

Flood Control Zone District
2020 Budget
Work Plan and Supporting Documentation

DETAIL FOR FCZD PROGRAM AREAS

| FLOOD MAINTENANCE AND OPERATIONS | | | | | | | | | |
|--|----------------------|--------------|--------------------------|--------------|--------------------------|--------------|----------------------|--------------|--|
| Flood Response (169102) | Original 2020 Budget | | Supplemented 2020 Budget | | 2020 Year End Projection | | Proposed 2021 Budget | | Assumptions/Notes |
| | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | |
| Wage and Benefits | | \$ 10,000 | | \$ 10,000 | | \$ 10,000 | | \$ 10,000 | |
| Sand and sandbags | | \$ 35,000 | | \$ 35,000 | | \$ 10,000 | | \$ 35,000 | Includes pre-deployed and sand bags for training |
| Preparedness training | | \$ 5,000 | | \$ 5,000 | | \$ 5,000 | | \$ 5,000 | Road and M&O employees and equipment |
| Sector observers during response | | \$ 40,000 | | \$ 40,000 | | \$ 20,000 | | \$ 40,000 | Road employees wages and benefits for 1 significant flood event |
| Construction contracts | | \$ 20,000 | | \$ 20,000 | | \$ 10,000 | | \$ 20,000 | During and immediately following response |
| TOTAL | \$ - | \$ 110,000 | \$ - | \$ 110,000 | \$ - | \$ 55,000 | \$ - | \$ 110,000 | Budget based on 2009 flood with cost & wage increases |
| NET IMPACT TO FUND BALANCE | \$ (110,000) | | \$ (110,000) | | \$ (55,000) | | \$ (110,000) | | 2020 YE projection assumes no fall flood |
| | | | | | | | | | |
| Flood Planning (169104) | Original 2020 Budget | | Supplemented 2020 Budget | | 2020 Year End Projection | | Proposed 2021 Budget | | Assumptions/Notes |
| | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | |
| Lower Nooksack | | | | | | | | | |
| Wage and Benefits | | \$ 150,000 | | \$ 150,000 | | \$ 150,000 | | \$ 150,000 | |
| CFHMP refinement/update | | | | | | | | | |
| Facilitation | | \$ 50,000 | | \$ 50,000 | | \$ 90,000 | | \$ 50,000 | 2020 BA inc 30k for contract balance + 20k amendment, increasing for reach work into 2021 |
| Hydraulic modeling/alternatives analyses | | \$ 100,000 | | \$ 173,127 | | \$ 73,127 | | \$ 50,000 | 2020 BA includes CA's for Land and WSE; 2021 BA for FEQ no-rise |
| FLIP process support/Engineering design/Plan | \$ 155,000 | \$ 175,000 | \$ 480,089 | \$ 500,089 | \$ 125,000 | \$ 125,000 | \$ 200,000 | \$ 300,000 | \$325k CA into 2020; Revenues from NEP; 2021 BA inc 200k for contract balance + 200k for amendment for more reach planning |
| Structure surveys in overflow corridors | \$ 75,000 | \$ 75,000 | \$ 75,000 | \$ 75,000 | | \$ - | \$ - | \$ - | work done under Herrera contract (previous row) |
| Sediment management | | \$ 200,000 | | \$ 200,000 | | \$ - | | \$ 200,000 | likely to get under contract in 2021 instead of 2020 |
| Reach 1 Sediment | \$ 150,000 | \$ 150,000 | \$ 150,000 | \$ 150,000 | \$ 85,700 | \$ 150,000 | \$ - | \$ 50,000 | 2020 PO for \$85.7 balance + amendment for updated survey; 2021 BA for follow-up work with reach team; revenues from NEP |
| FLIP support for ag (AWB, farmer stipends) | | | | | \$ 10,000 | \$ 16,000 | \$ 58,000 | \$ 60,000 | Pass through funding for ag consultant and farmers stipends - revenues from FbD |
