



King County

K.C. Date Received _____

CONSERVATION FUTURES (CFT) 2016 ANNUAL COLLECTIONS APPLICATION FOR FUNDS

PROJECT NAME: Re-Greening the Green _____

Applicant Jurisdiction(s): King County _____

Open Space System: Lower Green River _____

(Name of larger connected system, if any, such as Cedar River Greenway, Mountains to Sound, a Regional Trail, etc.)

Acquisition Project Size: approximately 130-250 acres across multiple parcels _____

CFT Application Amount: \$250,000 _____

(Size in acres and proposed number of parcel(s) if a multi-parcel proposal)

(Dollar amount of CFT grant requested)

Type of Acquisition(s): Fee Title Conservation Easement Other: _____

CONTACT INFORMATION

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Date: March 18, 2015 _____

PROJECT SUMMARY:

This multi-year, multi-parcel project will acquire easements on strategically important properties, between river mile 11 and 32 of the Lower Green River, to allow the planting and protection of tall, primarily deciduous, native shade trees. The focus will be on properties that, when planted with shade trees, will yield the greatest amount of shade to the river during the most intense periods of energy loading from the sun. In the support of the Green River System Wide Improvement Framework Project, the Muckleshoot Indian Tribe has completed a sun/shade analysis of the Lower Green River during the summer/fall months. The results of the Tribe's analysis are represented in a series of maps of the Lower Green River. Four representative maps from the Muckleshoot Tribe's analysis are included with this application: three overview maps and one sample high resolution map that shows the analysis area in greater detail. The Muckleshoot Indian Tribe's shade analysis serves as the best available science for identifying priority shoreline locations where establishing tall shade trees will improve chronic temperature problems on the Lower Green River. The Muckleshoot Tribe's analysis will be used to prioritize parcels to acquire shoreline buffer easements for tree planting. Initial priorities for acquisition of easements in support of planting shade trees, will be Lower Green River shoreline areas on the map that are identified as "medium, high, and critical" for shade.

One of the dominant impediments to salmon recovery in the Lower Green River system is high water temperatures from early summer through fall when salmon migrate upstream and spawn in the river. The Green River Total Maximum Daily Load (TMDL) Water Quality Improvement Report (Coffin and Lee 2011) determined that portions of the Green River exhibit unhealthy and sometimes lethal temperatures for salmonids and fails to consistently meet state water quality standards. The report identifies the lack of shade along the Lower and Middle Green River as the main driver for increased summer/fall water temperatures and highlights the importance of riparian vegetation along the riverine banks.

Analysis of riparian vegetation conditions found that over half of the total length of river within the lower 25 miles of river was found to have no trees or shrubs (other than invasive species) within shading distance of the river's edge (WRIA 9 Status and Trends Monitoring Report: 2005-2010). This heavily urbanized reach of the Green River runs through the cities of Kent, Auburn and Tukwila where development has cleared riparian areas of tall trees and shrubs which are critical to shading the river from intense summer sun, and thereby maintaining lower water temperatures.

Easement buffer widths will vary in size depending on the property location, land use and landowner. The primary goal is to secure easements within 150 feet of the Lower Green River's ordinary high water mark, that are wide enough to support shoreline trees that reach a minimum of 100 feet in height at maturity and that have high canopy volume to maximize shade creation. The extent of additional habitat complexity along the Lower Green River shoreline, and their requisite larger sized buffer areas, will be a work item in 2015. These habitat 'nodes' would only be created in limited locations where there is landowner willingness and compatible land uses to have larger, more complex vegetative riparian buffers. Avoiding negative impacts to existing agricultural properties will be taken into account in the acquisition of easements and the development of planting plans.

This project is part of the Green River System Wide Improvement Framework (SWIF) – a King County Flood Control District initiative that will improve flood protection within the Lower Green River Valley, for current and future generations, in a way that builds economic, ecological and community resiliency. Preparation of the Green River SWIF has been informed by an extensive advisory process that reflects a wide spectrum of constituent interests, including federal/state agencies, local cities, Muckleshoot Tribe, business community, and environmental organizations. Current floodplain management approaches often incorporate salmon recovery and habitat protection actions with flood protection projects. To this effect, in February 2015, the King County Council passed Motion #14305 which directed the Executive to propose to the CFT Citizen's Committee a project as described above.

Work in 2015 will further the Muckleshoot shade analysis, and engaged prioritized property owners, and fund appraisal work with the intent to begin easement acquisitions in 2016 when CFT funding becomes available. This initial 2016 funding request for \$250,000 is meant to catalyze a multi-year collaborative acquisition and planting effort on the Lower and Middle Green River.

