



FY2021 (7/1/20 – 6/30/21) Annual Work Plan (Final) Whatcom Conservation District

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Mission

“The Whatcom Conservation District assists land managers with their conservation choices through technical and financial assistance to implement best management practices so that the natural resources will be available to future generations.”

Natural Resource Priorities

- **Water Quality**
 - Shellfish harvest area in Portage Bay remain closed to fall harvest because of high fecal coliform in growing waters. Drayton Harbor is threatened with a shellfish growing water downgrade. Some drinking water wells have higher than the maximum level of nitrate. Lake Whatcom remains vulnerable to the harmful effects of algal blooms due to excessive levels of phosphorous.
 - This is both a regional and local priority.
 - Data relied upon
 - Bacteria - Ensuring abundant, healthy shellfish for ecosystem health and for commercial, subsistence and recreational harvest consistent with ecosystem protection is Strategy No. 19 for the 2018-2022 Action Agenda for Puget Sound.
 - Nitrate – Nitrate is a concern for both drinking water supplies ([See here.](#)) and Puget Sound ([See here.](#))
 - Phosphorous - Lake Whatcom water quality has been deteriorating due to increased phosphorous inputs that are resulting in algal blooms and depleted oxygen levels. ([See here](#))
 - Other entities engaged in addressing
 - Bacteria in surface water include Whatcom County Public Works, Health & Planning Departments; Lummi Nation & Nooksack Indian Tribe, Washington State Departments of Agriculture, Health & Ecology, and USDA Natural Resources Conservation Service. ([See here](#))
 - Nitrate pollution as part of an international transboundary nitrogen pilot includes natural resource scientists and natural resource professionals from Canada, US, the Lummi Nation and Nooksack Indian Tribe ([See here.](#))
 - Phosphorous in Lake Whatcom include the City of Bellingham, Whatcom County and Lake Whatcom Water & Sewer District. ([See here](#))
- **Inadequate Habitat**
 - Fish passage barriers, inadequate riparian areas, and inadequate instream habitat features impair the productivity of valued salmon species and impair the ecosystem processes that provide benefits for adjacent landowners as well as fish and wildlife. The lack of prey is a limiting factor to the recovery of the Southern Resident Orca. ([See here](#))
 - The lack of undeveloped and connected patches of native vegetation for movement and crossings in lowland Whatcom County limit wildlife both for local and migrating wildlife. ([See here](#))
 - This is both a regional and local priority.
 - Data relied upon includes WRIA 1 Salmon Recovery Plan ([See here.](#)) and 2018-2022 Action Agenda for the Puget Sound ([See here.](#))
 - Other entities engaged in addressing habitat include Whatcom County, Lummi Nation, Nooksack Indian Tribe of Indians, Nooksack Salmon Enhancement Association, Whatcom Land Trust, USDA FSA and NRCS.



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- **Water Quantity**
 - *There is concern that there is not enough water to meet the needs of our diverse community now and into the future due to projected population growth.*
 - *Flooding during severe climate fluctuations affects agricultural lands, urban areas along the river as well as sustainable salmon habitat.*
 - *This is both a state and local priority.*
 - *Data relied upon includes Chapter 173-501 WAC Instream Resources Protection Program – Nooksack Water Resource Inventory Area (WRIA) ([See here](#)), proposed rule amendment ([See here](#)) and WRIA 1 Watershed Management Plan & Associated Documents ([See here](#))*
 - *Other entities engaged in addressing this include the WRIA 1 Planning Unit, Whatcom County, City of Bellingham, PUD #1, Washington State Department of Ecology, Lummi Nation, and Nooksack Indian Tribe*
- **Conserving Working Lands**
 - *Well stewarded farm and forestry land provides environmental benefits in addition to food, fiber and fuel. These include aquifer recharge, storm water retention, and habitat. They also provide aesthetic and recreational values.*
 - *Regulations, market competition, and influx of people into the County are raising land values.*
 - *Low market prices for commodities and competition for land by other land uses make it difficult to make farming and forestry sustainable in Whatcom County.*
 - *This is a national, state and local priority*
 - *Data relied upon includes that from American Farmland Trust ([See here](#)), Office of Farmland Preservation ([See here](#)) and Whatcom County ([See here](#))*
 - *Other entities engaged in addressing this include Whatcom County, Whatcom Land Trust, Sustainable Connection, American Farmland Trust and The Conservation Fund.*

