



focus group sessions each centered on one of the respective focal challenges central to the ROSS approach, including: biodiversity (8 attendees), social equity & human health (11 attendees), climate change (5 attendees), and economic development (6 attendees) (see Attachment 1: Focus Group Summary Notes). Through the energetic discussions within each focus group, the team learned of many conditions and recommendations useful for steering strategic response in the Green/Duwamish Watershed.

### Open Houses

The *Our Green/Duwamish* team assembled the information gleaned from interviews, focus groups, and earlier research, and went to the broader community for additional input. Three sub-watershed-specific open houses were held in June and July to hear the thoughts of those familiar with conditions and concerns across the Green/Duwamish sub-watersheds. King County took responsibility for outreach to potential open house participants, with suggestions from ROSS staff.

The first open house was held at Camp Long in West Seattle on June 30<sup>th</sup>, where 28 attendees provided input focused on the Duwamish Estuary & Nearshore sub-watersheds. The open house for the Middle and Upper Green sub-watersheds was held on July 8<sup>th</sup> in Maple Valley at the Lake Wilderness Lodge (9 attendees participated), and the final open house addressing the Lower Green sub-watershed was held on July 14<sup>th</sup> at Kent Station (8 attendees participated). Each open house generated numerous informative conversations, and the team learned much from community leaders, city council members, government agency leaders, and organizational representatives about what they value in the Green/Duwamish sub-watersheds, as well as the air, land, and water issues seen as pressing concerns.

### Online Activities

Since July, two online tools have also been utilized to support the Green/Duwamish Watershed Strategy. In early July, the [Our Green/Duwamish project website](#) was activated. The website aims to engage the broader community in the project, and to provide news and updates as partners work together to develop the Watershed Strategy. Then, on July 15<sup>th</sup>, an [online survey](#) was opened for two weeks, inviting participants to comment on the threats and opportunities regarding air, land, and water resources within the Green/Duwamish Watershed (11 participants submitted comments). The ROSS and King County team especially targeted municipal planners and officials, as well as the WAG, with invitations to complete the survey.

## **Plans & Programs Inventory**

Based on the input and direction of numerous participants in the Listening Phase of the Green/Duwamish Watershed Strategy, the ROSS team learned of more than ninety plans and programs that are potentially pertinent to advancing environmental and social well-being related to air, land and water in the watershed (see Attachment 2: List of Plans and Programs). Researching these plans and programs made it clear to the project team that numerous actions are currently ongoing or planned within the Green/Duwamish Watershed to enhance living conditions for the people, plants, and animals of the watershed. The project team found that hundreds of millions of dollars have been allocated to and through these plans and programs by federal, state, local, non-profit, private sector, and community entities.

Through a screening process involving ROSS and King County staff, forty-one of these plans and programs were prioritized as key initiatives to be reviewed in greater depth. As possible, based on available information, these were described in a summary table, the “Plans and Programs Inventory,” listing for each initiative: the lead agency/organization, key partners, geographic reach, intended outcomes, metrics and targets used to measure success, the plan or program’s timeframe, resources deployed to meet its goals, and the status of progress (see Attachment 3: Plans and Programs Inventory). Through this effort, the ROSS team gained insight into various activities that have the greatest impact (or the potential for such impact) within the watershed. Those activities are summarized in the plans and programs summary memo (the preface to the Inventory table), in relation to the air, land, water, and socioeconomic resources they affect.

## **Findings**

Through Phase I of the Green/Duwamish Watershed Strategy, based on both direct input from listening tour participants and internal analysis of existing plans and programs affecting the watershed, the ROSS team compiled a list of numerous perceptions of watershed conditions as well as associated concerns and suggestions. This information was compiled in a master database, facilitating organization of the data according to focal topics, affected sub-basins, and involved resources. Through an intensive multi-stage internal workshop process, the ROSS team condensed this comprehensive content into about 75 consolidated ideas on watershed issues and responses. These 75 ideas were ultimately synthesized into a set of 39 key concepts reflecting ROSS team findings regarding the most important challenges and related opportunities in the watershed. Technical aspects of these concepts were then further refined

through outreach to leaders and specialists in agencies, non-profits, businesses, and community groups working in the watershed. (See Attachment 4: Challenges and Opportunities in the Green/Duwamish Watershed.)

The overall findings of the Listening Phase, as described below, address critical challenges faced within the watershed, as well as key opportunities to improve well-being for the many people, species, and ecosystems within the Green/Duwamish basin. The noted opportunities, organized by general typology of proposed action, represent potentially feasible strategic measures that may warrant further exploration in the next phase of the Green Duwamish Watershed Strategy. (The numbers following descriptions, below, refer to specific numbered challenges and opportunities that are further detailed in Attachment 4.)