1. OPEN SPACE RESOURCES

Please review the attached evaluation criteria. For the proposed acquisition parcel(s), please mark those criteria that apply and thoroughly, yet succinctly, describe **in the space below** how the proposed acquisition satisfies each marked criteria. Please clearly describe how these criteria might be met at a landscape level, and how they apply to individual parcels. If restoration is part of the plan, please briefly describe the current condition and the hoped for restored condition that is the goal of the acquisition.

- | | |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> A. Wildlife habitat or rare plant reserve | <input type="checkbox"/> E. Historic/cultural resources |
| <input checked="" type="checkbox"/> B. Salmon habitat and aquatic resources | <input type="checkbox"/> F. Urban passive-use natural area/greenbelt |
| <input type="checkbox"/> C. Scenic resources | <input type="checkbox"/> G. Park/open space or natural corridor addition |
| <input type="checkbox"/> D. Community separator | <input type="checkbox"/> H. Passive recreation opportunity/unmet needs |

The Green-Duwamish and Central Puget Sound (WRIA 9) Salmon Habitat Plan identifies the loss of cool, clean water as a key factor of decline for salmonids. The Green River serves as an important migration corridor and spawning and rearing habitat for several salmon species, including Puget Sound Chinook, bull trout, coho, chum, pink, sockeye, steelhead/rainbow, and cutthroat trout. These species all need cold waters for optimum health during various life stages. High temperatures can have many detrimental effects on the health of salmonids, including: blocking or delaying migration; causing a decrease in dissolved oxygen increasing susceptibility to disease; hindering or stopping the development of egg, fry and smolt; reducing the natural food supply; and killing both mature and immature fish. To increase survivability and rebuild the habitat, it will be necessary to reduce and then maintain lower temperatures in the river below Howard Hanson Dam.

The WRIA 9 Salmon Habitat Plan identifies planting of native trees as a critical part of protecting water quality from pollutants and contaminants, providing shade in summer, improving groundwater recharge and improving salmon and wildlife habitat (Program WW-5, Promote the Planting of Native Trees). The TMDL Water Quality Improvement Report also reiterates the importance of riparian vegetation along the banks of the Lower Green River. Without shade provided by trees along the lower leveed sections, it was determined that lethal temperature limits for salmon would continue to be exceeded in the lower 3.7 miles (6 km) of the Green during the summer months in at least one out of every 10 years.

Water quality modeling through the TMDL process showed that with trees present along the levees, lethal salmon temperatures can be avoided and the temperature water quality standard for the Lower Green (17.5°C 7DADMax) can be met for most of the river's length (Coffin and Lee 2011).

Acquisitions of these easements are a first step in planning for revegetation of this reach in order to improve water quality and habitat conditions. Planning for subsequent revegetation and coordination of those efforts in the basin has already begun.

2. ADDITIONAL FACTORS

For the proposed acquisition parcel(s), please mark all criteria that apply and thoroughly, yet succinctly, describe **in the space below** how the proposed acquisition satisfies each marked criteria.

- A. Educational/interpretive opportunity
- B. Threat of loss of open space resources
- C. Ownership complexity/willing seller(s)/ownership interest proposed
- D. Partnerships - Describe any public or private partnerships that will enhance this project
- E. Is the property identified in an adopted park, open space, comprehensive, or community plan?
- F. Transferable Development Credits (TDC) participation

The Green/Duwamish and Central Puget Sound (WRIA 9) Forum of Local Governments is formalizing a partnership known as "Green the Green" with businesses and environmental organizations in order to develop and implement a revegetation strategy that will address water temperature concerns. The goal is to focus and coordinate existing riparian restoration funding, and seek new grants as match, on high priority areas in the watershed. The backbone organizations to coordinate this revegetation effort are WRIA 9, the National Fish and Wildlife Foundation, and the Boeing Company with a broad coalition including local cities, state and federal agencies, Forterra, EarthCorps, MidSound Fisheries Enhancement Group and other businesses and non-profit organizations. A stewardship component, which would recruit volunteers and provide educational opportunities, is planned to be combined with on-the-ground restoration activities.

Funding for revegetation efforts is planned through a combination of funding sources including WRIA 9 Cooperative Watershed Management grant funds, the Boeing Company and the National Fish and Wildlife Foundation with each source contributing \$250,000 in 2015 for a total of \$750,000. These grants will be used as match in applying for additional funding, including Centennial Clean Water grants, Urban Waters Small Grants, and other state and federal opportunities.

Acting now to purchase easements will help ensure that shoreline trees can be planted to cool the water so salmon can recover in the Lower Green River system.

One critical piece needed to develop restoration areas are the easements needed in order to work on private lands. This grant application directly addresses that need and other grant funding sources have been identified in order to subsequently revegetate the properties once easements have been purchased.

