

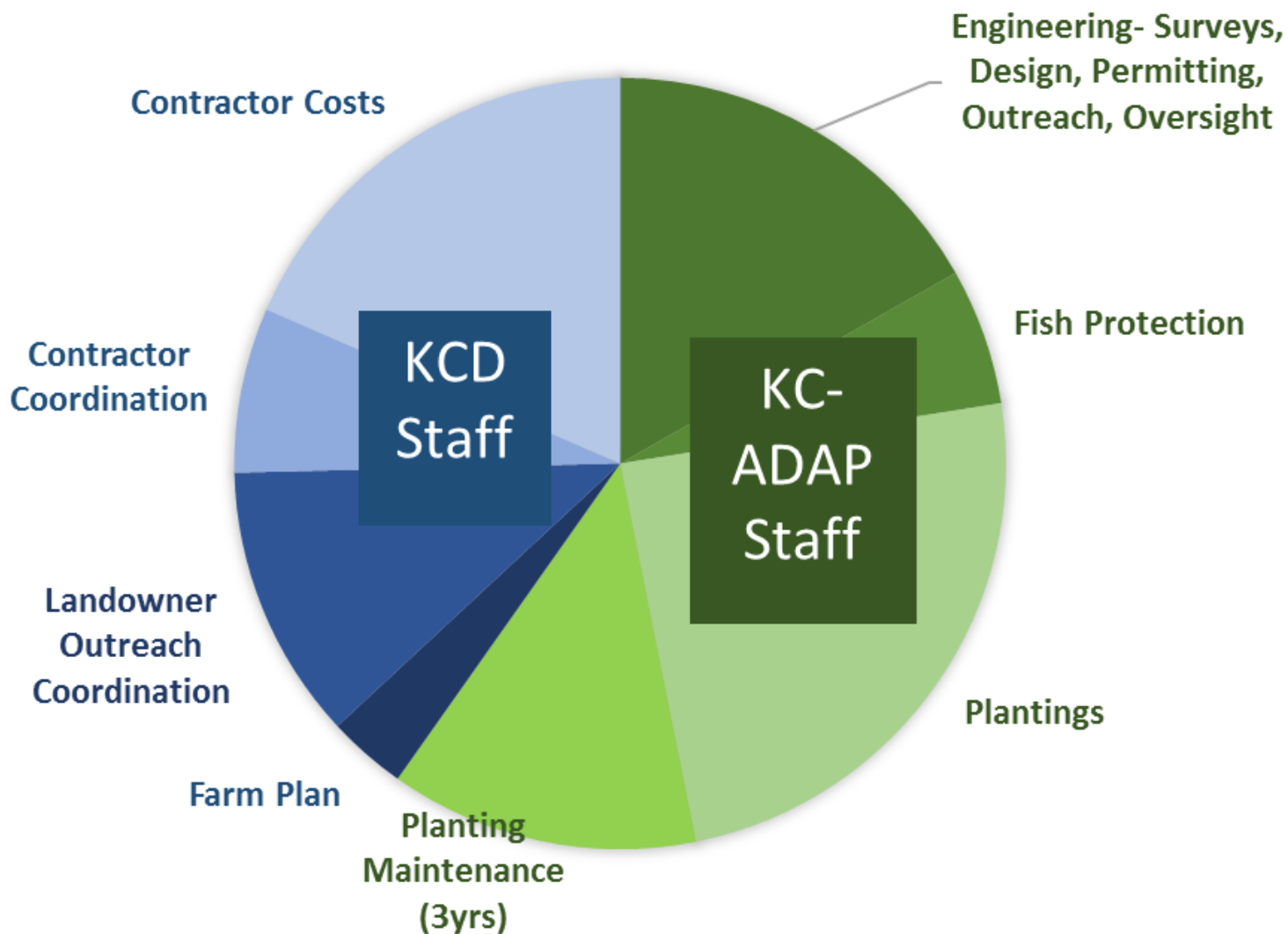
Agricultural Drainage Needs Assessment

June 15, 2016



2015 Cherry Valley farm drainage maintenance. Post – construction, pre-planting.

AGRICULTURAL DRAINAGE COLLABORATION- ROLES



*Photo of beaver dam removed during 2015
Cherry Valley farm drainage maintenance*