| High water mark survey | | \$ 25,000 | | \$ 25,000 | | | | \$ 25,000 | |
| TOTAL | \$ 380,000 | \$ 925,000 | \$ 705,089 | \$ 1,323,216 | \$ 220,700 | \$ 604,127 | \$ 258,000 | \$ 885,000 | |
| NET IMPACT TO FUND BALANCE | \$ (545,000) | | \$ (618,127) | | \$ (383,427) | | \$ (627,000) | | |
| | | | | | | | | | |
| Technical Assistance (169106) | Original 2020 Budget | | Supplemented 2020 Budget | | 2020 Year End Projection | | Proposed 2021 Budget | | Assumptions/Notes |
| | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | |
| Wage and Benefits | | \$ 75,000 | | \$ 75,000 | | \$ 75,000 | | \$ 75,000 | |
| Postage for Special District reassessments | | \$ 1,000 | | \$ 1,000 | | \$ 1,000 | | \$ - | CDID#5 to be updated in 2020 with improved parcel coverage |
| TOTAL | \$ - | \$ 76,000 | \$ - | \$ 76,000 | \$ - | \$ 76,000 | \$ - | \$ 75,000 | |
| NET IMPACT TO FUND BALANCE | \$ (76,000) | | \$ (76,000) | | \$ (76,000) | | \$ (75,000) | | |

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| National Flood Insurance Prgm (169108) | Original 2020 Budget | | Supplemented 2020 Budget | | 2020 Year End Projection | | Proposed 2021 Budget | | Assumptions/Notes |
|---|----------------------|--------------|--------------------------|--------------|--------------------------|--------------|----------------------|--------------|--|
| | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | |
| Wage and Benefits | | \$ 150,000 | | \$ 150,000 | | \$ 150,000 | | \$ 150,000 | |
| FEMA Floodplain mapping | | \$ 12,000 | | \$ 12,000 | | | \$ - | \$ 12,000 | Assumes LNR mapping in 2021 - expenditures for public meeting notice |
| Permit reviews | \$ 16,000 | | \$ 16,000 | | \$ 12,000 | | \$ 16,000 | \$ - | Flood permit fees |
| Public education/CRS activities | | \$ 15,000 | | \$ 15,000 | | \$ 15,000 | \$ - | \$ 15,000 | CRS mailings |
| TOTAL | \$ 16,000 | \$ 177,000 | \$ 16,000 | \$ 177,000 | \$ 12,000 | \$ 165,000 | \$ 16,000 | \$ 177,000 | |
| NET IMPACT TO FUND BALANCE | \$ (161,000) | | \$ (161,000) | | \$ (153,000) | | \$ (161,000) | | |
| | | | | | | | | | |
| Early Warning System (169110) | Original 2020 Budget | | Supplemented 2020 Budget | | 2020 Year End Projection | | Proposed 2021 Budget | | Assumptions/Notes |
| | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | |
| Wage and Benefits | | \$ 5,000 | | \$ 5,000 | | \$ 5,000 | | \$ 5,000 | |
| Nooksack River gages - USGS | | \$ 103,000 | | \$ 103,000 | | \$ 103,000 | \$ - | \$ 106,100 | 2020 PO for 103k |
| Everson MainSt stage gage _ USGS | \$ 4,400 | \$ - | \$ 4,400 | \$ - | \$ 4,325 | | \$ 4,500 | \$ - | Canadians reimburse cost to maintain gage; AVZ pays for Jones gage directly |
| Emergency access to SNOTEL | | \$ 5,000 | | \$ 5,000 | | | \$ - | \$ 5,000 | |
| Equipment for gage upgrades/repairs | | \$ 12,000 | | \$ 12,000 | | | \$ - | \$ 12,000 | Equip at NF gage may need replacing |
| Repairs and maintenance | | \$ 10,000 | | \$ 10,000 | | | \$ - | \$ 10,000 | |
| TOTAL | \$ 4,400 | \$ 135,000 | \$ 4,400 | \$ 135,000 | \$ 4,325 | \$ 108,000 | \$ 4,500 | \$ 138,100 | |