3. STEWARDSHIP AND MAINTENANCE

How will the property be stewarded and maintained? Does the property lend itself to volunteer stewardship opportunities? How will ongoing stewardship and maintenance efforts be funded?

The King County Water and Land Resources Division would maintain and monitor the easements as part of the overall management of river protection facilities and properties owned by the King County Flood Control District (FCD). King County and WRIA 9 will seek stewardship partner agreements with cities along the Lower Green River and non-profit groups to plant the sites and maintain the plantings until they are established.

4. PROJECT BUDGET

1) TOTAL CFT APPLICATION AMOUNT ^a	CFT: \$250,000
2) TOTAL PEL APPLICATION AMOUNT ^b	PEL:

^a Allowable CFT acquisition costs (Ordinance 14714): The disbursement of funds shall be made only for capital project expenditures that include costs of acquiring real property, including interests in real property, and the following costs: the cost of related relocation of eligible occupants, cost of appraisal, cost of appraisal review, costs of title insurance, closing costs, pro rata real estate taxes, recording fees, compensating tax, hazardous waste substances reports, directly related staff costs and related legal and administrative costs, but shall not include the cost of preparing applications for conservation futures funds.

^b King County projects only, if applicable.

Estimation of property value:

Briefly note how land values have been estimated (i.e., appraisal, property tax assessment, asking price, letter of value or other means).

This initial 2016 funding request for \$250,000 is meant to catalyze a multi-year collaborative acquisition and planting effort on the Lower and Middle Green River. The project costs described below are an estimate to secure easements on multiple parcels over multiple years. We estimate the total area of easement acquisition may range between 130 acres and 250 acres for tree planting on both banks of the 21 miles of Lower Green River. This stretch of the river courses through multiple land use types, ranging from low intensity agricultural to intense commercial; given this the easement costs will vary significantly depending on property type and landowner. We estimate the cost per square foot of buffer easement will range between \$1.15/sf and \$2.30/sf which is \$50,000 per acre to \$100,000 per acre. Given the range in easement acres and the range in costs across this long stretch of river, the total projects costs will range between \$6.5 million to \$25 million over the thirty year life of the SWIF plan. Importantly, this 2015 CFT proposal seeks seed funding to initiate and catalyze work on this important multi-year project.

PROJECT COSTS	ESTIMATED DOLLAR AMOUNT OR RANGE
Total property interest value	\$6,500,000 - \$25,000,000
Title and appraisal work	\$100,000 (due to the large # of separate parcels and landowners)
Closing, fees, taxes	\$50,000
Relocation	n/a
Hazardous waste reports	n/a
Directly related staff, administration and legal costs	\$100,000
Total Project Costs (CFT and other funds)	\$6,350,000

MATCHING FUNDS: Existing Sources (CFT can only provide a maximum of 50% of anticipated project costs)	DATE (Expended or Committed)	DOLLAR AMOUNT (Expended or Committed)
Total CFT Funds Previously Received <i>This Project</i>	0	
Total Matching Funds and Past CFT Funds <i>Currently Identified</i>	0	
Unidentified Remaining Match Need		\$250,000

Unidentified remaining match need: What funds are anticipated and what is the time frame?

Please briefly discuss how the unidentified remaining match need above will be met.

Match for the easements may come the Salmon Funding Recovery Board, the Natural Resources Conservation Service, the Washington Wildlife and Recreation Program, or local jurisdictions. Grants as match will be sought in 2015 and 2016.

5. IN-KIND CONTRIBUTIONS FROM PARTNERSHIPS

Brief Activity Description	Dollar Value of In-kind Contribution	Status (Completed or Proposed)	Activity Date Range (Completion Date or Proposed Completion Date)
Muckleshoot Indian Tribe prepared a technical product, "Lower Green River Solar Radiation Priorities Map" aka "the Sun Maps", in support of completing the Green River SWIF.	\$10,000	Completed	August 2013
The Boeing Company: funds secured for planting	\$250,000	Funds secured for planting	Depends on acquisition of planting easements
WRIA 9 Coopertive Management grant funds	\$250,000	Funds secured for planting	Depends on acquisition of planting easements
National Fish and Wildlife Foundation	\$250,000	Funds secured for planting	Depends on acquisition of planting easements
TOTAL	\$760,000		

6. ATTACHED MAPS (Two maps are now required: 1) site map and 2) general location map; you may also include one additional map, aerial photo or site photo)

8 ½ x 11" maps are preferred, but 11 x 17" is acceptable if folded and hole-punched for insertion into a three-ring binder.

Site Map that shows the following:






- Each parcel proposed for acquisition in yellow or distinct shading and an indication of any parcel proposed for less than fee simple acquisition, such as a conservation easement;
- Location of any proposed development to the site such as parking, trails or other facilities;
- Location of any proposed site restoration;
- Existing adjacent public (local, state or federal) parks or open spaces labeled and shown in dark green or distinct shading.