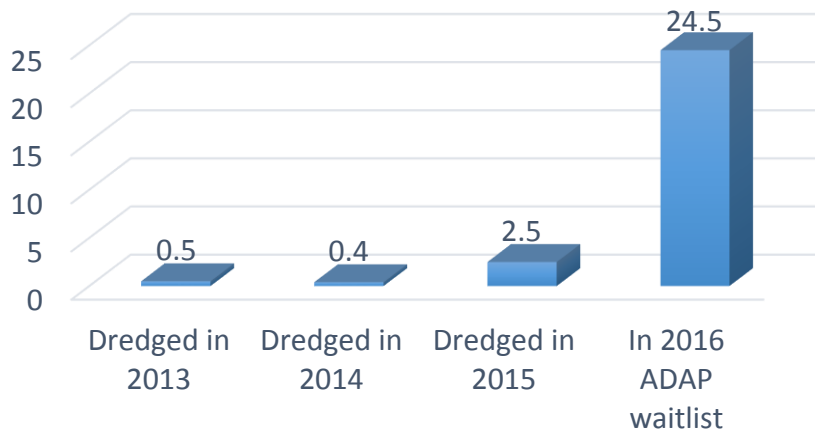
Acres Impacted





Native plants staged to be installed along 2015 farm drainage maintenance . 2015 floodwaters in background.