#### Coordination of Existing Plans and Programs

The ROSS team began its research effort understanding that while many people living and working in the Green/Duwamish Watershed are thriving in terms of health and well-being, many others are not. Similarly, plants and wildlife face significant threats to their long-term viability within the basin. It was also clear to the team that many robust efforts to improve air, land, water, and human conditions were already underway within the watershed. The team understood that many successes have been, and continue to be, achieved in the areas of habitat restoration and conservation, air and water quality improvement, and sustainable forestry practice, among others, but more needs to be done.

Though there are many effective plans, programs, and initiatives underway in the watershed, a number of them would benefit from enhanced coordination with other efforts in the watershed, and in the broader region. Such coordination would help agencies share best practices, troubleshoot jurisdictional conflicts, collaborate on funding opportunities, and optimize existing resources for maximum benefit. Many stakeholders referenced the WRIA 9 Salmon Habitat Recovery Plan as having set a good example of interagency coordination at the watershed scale, and suggested that it could also be used as a model for addressing issues that extend beyond salmon recovery (See #s 3, 5, 11, 35 in Attachment 4). One issue that could benefit from such coordination is water quantity control. In the Green/Duwamish, water quantity is a problem with regard to stormwater runoff, flooding, and storm surge (associated with sea level rise) and it has been recommended that these should be addressed as interconnected elements in surface water management and regulation (See #s 5, 14, 21).

### New Watershed-Wide Plans and Programs

It was also found that there are gaps within the planning and programming for human and ecosystem health within the Green/Duwamish watershed, and that this is true across both subject areas and geographic reaches. Where human health is concerned, watershed-wide air quality, water quality, recreational opportunity, and access to healthy food are known concerns and have already been extensively evaluated. Opportunities to enhance these factors in human health include facilitating efforts already underway to: improve air and water quality; evaluate access to recreational facilities and potentially recommend specific open space investments (See #s 5, 6, 10, 14, 29, 36); evaluate access to non-motorized transportation opportunities and help advance trail planning efforts (See #s 16, 19, 20, 35, 37); and provide fishing opportunities in places where resident aquatic life is not harmful to human health if consumed (See #38). There is also an opportunity to develop a watershed-wide urban forestry plan (See #s 12, 27, 34), which could improve human health by increasing air filtration by trees and by mitigating climate change impacts such as Urban Heat Islands and severe storms.

With respect to the well-being of plant and wildlife communities in the Green/Duwamish, many participants in the Listening Phase identified gaps in watershed-scale planning. Opportunities exist to develop a watershed-wide invasive species plan (See #s 1, 3, 13), biodiversity plan (See #1), and stormwater plan (See #s 5, 7, 14), as well as a watershed-wide coalition coordinating habitat stewardship and restoration (See #s 1, 3, 30). Such watershed-wide planning would address geographic gaps that hinder current planning addressing these issues.

### Public Outreach & Communication

Although many initiatives are underway to address conditions in the Green/Duwamish Watershed, they are not all well-understood by the general public. Efforts to recover salmonid species habitat, to clean up the Duwamish Estuary from decades of pollution, and to remove invasive species, among other efforts, are not apparent to many of the people who live, work, and spend time in the watershed. Nor are the immediate human benefits of such efforts widely understood. Accordingly, there are opportunities to better engage the public via outreach while projects are planned and carried out, to help mobilize individuals as volunteers, and to foster political will to increase funding and action at the watershed-scale (See #s 2, 3, 8, 30, 31).

Additional communication opportunities involve illustrating clear connections between ecosystem health, human health, and economic vitality within the Puget Sound Region. The growing impacts of

climate change, as well as the effects of urban sprawl and habitat encroachment, could be clarified alongside opportunities for mitigating adverse outcomes (See #22). Such illustrative communication could be widely used to foster support for crucial, but sometimes poorly understood, habitat restoration and resource management practices.

### Technical Analyses & Toolkits

Multiple Listening Phase participants observed that there are few conclusive analyses documenting problem areas within the watershed that they could readily describe anecdotally. In addition, some participants suggested that user-friendly instructional toolkits could help facilitate implementation of watershed improvement actions by various interested agencies and individuals. There is opportunity for the content of such analyses and toolkits to be framed and preliminarily developed during formulation of the Watershed Strategy. These could eventually be handed off to agencies and non-profits for further development, fine-tuning, and distribution.

One particular suggestion of needed analysis addressed the Lower Green, where parks facilities managers cited inadequate supply and condition of parks and open space for community use (See #s 28, 29, 32). The managers suggested that analysis of supply and demand across the watershed could reveal areas that have insufficient access to appropriate open space resources. Similar supply and demand analysis was also recommended with regard to forest roads, suggesting that some roads could potentially be removed from use and environmentally restored to serve greater ecological functions (See #10). Finally, supply and demand analyses were suggested for manufacturing and industrial lands, as well as economic valuation of agricultural and forest lands as providers of continuous, connected, and essential ecosystem services (See #s 23, 24, 25, 26, 27). Research and analysis in each of these areas could support decision-making processes aimed at improving human and ecological health outcomes through provision of open space, recreation, and cleaner air and water (See #23).