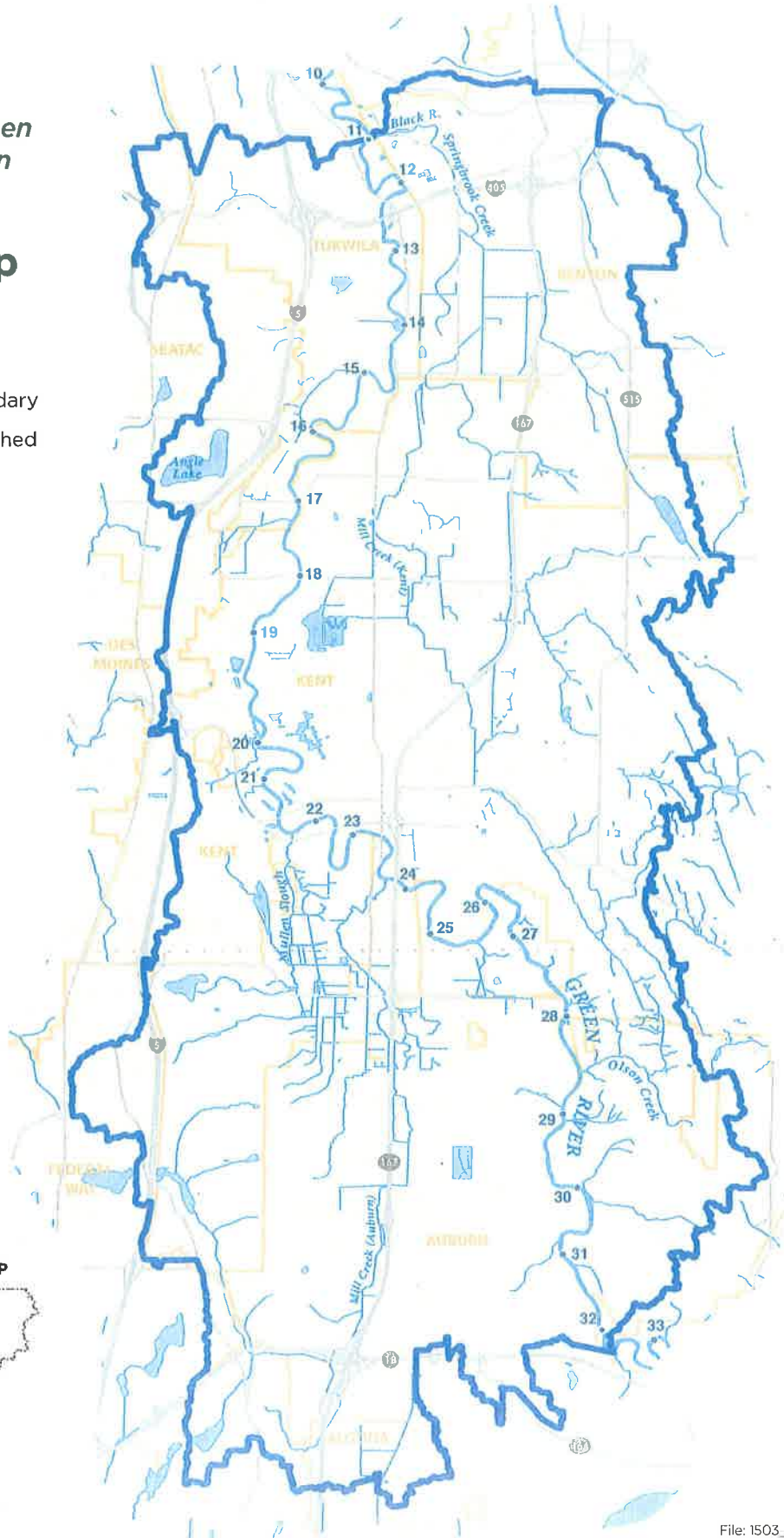
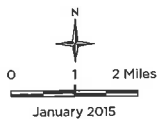
Location Map that shows the following:

- Other permanently protected open spaces (private, non-profit, institutional, etc.) shown in light green or distinct shading;
- Major water courses such as creeks, rivers, lakes or wetlands;
- Major roads, arterial roads or regional trails.
- *Map scale: This map should show approximately a ten-mile radius around the proposed acquisition(s).*

Re-Greening the Green
 2016 CFT Application

Lower Green River Site Map

-  River Mile
-  Major Road
-  King County Boundary
-  WRIA 9 Subwatershed Boundary
-  **NAME** Incorporated Area



GENERAL LOCATION MAP

