind ordinances was demonstrated during our recent completion of a small cell ordinance for the City of Renton. The City hired AHBL because telecommunications providers were requesting permits for the placement of small cell facilities within City rights-of-way and the City did not have standards to address this new technology within its existing Wireless Communications Facilities chapter (RMC 4-4-140).

AHBL staff met with industry stakeholders, City planning staff, Puget Sound Energy, and other stakeholders to craft a solution that would allow for the placement of small cell telecommunications facilities within City rights-of-way in a manner that honored the intent of the City's existing design standards. The Renton City Council adopted the new Small Cell standards in January 2018.

KEY PERSONNEL



Wayne E. Carlson, FAICP, LEED AP

Principal, Land Use Planner

Wayne is a principal land use planner at AHBL with 24 years of professional experience. Wayne has worked in both the public and private sectors and has experience with every major facet of planning, including developing model language for water conservation, gap analyses for development code updates; the preparation of comprehensive plan updates; park, recreation, and open space plans; public outreach; development review; and environmental review. His career includes facilitating numerous public involvement events, workshops, and public open houses; presenting to local planning commissions, city councils, boards and commissions, in addition to working with small stakeholder groups and technical working groups.

Wayne has worked with more than 40 jurisdictions in Washington and California to integrate water efficient landscape practices into local codes and standards. This includes working with local staff to conduct outreach to stakeholders in the community to educate and gather feedback on proposed code amendments prior to the adoption process.

EDUCATION

Master of City and Regional Planning with Distinction, The Ohio State University, 1994

B.A., Political Science, California State University Fullerton, Cum Laude, 1991

REGISTRATION

LEED Accredited Professional, U.S. Green Building Council, 2004

American Institute of Certified Planners (AICP), 1996

RELEVANT PROJECT EXPERIENCE

CALIFORNIA STORMWATER QUALITY ASSOCIATION PROPOSITION (CASQA) 84 LID CODE UPDATES, VARIOUS MUNICIPALITIES, CA

Wayne was the Principal-in-Charge for technical assistance to 25 cities and counties throughout California to modify landscape codes and standards to water-efficient and low impact development practices into local codes. This project involved assisting Phase II permittees with amendments to landscape-related codes and standards, which required the review of local planning and permitting process to identify gaps or impediments impacting effective implementation of the post-construction stormwater requirements.

PUGET SOUND PARTNERSHIP, INTEGRATING LID INTO LOCAL CODES: A GUIDEBOOK FOR LOCAL GOVERNMENTS

Wayen worked with the Puget Sound Partnership and the Department of Ecology to prepare a step-by-step guide for integrating LID into local codes. The guide was informed by the work AHBL performed while assisting 36 Puget Sound cities and counties with amendments to local codes and engineering standards to facilitate the use of LID. The final document that it was included as official guidance in the Phase I and II Western Washington NPDES Municipal Stormwater Permits.

EASTERN WASHINGTON LOW IMPACT DEVELOPMENT (LID) GUIDANCE MANUAL

Wayne was the Principal-in-Charge for the Eastern WA LID Guidance Manual, which provides technical guidance for the design and sizing of LID practices to meet the Department of Ecology's 2004 *Stormwater Management Manual for Eastern Washington.* It also establishes goals, objectives, and design criteria for individual LID practices to achieve the flow reduction and water quality treatment standards for eastern Washington.

CITY OF BELLEVUE LID CODE INTEGRATION

Wayne was the Principal-in-Charge for the development of amendments to the City of Bellevue's Land Use Code and Transportation Code to integrate green infrastructure practices. In accordance with a number of project requirements set forth by the municipality, AHBL prepared amendments to a variety of codes including the City's landscaping, parking, site design, and right-of-way construction standards. Amendments to the City's Comprehensive Plan were also prepared to ensure that there was policy support for the code amendments.