A variety of instructional toolkits were recommended, that could be made available to private land owners, technical staff, and others operating within the watershed. Discussion with agency staff revealed that although ongoing government efforts are ambitious and sometimes well-funded, there are limits to what can be achieved through government intervention on private property – and privately owned parcels make up a majority of land within the watershed. With the current pace of redevelopment at 1% per year, most parcels have little chance of being improved via regulation of development action toward meeting habitat and landscape performance goals. Thus, it could be more

productive for private land owners (homeowners, businesses, and others) to receive toolkits and incentives that facilitate taking up important work on their own property to improve wildlife habitat (See #7), treat stormwater onsite, and remove invasive species. Additional opportunities exist for toolkits to assist: transfer and purchase of development rights (TDRs and PDRs) (See #s 8, 15, 39); enforcement strategy design for water quality regulating agencies (See #9); and environmental compliance for business owners.

### Geographically-Specific Opportunities

Many of the challenges and opportunities identified during the Listening Phase focused on specific geographic areas, or particular landscape features, perceived to be insufficiently addressed in current plans, programs, and initiatives. With respect to water quality, technical staff identified the lack of adequate planning and restoration efforts in many of watershed's tributary basins. Focusing on these areas could help improve water quality in the receiving waters, assisting with salmon habitat outcomes as well as human health benefits (See #4). Within the watershed's urban and suburban areas, reduced air quality disproportionately impacts people living in the Duwamish Estuary, Nearshore, and Lower Green sub-basins. This problem, largely the result of emissions from passenger and freight vehicles traveling on nearby highways, is manifest in disproportionately high asthma hospitalizations in the local communities. Agencies and organizations are engaged in addressing this concern in the lower reaches of the watershed, as well as mitigating the impacts, but much work remains to be done and could integrate the air quality benefits of planned vegetated open space. Also within the watershed's urban and suburban areas, there is a need for job training and education access for low-income individuals. Enhancing stewardship training in these areas could provide multiple benefits, such as helping people attain living-wage restoration jobs while also improving their environments (See #33).

Several additional location-specific opportunities include: reviving an initiative to establish Hanging Gardens State Park; developing a "Mountains to Sound Commission;" and focusing habitat restoration and associated land conservation within the Icy Creek and Cristy Creek drainages (See #s 17, 18, 19, 20).

### Equity Impact Review and Process Equity within the Green/Duwamish Watershed Strategy

Social equity was another major area of concern throughout the Listening Phase. With guidance from King County staff, the ROSS team worked to facilitate conversations and gain insights regarding three entwined aspects of equity in the Watershed: process equity, distributional equity, and generational equity. In considering these concerns, and toward ensuring that equitable decision-making frames the

Green/Duwamish Watershed Strategy, an opportunity was noted to conduct an Equity Impact Review (EIR) regarding strategy recommendations developed in subsequent phases of the Strategy (See #29). EIR is designed to assess how proposals may address or exacerbate conditions of inequity, bringing such issues to light early in decision-making processes. For example, in light of currently inequitable provision of parks and recreation opportunities across the Green/Duwamish Watershed, an EIR may highlight ways in which Watershed Strategy recommendations might reduce or increase this imbalance.

Finally, multiple partners also identified a lack of appropriate community representation in the Listening Phase of the Watershed Strategy process itself. Most of the participants involved in the Listening Phase activities were staff from agencies or non-profits already working on watershed projects. Few participants were representatives of communities and neighborhoods within the watershed, despite outreach efforts by King County and ROSS through the open houses and the web survey. Accordingly, a clear opportunity exists to ensure appropriate engagement of community representatives throughout the remainder of the Watershed Strategy development.

### **Syntheses**

Through the Listening Phase of the Green/Duwamish Watershed Strategy, the ROSS team developed: background information on existing watershed conditions, information on important current efforts in the basin, and summary analyses regarding important challenges and opportunities in the watershed. To render this wide breadth of data and findings more intuitive and actionable for planning specific strategic responses in the watershed, the ROSS team then compiled and contextualized the information in the following products:

- *Synthesis cards* (see Attachment 5: Synthesis Cards) describing background information, key plans and programs, and key challenges and opportunities with respect to important watershed issues (biodiversity, climate change, human health, social equity, and economic development).
- *Synthesis maps* (see Attachment 6: Synthesis Maps) of geographically distinct challenges and opportunities in the watershed. Including:
  - Preliminary mapping of stakeholder input, grouped into two distinct ecological functional areas: the Nearshore, Duwamish Estuary, and Lower Green Sub-basins; and Middle and Upper Green Sub-basins.
  - Final synthesis mapping of localized challenges and opportunities detailed in Attachment 4.