Program Areas: *There are two program areas: “Natural Resource” and “District. Natural resource programs are those created to address the natural resource priorities identified in the District’s Five-year Plan. District programs are those that support basic operations, education and outreach with landowners, engagement with other agencies and groups to advance the District’s mission. To support these program areas, District staff have been organized into six teams: Livestock, Habitat, Science & Research, Education and Outreach, Engineering and Administration.*

Natural Resource Priority Program Area: Water Quality

Goals:

- *Contribute to upgrade of all shellfish harvest areas impaired by coliform bacteria pollution.*
- *Reduce reactive nitrogen (N') pollution in surface and groundwater to below water quality standard.*
- *Achieve the phosphorous TMDL limit set for Lake Whatcom.*



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Natural Resource Measurable Result Objective:

- We will contribute to the success of our local PIC program so that sampled freshwater sites (excluding those at the international border) are analyzed and displayed in a manner to change behavior to meet the water quality standard for fecal coliform bacteria.
- Nutrient management plans will be developed, implemented and evaluated to reduce the number of domestic wells showing nitrate levels at or above the drinking water standard and reduce the amount nutrients and bacteria entering estuarine environments in adjacent bays of the Salish Sea via surface runoff.
- Advanced storm water projects will be designed to provide assistance to landowners to install and reduce phosphorous entering Lake Whatcom so as to achieve TMDL targets.
- Work with the City of Lynden to monitor water quality implement an outreach program supporting behavior change city residents that might be impacting water quality.
- Design a storm water management plan for the Northwest Washington Fairgrounds that will treat and infiltrate storm water.

Programmatic Measurable Result Objective:

- Commercial Livestock Operations
 - 25 Technical Assistance and Assessments conducted
 - 10 Plans developed
 - 10 Plans Implemented or Projects Installed
 - 10 Cost share Projects Facilitated
- Non-commercial Livestock Operations
 - 40 Technical Assistance and Assessments conducted
 - 30 Plans developed
 - 15 Plans Implemented or Projects Installed
 - 7 Cost share Projects Facilitated
- Complete 6 Target HIP projects, 8 DIY HIP projects
- Research and Effectiveness Monitoring
 - Begin implementation of research on water level control structure in agricultural drainage structures to manage subsurface water to improve agricultural productivity while conserving and protecting surface and groundwater resources.
 - Assist the Nooksack-Fraser Transboundary Nitrogen Project in the monitoring, evaluating the nature, extent and sources of reactive nitrogen contamination.
 - Evaluation of the effectiveness of best management practices at four Edge of Field monitoring sites.
 - Conduct instream monitoring of pollutants (e.g. nitrate, E.coli, total suspended solids, etc.) to understand trends and concentration of in-stream pollutants.
 - Support the development of microbial source tracking (MST) methodologies.
 - Manure Spreading Advisory support and improvement.
 - Support installation of weather and soil monitoring stations for use by farmers by WSU's AgWeatherNet.



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- Continue work with WSU in developing climate and precipitation modeling and establishing AgWeatherNet stations to assess likely changes in future weather patterns on BMP effectiveness.
- Report to partners and landowners on results of County-wide water quality data collection, display and analysis.
- Improve characterization of watersheds and management by landowners in partnership with NRCS on NWQI Watershed Assessment reports
- Storm water management report for the Northwest Washington Fair and Event Center to address suspected conveyances of pollution and to illustrate treatment techniques to the public.

Funding Source(s): Whatcom County, Washington State Department of Health, Washington State Conservation Commission, City of Bellingham, City of Lynden, USDA-NRCS

<i>WATER QUALITY</i>	Target Dates	Team/Person Responsible	Time (Days) Required	Estimated Funding
Livestock Sources Technical Assistance				
Provide Technical Assistance	On going	Livestock	56	\$ 18,758
Conduct Risk Assessments	On going	Livestock	97	\$ 29,318
Develop/Update Conservation Plans	On going	Livestock	297	\$ 78,966
Implement Conservation Plans	On going	Livestock	43	\$ 10,770
Cooperator Follow-up & Adaptive Management	On going	Livestock	41	\$ 10,794
Livestock Sources Financial Assistance				
Structural Practice Planning & Implementation		Livestock	56	\$ 17,874
Advanced Waste Treatment Practices (RCPP) - monitoring	On going	Research	25	\$ 7,963
Implement Cost-share Program	On going	Livestock	5	\$ 1,430
Complete Cultural Resource Investigations	On going	Habitat	11	\$ 4,595
Research, Data, & Effectiveness Monitoring				
Edge of Field Program	On going	Research	145	\$ 44,048
NRCS-NWQI Watershed Assessments	Spring-Fall	Research	66	\$ 24,263
Water Quality Data Coordination	On going	Research	191	\$ 68,854
Discovery Farms Program	On going	Research	23	\$ 11,291
Coordinate research, monitoring, and modeling projects and activities	On going	Research	54	\$ 22,061
CIG - Water Control Structures	On going	Research	45	\$ 16,999
Watershed Improvement Projects				
Lake Whatcom HIP Program	On going	Education & Habitat	290	\$ 111,298
City of Lynden	On going	Education	68	\$ 20,155