| NET IMPACT TO FUND BALANCE | \$ (130,600) | | \$ (130,600) | | \$ (103,675) | | \$ (133,600) | | |
| | | | | | | | | | |
| FLOOD CONSTRUCTION AND IMPROVEMENTS | | | | | | | | | |
| Repair and Maintenance (169112) | Original 2020 Budget | | Supplemented 2020 Budget | | 2020 Year End Projection | | Proposed 2021 Budget | | Assumptions/Notes |
| | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | |
| Wage and Benefits | | \$ 90,000 | | \$ 90,000 | | \$ 90,000 | | \$ 120,000 | |
| Misc | | | | | | | | | |
| | | | | | | | | | |
| Construction Projects | | | | | | | | | |
| Emergency/new projects as needed | \$ 50,000 | \$ 350,000 | \$ 50,000 | \$ 350,000 | | | \$ 50,000 | \$ 50,000 | Assumed costs for responding to flood/new repairs (assumes no fall 2020 flood) |
| Miscellaneous repair projects | | \$ 50,000 | | \$ 50,000 | | | \$ - | \$ 50,000 | Placeholder for small projects; fall 2019 flood assumed |
| Marine Drive Levee Repair 2020 damage (720004) | \$ - | | \$ - | | | \$ 15,000 | \$ 225,000 | \$ 300,000 | Survey in 2020, construction in 2021 |
| Truck Road 2018 Emergency Bank Protection (718001) | \$ 25,000 | \$ 50,000 | \$ 25,000 | \$ 50,000 | | | \$ - | \$ - | 50/50 cost-share with Roads; 2020 BA for mitigation payment to habitat project but will be rolled into new project from 2020 flood |
| Truck Road 2020 Damage (720008) | | | | | \$ 87,500 | \$ 100,000 | \$ 140,000 | \$ 150,000 | Alt analysis in 2020, design in 2021 - 75% FEMA and 50/50 cost-share with Roads on remainder |
| Everson Overflow Pipeline Bank Stabilization (72000x) | | | | | | | \$ 120,000 | \$ 150,000 | |
| Red River Levee Stabilization (SWIF - 719002) | | \$ 30,000 | | \$ 230,000 | \$ 18,000 | \$ 120,000 | \$ - | | 200k CA from 2019 for ILA, 30k new BA in case bids are high; revenues of 15% from Lummi and Roads |
| Hannegan Levee Rehabilitation (USACE - 718006) | | | | | \$ 29,501 | \$ 1,118 | \$ - | \$ - | 2020 costs are planting; revenues from LE Subzone (30% of FCZD cost-share to USACE) |
| Abbott Levee Erosion Protection (718010) (project moved to 114 with improvement project) | \$ 200,000 | \$ 400,000 | \$ 200,000 | \$ 400,000 | | | \$ - | \$ - | Combined w/ improvement project & moved to 169114 to cover both |
| Sande-Williams Levee Rehab (USACE/DD2-719004) | \$ 17,000 | \$ - | \$ 17,000 | \$ - | \$ 17,000 | \$ - | \$ - | \$ - | 2020 revenues from DD#2 for 80/20 split on USACE cost-share |
| Twin View Levee Rehabilitation (USACE - 719003) | | \$ - | | \$ - | \$ 25,614 | \$ 4,044 | \$ - | \$ - | 2020 costs are planting; revenues from SNE Subzone (30% of FCZD cost-share to USACE) |

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| Mitigation Planning/Implementation | | | | | | | | | | | | | | | | |
|---|----------------------|--------------|--------------------------|--------------|--------------------------|--------------|----------------------|--------------|-------------------|--|------------|---|---|--------------|--|--|
| Jail crew | \$ | 117,439 | \$ | 117,439 | \$ | 50,000 | \$ | - | \$ 117,439 | Jail crew labor for FCZD and SWIF projects; available to diking or subzones 2020 exp for contract balance; new 2-year contract in 2021 Increased to cover plant replacement costs for Deming and other past projects as needed | | | | | | |