SAMMAMISH MUNICIPAL CODE & STORMWATER MANUAL UPDATES

As the Principal-in-Charge, Wayne worked with the City of Sammamish to integrate green infrastructure practices into the City's codes and standards to make low impact development (LID) practices the preferred approach to site development. This work has involved the preparation of a city addendum to the 2016 King County Surface Water Design Manual (KCSWDM) and the preparation of amendments to various chapters of the Sammamish Municipal Code including its landscape code. Additionally, there was substantial public outreach effort to embrace the sustainable practices.

RENTON SMALL CELL ORDINANCE

As the Principal-in-Charge, Wayne helped the City of Renton with a first-of-a-kind ordinance to allow for the placement of small cell telecommunications facilities within City rights-of-way in a manner that honored the intent of the City's existing design standards.

Craig Andersen, PLA, LEED AP

Project Manager, Landscape Architect

The WSU Spokane Landscape Architecture program brought Craig to Spokane 20 years ago and he has been proud to call Spokane home ever since. His technical skillset includes irrigation design, planting plans, preparation of construction documents for public bidding, green stormwater infrastructure, public speaking, graphic presentation, and blending multiple uses into thoughtfully designed projects. He brings over 17 years of experience in Spokane and understands the unique climatic conditions, jurisdictional requirements, and local standards in eastern Washington.

Craig is also passionate about sustainable approaches to development and is a board member of the Inland Branch of the Cascadia Green Building Council. He is active in the community through his involvement with organizations such as the Lands Council and the Spokane River Forum. Craig is also a Board Member of the Spokane Parks Foundation. He has completed numerous landscape architecture projects for Spokane County, City of Spokane, Spokane Conservation District, and Spokane Public Schools.

EDUCATION

Washington State University, Bachelor of Landscape Architecture, 2000

REGISTRATION

Professional Landscape Architect, State of Washington, 2005

RELEVANT PROJECT EXPERIENCE

Catholic Charities Housing Services (CCHS) Landscape Action Plans, Spokane
CCHS asked Craig to review their portfolio of 14 apartment sites and provide Landscape Capital Needs Assessments for each site. Craig used the assessments to prepare a detailed landscape management plan for all CCHS properties. The plan included monthly maintenance tasks and schedules, procedure descriptions, and resources for maintenance supplies.

Catholic Charities Housing Services (CCHS) Irrigation Audits, Spokane
Building upon the success of the Landscape Maintenance Manual, in early 2016 CCHS asked Craig to look into how to reduce their irrigation water and maintenance costs for their 10 most costly sites. Craig completed irrigation audits and recommissioned each system. Irrigation audits were complete using the Irrigation Association's guidelines to review each site, calculate system performance, and prepare new controller schedules. Recommissioning the irrigation systems has been a massive success for CCHS with over $20,000 in water use savings by the end of the year.

SPOKANE LANDSCAPE RESOURCE MANAGEMENT PLAN, SPOKANE
Craig assisted in the development of a landscape management plan which captured the true cost of City-owned assets in Spokane, WA. Craig led the identification and assignment of various maintenance needs for each given asset, and contributed valuable feedback to inform the creation of budget forecasts and operational needs for future landscape assets.

EASTERN WASHINGTON L.I.D. GUIDANCE MANUAL
Craig was the Landscape Architect for the Eastern WA LID Guidance Manual, which provides technical guidance for the design and sizing of LID practices to meet the Department of Ecology's 2004 *Stormwater Management Manual for Eastern Washington.* It also establishes goals, objectives, and design criteria for individual LID practices to achieve the flow reduction and water quality treatment standards for eastern Washington.

HAZEL'S CREEK REGIONAL CONSERVATION AREA, SPOKANE
Landscape project manager for the Hazel's Creek master plan which introduced an integrated approach to stormwater management in the City of Spokane. Historically in Spokane, the public is prohibited from accessing regional stormwater management facilities. The opposite will be true at Hazel's Creek where community recreation and education opportunities, natural wetlands and wildlife enhancements, and demonstration of low impact development techniques will be combined with constructed stormwater treatment wetlands and a detention and infiltration system that will manage the sub-basin's stormwater runoff.