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Install stormwater management facilities for The Fairgrounds	Summer/Fall	Ed & Habitat	16	\$	6,130
Non-livestock Conservation Practice Planning and Implementation	On going	Livestock	0	\$	-
General					
Work with other Agencies & Stakeholders	On going	Livestock	56	\$	22,962
Manage databases	On going	Corina	11	\$	3,722
Map/Maintain GIS Layers	On going	Andrew	11	\$	4,846
TOTALS:			1607	\$	537,094

Natural Resource Priority Program Area: Habitat

Goal(s):

- Restore and enhancing riparian areas along lowland streams and wetlands to improve fish and wildlife habitat, improve water quality and attenuate flood waters.
- Restore and enhance salmon habitat enhancing channel complexity and instream fish habitat in priority habitat areas.
- Restore access to habitat by removing fish passage barriers.
- Restore access to habitat by restoring lower Nooksack River floodplain connections without adversely affecting the agricultural base.
- Protect juvenile fish by assisting producers with support and resources to secure and use fish friendly pump intakes.

Natural Resource Measurable Result Objective:

- 2 miles and 20 acres of new riparian buffers in priority reaches
- 8 barriers to fish passage removed
- opening 10 miles of salmon habitat opened
- 3 instream wood habitat structures installed

Programmatic Measurable Result Objective:

- 25 landowners contacted
- 15 plans written
- 10 projects installed
- 125 projects maintained

Funding Source(s): Washington State Conservation Commission, Whatcom County, Washington State Dept. Of Commerce and USDA NRCS and FSA

HABITAT ENHANCEMENT	Target Dates	Team/Person Responsible	Time (Days) Required	Estimated Funding
Conservation Reserve Enhancement Program				
Plan and contract new projects and cooperators	Winter/Spring	Habitat	155	\$ 68,194



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Plan and contract re-enrollments	Winter/Spring	Habitat	56	\$	23,422
Develop and implement project	Winter/Spring	Habitat	144	\$	62,798
Monitor and maintain projects	Summer/Fall	Habitat	47	\$	21,160
Administer CREP cost-share/maintenance reimbursements	On going	Habitat	11	\$	4,595
NRCS Funded Habitat Projects					
Fish Passage Barrier Removal	On going	Frank	34	\$	16,856
Riparian Restoration	On going	Frank	11	\$	5,619
Instream habitat	On going	Frank	0	\$	-
Other Habitat Projects					
Fishtrap Creek habitat assessment and improvements	Spring-Fall	Frank	9	\$	4,337
Nooksack River fish screening	On going	Frank	5	\$	2,247
Fish Screens	On going	Frank	0	\$	-
General					
Work with other Agencies & Stakeholders	On going	Frank	27	\$	13,076
Manage databases	On going	Wayne/Andrew	34	\$	14,036
Map/Maintain GIS Layers	On going	Andrew	14	\$	5,815
TOTALS:			547	\$	242,155

Natural Resource Priority Program Area: Water Quantity

Goal(s):

- Contribute to the development of a water resource management plan and strategy that assists resolution of the conflicts between instream flow, sustainability of harvestable fish, natural salmon productivity and viable resource lands through:
 - A plan and implementation strategy for a shared County-wide domestic water conservation program.
 - Illustration of the relationship between precipitation, aquifer levels, instream flows, riparian habitat and natural fish production,
 - Cost effective water use efficiencies for resource landowners and operators to keep lands in production with legal water allocation of water in time and place consistent with agreed fish productivity (aquatic, riparian habitat and seasonal stream flows) by agricultural water users and fish and wildlife co-managers
- Support Individual landowners, special districts, and municipalities in addressing water quantity concerns (too much/too little).

Natural Resource Measurable Result Objective:

- Watershed Improvement Districts and Treaty Tribes are negotiating watershed management issues that address their common concerns for water quality, water quality and fish productivity
- The legislature is considering a pilot watershed management project to allocate water between instream flows and seasonal water users without prejudice to existing water rights.