| Reveg planning/coordination | \$ | 23,000 | \$ | 23,000 | \$ | 16,289 | \$ | - | \$ 30,000 | | | | | | | |
| Reveg/misc supplies | \$ | 10,000 | \$ | 10,000 | \$ | 5,000 | \$ | - | \$ 10,000 | | | | | | | |
| TOTAL | \$ | 292,000 | \$ | 1,120,439 | \$ | 177,615 | \$ | 401,451 | \$ 535,000 | | \$ 977,439 | | | | | |
| NET IMPACT TO FUND BALANCE | \$ | (828,439) | \$ | (1,028,439) | \$ | (223,837) | \$ | (442,439) | | | | | | | | |
| Flood Hazard Reduction (169114) | Original 2020 Budget | | Supplemented 2020 Budget | | 2020 Year End Projection | | Proposed 2021 Budget | | | | | | | | | |
| | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | Assumptions/Notes | | | | | | | |
| Wage and Benefits | \$ | 305,000 | \$ | 305,000 | | | \$ | 375,000 | | | | | | | | |
| Swift Creek | | | | | | | | | | | | | | | | |
| Bank stabilization/channel excavation | \$ | - | \$ | 105,000 | \$ | - | \$ | 105,000 | \$ | - | \$ 107,835 | 300k commitment per year; 150k Roads; remainder cost-shared 70/30 b/w FCZD and SNE Subzone Subject to CPI-W Increases | | | | |
| Lower Nooksack River | | | | | | | | | | | | | | | | |
| Marietta property acquisition & demo (FEMA FMAG-716002) | \$ | 231,560 | \$ | 264,640 | \$ | 231,560 | \$ | 273,401 | | \$ | - | \$ - | 2019 CA into 2020 of \$8761 for Iverson; assumes demo and 4th property acquisition/demo in 2020 | | | |
| Marietta property acquisition & demo New properties | | \$ 50,000 | | \$ 50,000 | | \$ - | | \$ - | \$ 50,000 | | \$ - | \$ 50,000 | Teeters cultural, asbestos, demo; Phase 2 ESA for Turk properties | | | |
| Leases for agriculture | \$ | 3,780 | \$ | 3,780 | \$ | 3,780 | \$ | 3,780 | \$ 3,780 | \$ - | | | River Rd and Emmerson Rd properties | | | |
| Floodplain acquisition | \$ | 800,000 | \$ | 1,000,000 | \$ | 800,000 | \$ | 1,000,000 | \$ | 818,240 | \$ | 1,022,800 | \$ 831,760 | \$ 1,039,700 | Walton property in 2020; revenues from FbD grant; 2021 BA is rest of grant task budget less 1M | |
| Ferndale Levee Improvement Project (719008) | \$ | 240,000 | \$ | 300,000 | \$ | 240,000 | \$ | 300,000 | \$ | 428,000 | \$ | 535,000 | \$ | - | \$ - | Alt analysis, 30% design under 2020 contract, 60% design under 2022 amendment; revenues from FbD grant |
| Lynden Levee Improvement Project (in conjunction with USACE rehab project) (718005) | | \$ 75,000 | | \$ 75,000 | | \$ 15,000 | | \$ 524,000 | \$ | 655,000 | | | | | Design support in 2020; channel construction and USACE cost-share in 2021 | |
| USACE Lynden Levee Rehab and Culvert Replacement | | \$ - | | \$ - | | | | \$ - | \$ 220,000 | | | | | | 20% cost-share based on USACE estimate | |
| Abbott Levee Improvement (SWIF) (718010) | \$ | 100,000 | \$ | 200,000 | \$ | 100,000 | \$ | 200,000 | \$ | 155,000 | \$ | 310,000 | \$ | 325,000 | \$ 650,000 | Assumes Roads pays 50%; interim repair in 2021; improve in 2023 |
| Duffner Ditch Flood Gate Replacement Early Action (720007) | | | | | | \$ 395,088 | \$ | 395,088 | \$ | - | \$ | - | | | | EQIP funding and 100k FbD grant early action funds |