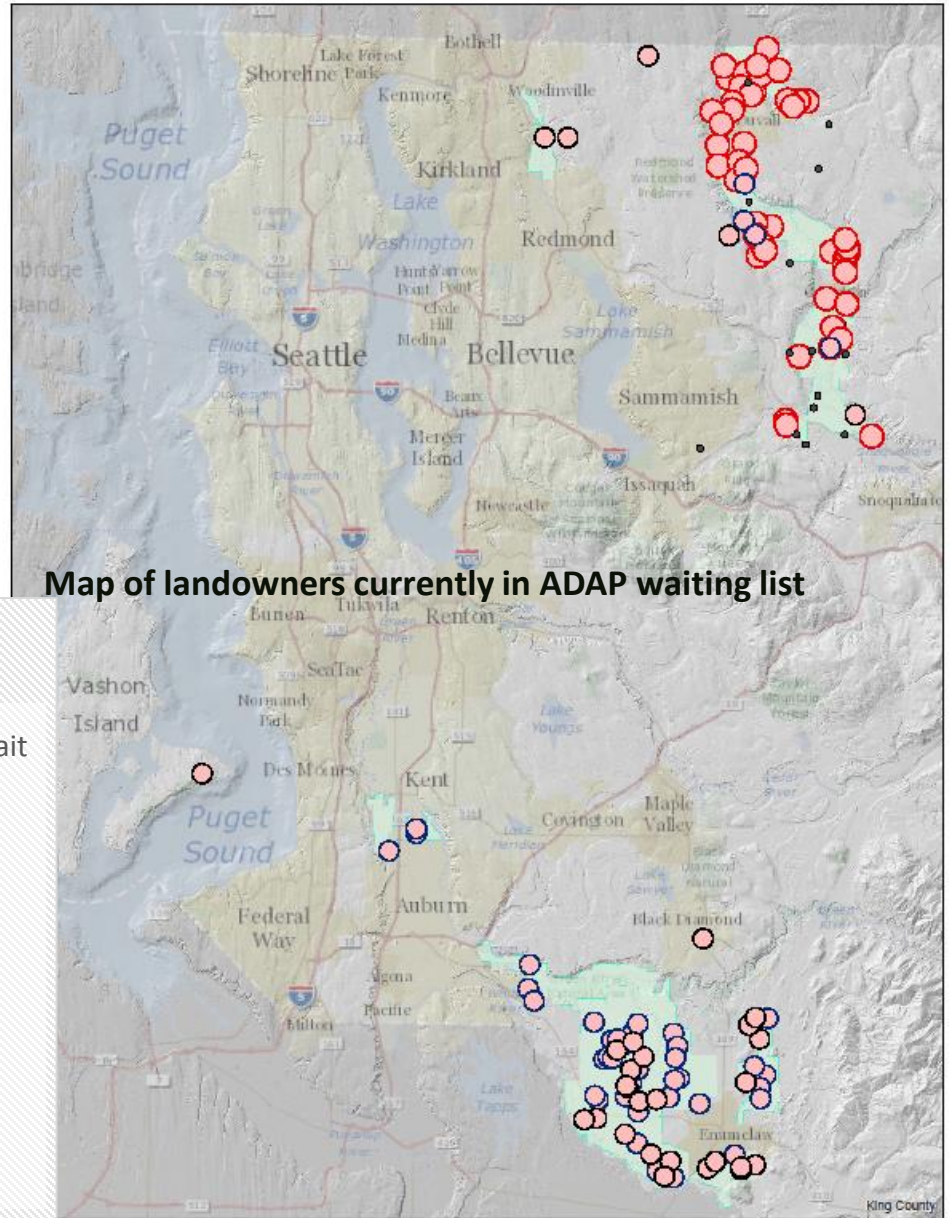
Miles of Agricultural Drainage



Steel plates and pumps are used to dewater a job site before dredging.

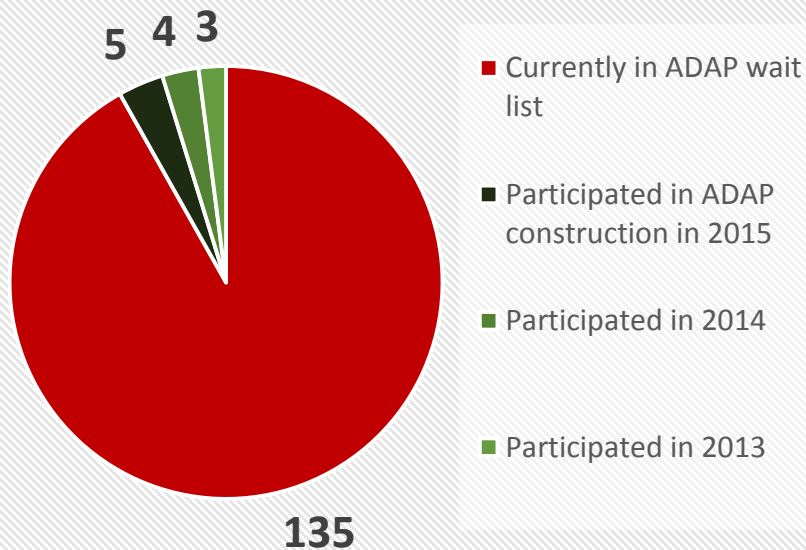


Councilmember Lambert with landowner at 2015 farm drainage job site



Map of landowners currently in ADAP waiting list

Number of Landowners who ...



