# Mercer Island CAP – Page 33

# Revised Natural Systems Section (Draft)

**Natural systems (e.g., trees, soil) store and capture carbon from the atmosphere and provide important climate resiliency services**. For example, natural cooling from tree shade reduces extreme heat stress and decreases energy demand for air conditioning. Conserving valuable water resources also helps ensure that Mercer Island is resilient against future droughts and can maintain a healthy water supply in the years ahead.

**Focus area goal:** Foster climate resilient natural landscapes by protecting vital habitats, ecosystems, ~~and natural resources,~~ and conserving water resources.

| Strategy | KPI/Metric | 2030 Target | 2050 Target |
|---|---|---|---|
| Increase urban tree canopy and green space. | Increase in tree canopy acreage ~~(% of city coverage)~~ and replacement counts[1] | ~~Maintain current canopy and increase canopy by 5% compared to 2018~~<br>Ensure City's tree replacement ratio for trees lost on public lands is at least 5:1.<br>Continue to prioritize retention of healthy, mature canopy in parks, rights-of way, and open space areas.<br>Increase tree canopy on private land by 5%.[2] | ~~Maintain current canopy and increase canopy by 15%~~<br>All new City plantings are climate-adapted species.<br>Increase tree canopy on private land by 15%. |
| Foster healthy & resilient natural systems. | ~~Change in ecosystem function (forest age & diversity, invasives removal, stream daylighting)~~<br>Improvement in ecosystem function | ~~Restored ecosystem function (acres?)~~<br>Transition 10% percent of public open space from active restoration to a monitoring and | ~~Improved ecosystem function (acres?)~~<br>Transition 50% percent of public open space from active restoration to a monitoring and |

[1] Target applies only to land acreage that could support tree canopy.
[2] The most recent tree canopy assessment was completed in 2018; the next will be completed in 2028 and will inform future policy decisions.

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|---|---|---|---|
| | | maintenance phase of management.<br>Recruit landowners to participate in active restoration efforts and/or habitat conservation on private land.[3] | maintenance phase of management. |

## Strategy #1: Increase urban tree canopy and green space.

| Action ID | Short name | Action description | Icons |
|---|---|---|---|
| **NS1.1** | Tree planting incentive program | Develop programs to support and encourage residents and large property owners to plant the right tree in the right place and sustain existing trees with reduced cost or free trees. Offer tree-awareness campaigns and classes to educate the community and develop tree planting demonstration programs. | |
| **NS1.2** | Tree planting programs | Enhance City-led street tree planting in the right-of-way and assess long-term stewardship needs; promote street frontage plantings by businesses. | |

## Strategy #2: Foster healthy & resilient natural systems.

| Action ID | Short name | Action description | Icons |
|---|---|---|---|
| **NS2.1** | Water-efficient landscape standards | Utilize educational campaigns to encourage drought-resistant and/or native landscaping and design. Work with landscape companies to educate and incentivize drip irrigation and smart management technology. Develop demonstration programs. | |
| **NS2.2** | Water conservation incentives | Partner with regional water conservation groups, such as the Saving Water Partnership, to develop and advertise incentives and installation programs to retrofit inefficient water fixtures. | |
| **NS2.3** | Green stormwater infrastructure | Promote green stormwater infrastructure and low impact development (LID) through education and demonstration programs. | |

[3] "Monitoring and maintenance phase" is defined as open space areas with less than 5% invasive plant cover, greater than 60% native tree cover, and a diversity of plant species, tree ages, and forest structure.

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| **NS2.4** | Greywater reuse education | Develop campaigns to educate residents and businesses on the financial and environmental benefits of reusing rainwater and greywater. |  |

## (New Natural Systems actions to cover the revised target language listed above)

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|---|---|---|---|
| **NS2.5** | Develop monitoring and maintenance baseline for all City open spaces | Complete an assessment of all City open spaces to establish a baseline for monitoring and maintenance phase. (Note: This work has already been completed for some, but not all, of the City's open space areas.) | |
| **NS2.6** | Open space restoration | Using the baseline date from NS2.5, expand acreage of forested open space undergoing intensive restoration in order to reach a more stable monitoring and maintenance phase of management. Expand contiguous areas of open space in the monitoring and maintenance phase to improve habitat connectivity and limit boundary effects. | |
| **NS2.7** | Private forest restoration | Engage private landowners (businesses, schools, churches, and residential properties) to participate in forest restoration programs. Develop programs and incentives to increase canopy cover, improve diversity of native species and forest structure, reduce invasive species, and add resilient, climate-adapted landscaping. | |
| **NS2.8** | 10-Year Citywide tree Canopy Assessment | Continue to perform an assessment of the citywide tree canopy every ten years. Use data and findings to modify strategies and actions related to increasing forest canopy and improving forest health. | |
| **NS2.9** | Carbon sequestration | Assess the carbon sequestration (the rate of carbon stored in plants, soil, and habitats) of existing public land in Mercer Island and explore ways to increase sequestration levels through changes to land management practices. | |