RIVERFRONT PARK LID EVALUATION, SPOKANE
Riverfront Park is a beloved amenity in Spokane's downtown. The 2014 Riverfront Park Master Plan outlined conceptual improvements that resulted from an extensive public outreach effort. As part of this master planning process, AHBL prepared a low impact development (LID) study with the goal of identifying strategies that would improve water quality, reduce maintenance costs, and beautify the park.

Brittany Port, AICP

Land Use Planner

Brittany Port is a land use planner with professional experience in both current and long-range planning projects. Brittany has worked on a variety of policy planning projects including comprehensive plan updates, shoreline master programs, and zoning code updates for public sector clients in Washington and California.

Brittany has a talent for graphic design and document production and has served as a graphics and production lead on several long-range planning projects as well as a co-author. Brittany is proficient in GIS, Adobe Creative Suite (Photoshop, Illustrator and InDesign), and AutoCAD. She has assisted with several code amendments to zoning, landscape and subdivision ordinances particularly as they pertain to incorporating low impact development. Brittany has been published in the American Planning Association's Planning magazine and has served as an instructor for a Planetizen course on creating interactive plans designed for reading on mobile devices.

Brittany serves one day per week as an on-site planner for the City of Milton, WA where she administers the City's zoning code. This experience provides her with valuable perspective on implementation issues that are inherent in land use codes.

EDUCATION

The Ohio State University, Master of City & Regional Planning, 2014

The Ohio State University, B.S., City & Regional Planning, Magna Cum Laude, 2013

REGISTRATION

American Institute of Certified Planners (AICP), 2016

RELEVANT PROJECT EXPERIENCE

CALIFORNIA STORMWATER QUALITY ASSOCIATION PROPOSITION (CASQA) 84 LID CODE UPDATES, VARIOUS MUNICIPALITIES, CA

As land use planner, Brittany provided technical assistance to 25 cities and counties throughout California to modify landscape codes and standards to water-efficient and low impact development practices into local codes. This project involved assisting Phase II permittees with amendments to landscape-related codes and standards for compliance with Permit Condition E.12.J(ii)(a) of General Permit No. CAS000004, which required the review of local planning and permitting process to identify gaps or impediments impacting effective implementation of the post-construction stormwater requirements.

CITY OF BELLEVUE LID CODE INTEGRATION

As the land use planner, Brittany helped develop amendments to the City of Bellevue's Land Use Code and Transportation Code to integrate green infrastructure practices. In accordance with a number of project requirements set forth by the municipality, AHBL prepared amendments to a variety of codes including the City's landscaping, parking, site design, and right-of-way construction standards. Amendments to the City's Comprehensive Plan were also prepared to ensure that there was policy support for the code amendments.

SAMMAMISH MUNICIPAL CODE & STORMWATER MANUAL UPDATES

As the land use planner, Brittany worked with the City of Sammamish to integrate green infrastructure practices into the City's codes and standards to make low impact development (LID) practices the preferred approach to site development. This work has involved the preparation of a city addendum to the 2016 King County Surface Water Design Manual (KCSWDM) and the preparation of amendments to various chapters of the Sammamish Municipal Code including its landscape code. Additionally, there was substantial public outreach effort to embrace the sustainable practices.

RENTON SMALL CELL ORDINANCE

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WHATCOM COUNTY LID CODE UPDATES

Brittany is project planner for AHBL's work with Whatcom County to integrate LID into local codes and standards following the issuance of the 2013 Phase II NPDES Permit. She prepared an opportunity analysis to identify areas where the LID principles of minimizing vegetation loss, impervious surface coverage, and stormwater runoff can be integrated into the County's codes and enforce- able standards.