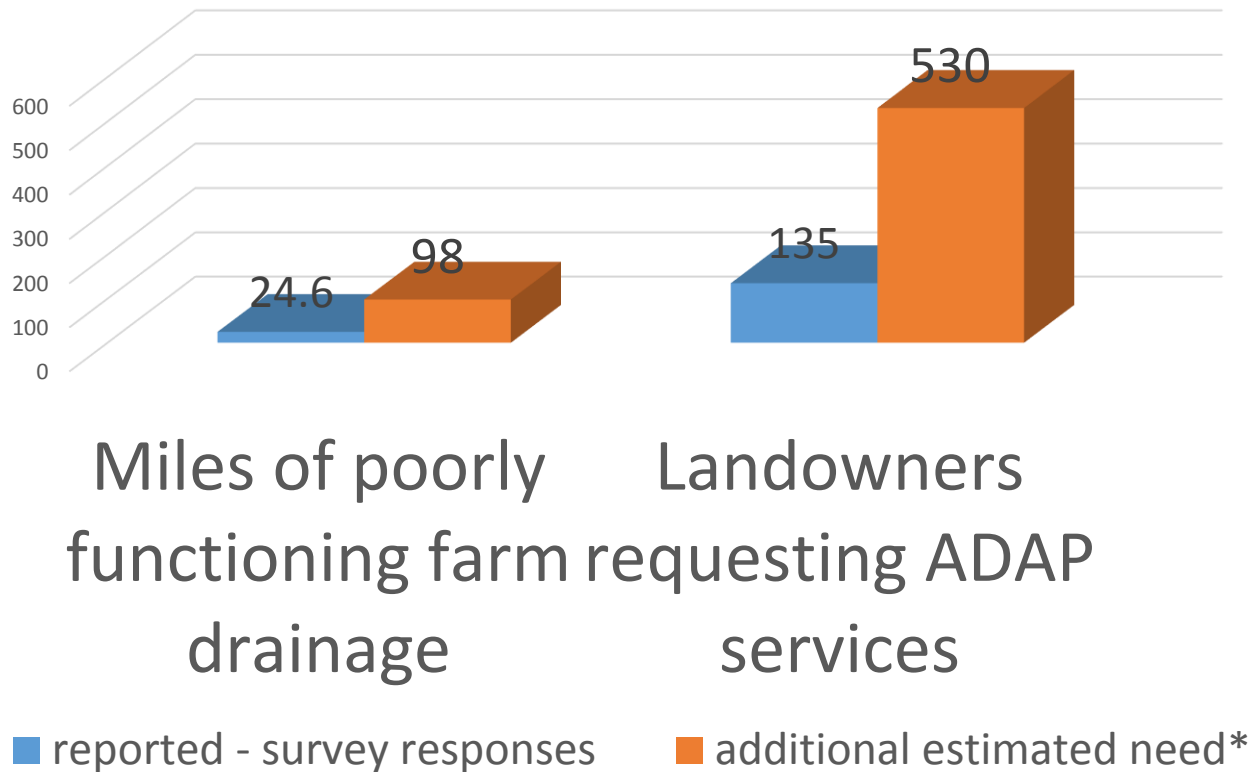


Replacing failed and undersize culverts with bridges, like the one on the left, installed by KCD in 2015, allows ditches to function, livestock to cross without water quality issues, and improves fish passage.