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- Whatcom Water Alliance members report Summer water use and/or Equivalent Residential Unit (ERU) decrease from 2019
- Implementation of agricultural irrigation water use efficiencies and practices without prejudice to existing water rights.

Programmatic Measurable Result Objective:

- A gap analysis and framework for an Agricultural Water Use Efficiencies and Conservation program in Whatcom County.
- Research how water control structures in drainage structures can improve (quality & quantity) of surface and ground water resources while improving crop productivity.
- Install and improve data coverage (soil water probes) and public data accessibility at five weather stations for irrigation decision support in cooperation with WSU and AgWeatherNet.
- 5 landowners will adopt and implement of irrigation efficiencies practices with technical planning and assistance.
- Produce website content and outreach events/media on irrigation and water efficiencies for agricultural water users.
- Whatcom Water Alliance (WWA) or Residential Water Use efficiency work
 1. A program and implementation plan for WWA for 2021
 2. A school-based curriculum on Water use efficiency using the Whatcom Explorer Mobile Watershed

Funding Source(s): Washington Conservation Commission, Whatcom County, USDA-NRCS, and City of Lynden (Whatcom Water Alliance), Whatcom Community Foundation

WATER QUANTITY	Target Dates	Team/Person Responsible	Time (Days) Required	Estimated Funding
Develop Water Use Efficiencies & Conservation Programs				
Agriculture	Thru Winter	Nichole	25	\$ 10,175
Rural & Commercial		Aneka	0	\$ -
Address Flooding & Drainage Problems				
Flood Protection Projects (Assist Whatcom County Public Works)	On going	Habitat	20	\$ 10,114
Drainage Enhancement Projects (Assist DIDs & WIDs)	On going	Habitat	14	\$ 6,588
Other Water Quantity Projects				
Irrigation Water Management	On going	Nichole	14	\$ 6,390
Water Use Efficiency	On going	Aneka	16	\$ 6,390
Water Development	On going	Frank	0	\$ -
General				
Work with other Agencies & Stakeholders	On going	George/Frank	7	\$ 3,751
Manage databases		Andrew	2	\$ 969
Map/Maintain GIS Layers		Andrew	2	\$ 969
TOTALS:			99	\$ 45,345



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Natural Resource Priority Program Area: Conserving Working Lands

Goal(s):

- Whatcom County residents appreciate the value of natural resource-based industries and support the sustainability of working lands.
- Farmers, foresters, and ranchers will increasingly exhibit good stewardship to protect and enhance water quality, quantity, restore habitat through implementation of conservation practices
- Farmers, foresters, and ranchers are publicly acknowledged for delivering environmental services to their community.
- Reduction of regulatory burden on Working lands will be reduced through adoption of best management practices
- Markets are developed to improve the benefits and costs of operations and sustain the infrastructure to support viability of working lands to protect them from conversion to other uses.
- Reduce risk of harm to people and property through assisting in landowner adoption of fire preparedness practices.

Natural Resource Measurable Result Objective:

- Acres protected through purchase of development rights.
- Conservation Stewardship Certification programs will demonstrate and highlight positive steps landowners are taking to protect and enhance environmental values.
- Advance the Whatcom County Ag-Watershed Pilot Project with regard to establishing an environmental services marketplace.
- Reduce wildfire potential and increase preparedness in areas of moderate to high wildfire risk.

Programmatic Measurable Result Objective:

- 5 landowners will adopt and implement stewardship plans and participate in the County's RCPP
- Attend 10 Ag Advisory and Purchase of Development Rights Committee meetings
- 10 landowners will enroll in Conservation Stewardship Certification programs.
- Complete 10 individual home wildfire risk assessments
- Give 4 presentations to communities on fire preparedness and table at 5 community events
- Work with 2 new communities through the NFPA Firewise USA® Program

Funding Source(s): Washington Conservation Commission, Russell Family Foundation & Whatcom County

CONSERVING WORKING LANDS	Target Dates	Team/Person Responsible	Time (Days) Required	Estimated Funding
Assist farmers access equipment				
Manure Spreader	Spring/Summer	Livestock Team	2.25	\$ 419
Poultry processing	On going	Livestock Team	2.25	\$ 419
Support local initiatives				
Attend County Ag Advisory & PDR Committees	On going	George/Larry	23	\$ 13,138