| Cougar Creek Early Action Project Design (72000x) | | | | | | | | \$ 90,000 | \$ | 90,000 | | | | | | NOAA funding through TNC |
| Dahlberg Wetland Mitigation Site (719006) | | | | | | | | | \$ | - | \$ | - | | | | |
| Acquisition | | | | | | \$ 789,436 | | | | | | | | | | P&S signed in 2019 but not CA'd so purchase out of 2020 BA |
| Demo and site cleanup | | | | | | \$ 20,000 | | \$ - | \$ | - | | | | | | costs to remove house and site clean up |
| Wetland plan development | | | | | | \$ 30,000 | | | | \$ 100,000 | | | | | | 2020 Property survey & help from Roads wetland staff; 2021 BA for consultant to develop site plan |
| Jones Creek Deflection Berm (712004) | | | | | | | | | | | | | | | | |
| Berm and bridge design | \$ | 33,000 | \$ | 110,000 | \$ | 33,000 | \$ | 256,069 | \$ | 30,000 | \$ | 100,000 | \$ | 54,000 | \$ 180,000 | 2019 PSE contract will CA into 2020; Permitting assistance from Roads (30k/yr) design cost-shared 70/30 with Roads |
| Land/easement acquisition | \$ | 800,000 | \$ | 1,025,000 | \$ | 800,000 | \$ | 1,025,000 | \$ | 520,000 | \$ | 650,000 | \$ | 520,000 | \$ 650,000 | Kosmic payments against 2019 BA; Swift properties in 2020; Derus in 2021 |
| Construction | | \$ - | | \$ - | | \$ - | | \$ - | \$ | - | \$ | - | | | | Construction likely in 2022 |
| High Creek Sediment Management | | | | | | | | | | | | | | | | |
| Sediment trap/channel imp. Construction (718007) | \$ | - | \$ | - | \$ | 6,000 | \$ | - | \$ | - | \$ | - | | | | Final planting costs in 2020 |
| Sediment trap maintenance (72000x) | | \$ 20,000 | | \$ 20,000 | \$ | 22,500 | \$ | 30,000 | \$ | - | \$ | 45,000 | | | | FEMA revenues (75%) in 2020 |

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| Glacier-Gallup Creek Alluvial Fan Restoration (718007) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|----|---------|----|---------|-------------|----|---------|-------------|---------|--------|-------------|---------|--------|-------------|--------|---|-----------|--|----|-----------|--|----|-----------|--|----|-----------|
| Feasibility study/concept design | | | | | \$ | 116,435 | | \$ | 44,000 | \$ | 55,000 | | \$ | 48,000 | \$ | 60,000 | Risk assessment and alternatives anlaysis by BGC; 39k was CA 2019 CA for NHC | | | | | | | | | | |
| Outreach | | | | | \$ | 54,857 | | \$ | 8,000 | \$ | 10,000 | | \$ | 36,000 | \$ | 45,000 | | | | | | | | | | | |
| Preliminary design | | \$ | 200,000 | \$ | 250,000 | | \$ | 200,000 | \$ | 250,000 | | \$ | 200,000 | \$ | 250,000 | | | | | | | | | | | | |
| TOTAL | | | | | \$ | 2,408,340 | | \$ | 3,704,640 | | \$ | 2,408,340 | | \$ | 4,030,763 | | \$ | 2,424,608 | | \$ | 4,073,324 | | \$ | 2,632,540 | | \$ | 4,517,535 |
| NET IMPACT TO FUND BALANCE | | | | | \$ | (1,296,300) | | \$ | (1,622,423) | | \$ | (1,648,716) | | \$ | (1,884,995) | | | | | | | | | | | | |

| Aquatic Invasive Species (169120) | Original 2020 Budget | | Supplemented 2020 Budget | | Year End 2020 Projection | | Proposed 2021 Budget | | Assumptions/Notes |
|---|----------------------|--------------|--------------------------|--------------|--------------------------|--------------|----------------------|--------------|--|
| | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | |
| AIS ADMINISTRATION | | | | | | | | | |
| Staff | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | Misc. Expenses |
| Office and operating | | \$ - | | \$ - | | \$ - | | \$ - | |
| TOTAL | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | |
| NET IMPACT TO FUND BALANCE | \$ - | | \$ - | | \$ - | | \$ - | | |
| AIS OPERATIONS | | | | | | | | | |
| Coordination and Planning | | | | | | | | | |
| Education and Inspection | | | | | | | | | Contribution to City for AIS Program; includes COB program cost increase |
| Interlocal Agreement (COB) | \$ - | \$ 132,840 | \$ - | \$ 132,840 | \$ - | \$ 132,840 | \$ - | \$ 143,467 | |
| AIS online education program website maintenance | \$ - | \$ 8,750 | \$ - | \$ 8,750 | \$ - | \$ 8,750 | \$ - | \$ 8,750 | Contracted services for online course/website support |
| TOTAL | \$ - | \$ 141,590 | \$ - | \$ 141,590 | \$ - | \$ 141,590 | \$ - | \$ 152,217 | |
| NET IMPACT TO FUND BALANCE | \$ (141,590) | | \$ (141,590) | | \$ (141,590) | | \$ (152,217) | | |
| TOTAL FOR COST CENTER | \$ - | \$ 141,590 | \$ - | \$ 141,590 | \$ - | \$ 141,590 | \$ - | \$ 152,217 | |
| | | \$ 141,590 | | \$ 141,590 | | \$ 141,590 | | \$ 152,217 | |
| Water Planning (169121) | | | | | | | | | |
| | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | Revenues | Expenditures | Assumptions/Notes |
| WATER PLANNING ADMINISTRATION | | | | | | | | | |
| Staff | \$ - | \$ 110,886 | | \$ 110,886 | | \$ 110,886 | \$ 5,358 | \$ 123,354 | Watershed Planner+LIO Labor |
| Office and operating | | \$ 550 | | \$ 550 | | \$ 550 | | \$ 550 | |
| TOTAL | \$ - | \$ 111,436 | \$ - | \$ 111,436 | \$ - | \$ 111,436 | \$ 5,358 | \$ 123,904 | |
| NET IMPACT TO FUND BALANCE | \$ (111,436) | | \$ (111,436) | | \$ (111,436) | | \$ (118,546) | | |
| WATER PLANNING OPERATIONS | | | | | | | | | |
| Coordination and Planning | | | | | | | | | |
| Watershed Planning | \$ - | \$ 100,000 | \$ - | \$ 133,143 | \$ 50,000 | \$ 133,143 | \$ 50,000 | \$ 50,000 | Drainage-Based Management |
| Watershed Planning Administrative Support | | | | | | | | \$ 25,000 | Watershed Planning Administrative Support |
| LENS Groundwater Model | \$ - | \$ 100,000 | \$ - | \$ 100,000 | \$ - | \$ 100,000 | | \$ 50,000 | LENS Groundwater Model |
| LIO administration | \$ 67,950 | \$ 67,950 | \$ 67,950 | \$ 79,426 | \$ 67,950 | \$ 90,902 | \$ 119,642 | \$ 119,642 | LIO administration |
| USGS Stream Monitoring/AESI GW Monitoring Contracts | | \$ 105,000 | | \$ 105,000 | | \$ 105,000 | | \$ 110,000 | USGS Stream Monitoring/AESI GW Monitoring Contracts |
| Water Settlement Initiative | | | | | | | | | Water Settlement Initiative |
| TOTAL | \$ 67,950 | \$ 372,950 | \$ 67,950 | \$ 417,569 | \$ 117,950 | \$ 429,045 | \$ 169,642 | \$ 354,642 | |
| NET IMPACT TO FUND BALANCE | \$ (305,000) | | \$ (349,619) | | \$ (311,095) | | \$ (185,000) | | |
| TOTAL FOR COST CENTER | \$ 67,950 | \$ 484,386 | \$ 67,950 | \$ 529,005 | \$ 117,950 | \$ 540,481 | \$ 175,000 | \$ 478,546 | |
| | | \$ 416,436 | | \$ 461,055 | | \$ 422,531 | | \$ 303,546 | |