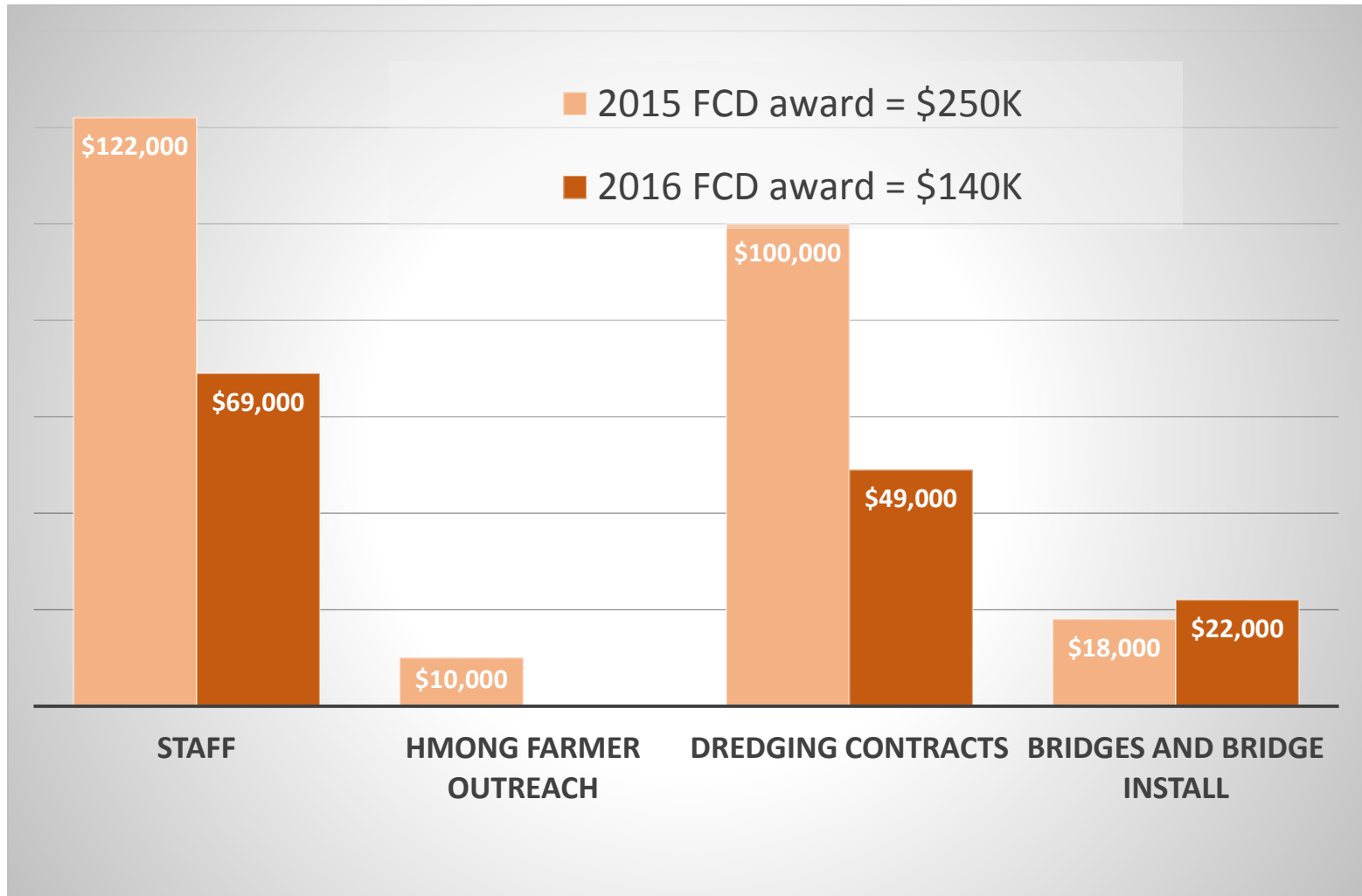
Above and left: King County crews use best available science for fish protection during farm ditch maintenance.

Estimate total need



**To estimate total need, 2015 survey response rate was applied to all agricultural properties in King County. Figures as reported by landowners.*

King Conservation District Farm Drainage program budget



Total King County farm drainage

maintenance costs

We incur additional costs to ensure ecologically sound management of farm drainage in King County:

- Fish relocation
- Mitigation plantings on banks
- Multi-landowner projects need construction project management
- Need to allocate additional funds to use best available science to map and plan work in a sub-basin in five year cycles. Plan collaboratively with all other drainage related and restoration work in the sub-basin.

Costs per linear foot

King County ADAP

Technical Assistance	\$7.27
De-Fishing	\$2.48
Planting	\$10.55
Maintenance (3yr)	\$5.61
KC-ADAP total costs	\$25.91

KCD Drainage Assistance

Farm Plan	\$1.43
Landowner Coordinat'n	\$5
Project Management	\$3
Construction Cost	\$8
KCD total costs	\$17.43

total 2015 project cost, per linear foot	\$43.34
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Total cost to maintain all of estimated need:

- 98 miles of waterway estimated to be negatively impacted
- 517,440 linear feet x \$43.34 per liner foot; includes King Conservation District and ADAP costs = \$22,425,850