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Conservation Stewardship Program to give recognition for good stewardship	On going	George	25	\$ 11,440
Environmental market place to add to the farmers bottom line	On going	George	11	\$ 6,569
Become more resilient, adapt or mitigate harmful effects of climate change	On going	Team Leaders	23	\$ 7,810
Reduce risk of loss to fire	On going	Edu & Outreach	185	\$ 64,416
TOTALS:			270	\$ 104,211

District Program Area: Education and Outreach

Goal(s):

- Whatcom County residents will have an ecological understanding and place-based connection to the land, resources and economy promoting responsible stewardship and sustainable land management.
- Farmers, producers, and landowners exhibit good stewardship in protecting and enhancing water quality, water quantity, and wildlife habitat.
- Whatcom Conservation District is a vital part of community interaction; seen as trusted advisors, with a depth of understanding of both the regulatory framework and land conservation stewardship practices.
- All Whatcom County residents and elected officials value natural resource-based industries such that they support the protection of working lands and their land managers.

Programmatic Measurable Result Objective:

- Enroll 50 new voluntary technical assistance contacts to our non-dairy farm planning team
- Enroll 30 new voluntary technical assistance contacts to our CREP team
- Increase website traffic 10,000 hits above last year
- Monthly e-news (Reaching 1000 people/month) Increase number of e-news subscribers (200 per year)
- Whatcom Explorer Watershed Education (20 schools, 55 teachers, 1,500 students/year) *
- Develop high quality digital lesson plans and curriculum to support teachers and parents (4 per year)
- Print material including newsletter, postcards (Reaching 4,000+)
- Develop high quality digital library on stewardship related topics (8 per year) *
- Develop plan for Water Use Efficiency website, and multi-media library for WWA Installation of conservation practice signs on agricultural fields around county (i.e., Conservation Cover, Cover Crops, etc.)
- Increase Social Media presence Facebook and YouTube (increase by 20% over previous year)
- Maintain a community presence by nurturing partnerships and offering to present, educate, table, etc. at community functions (in-person or virtual)*
- Coordinate events, expos, trainings and tours to promote voluntary stewardship *



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- Reach out to minority land users to support cultural diversity, understanding of conservation principles and exhibition of good stewardship.

*will depend on COVID19 restrictions

Funding Source(s): Washington Conservation Commission, Whatcom County, City of Lynden, Washington State Department of Agriculture, Tenmile Clean Water Project, and Whatcom Community Foundation

PUBLIC EDUCATION & OUTREACH	Target Dates	Team/Person Responsible	Time (Days) Required	Estimated Funding
Outreach				
Outreach to Community so that it values and supports agriculture, forestry and District programs	On going	Aneka	45	\$ 13,793.40
Outreach to landowners and occupiers so that they exhibit good conservation stewardship	On going	Aneka	45	\$ 13,793
Social Marketing Initiatives				
Survey Landowners/Community as to awareness and needs	On going	Education & Coordinators	0	
Publish Newsletters/flyers/articles/notices	Annually	Education	38	\$ 12,883
Maintain web content, social media presence & information videos	On going	Education & Coordinators	45	\$ 17,388
Conducting Events & Workshops				
Run with the Chums, WOW, Earth Day, Sea Feast etc.	On going	Education	36	\$ 12,693
Livestock stewardship workshops (Nutrient Management Trainings, Small Farm Expo, Speaker Series, etc.)	On going	Education & Livestock	99	\$ 32,641
Plant Sale	Jan-Mar 2020	Habitat	59	\$ 21,550
Engaging Educational Community				
Higher Education Opportunities (guest lectures, tours, Internships, Capstone, etc.)	On going	Education & Research	16	\$ 7,086
Watershed Education	On going	Education	47	\$ 11,816
General				
Work with other Agencies & Stakeholders	On going	Education/Research	32	\$ 12,379
Manage databases	On going	Andrew	2	\$ 969
Map/Maintain GIS Layers	On going	Andrew	2	\$ 969



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TOTALS: 466 \$ 157,961

District Program Area: Operations & Administration

Goal(s): The District will be recognized as:

- An “honest broker” who is accepted by all sides as impartial.
- A “trusted messenger” by our Community.
- A leader in anticipating and fulfilling the conservation needs of Whatcom County.
- Efficient in applying taxpayer dollars to effective conservation programs.

Programmatic Measurable Result Objective:

- Introduce WCD to 10 key stakeholder audiences in the community
- Hold at least one public hearings in the Community to receive input on the Draft Long Range Program of Work.
- Complete updates of the District’s
 - personnel manual
 - policies
 - compensation package
- Complete analysis of the District’s funding model and alternatives.

Funding Source(s): Washington State Conservation Commission & District Savings

DISTRICT OPERATIONS	Target Dates	Team/Person Responsible	Time (Days) Required	Estimated Funding
Special Initiatives				
Establish the District as an Honest Broker and Trusted Messenger in the eyes of the Community	On going	Board & E.D.	41	\$ 13,604
Develop Rates and Charges request	Jul - Sep	Board & E.D.	23	\$ 13,138
Review/update District policies, personnel manual, employee compensation package and funding model.	Jul - Dec	Board & E.D.	56	\$ 32,846
External				
General Technical Assistance to anyone not in specific program	On going	All Staff	27	\$ 10,519
Work with other Agencies & Stakeholders		George	23	\$ 13,138
WSCC Center for Technical Development	On going	Nichole	52	\$ 25,000
Internal				
Administer Programs/Grants	On going	Management Team	304	\$ 127,726



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Provide the professional development, training, equipment and support to District staff necessary to successfully accomplish their respective program responsibilities

Run an efficient, economical election process

Manage databases

Maintain Communications/Network/Computer systems

On going	E.D. & Team Coordinators	101	\$	43,228
Jan - March	Dawn	34	\$	12,904
On going	Andrew	23	\$	9,691
On going	Andrew	23	\$	9,691
TOTAL:		704	\$	311,486



Photo by Gabriella Mednick, Whatcom CD

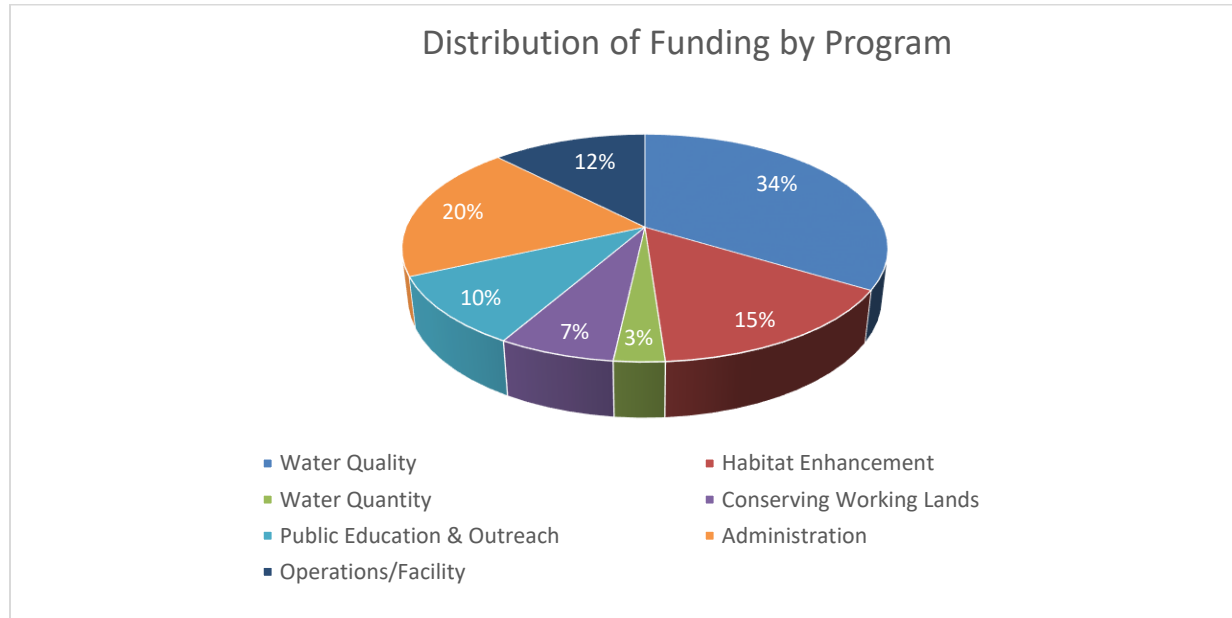


Photo by: Gabriella Mednick, WCD



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Fiscal Year 2021 Budget



	Full-time Equivalents	Estimated Funding
Water Quality	7.1	\$ 537,094
Habitat Enhancement	2.4	\$ 242,155
Water Quantity	0.4	\$ 45,345
Conserving Working Lands	1.2	\$ 104,211
Public Education & Outreach	2.1	\$ 157,961
Administration	<u>3.1</u>	\$ 311,486
Operations/Facility		\$ 195,755
TOTAL:	16.4	\$ 1,594,007