

TARGETS, ACTIONS AND ESTIMATED COSTS

TARGET AND ACTIONS	ESTIMATED COSTS (Source(s))
TOTAL SUSPENDED SOLIDS	
<ol style="list-style-type: none"> 1. Collect and correlate data from the Fed/Provincial data system to identify times during the year when there are issues. 2. Install continuous turbidity meters in two sites including the lower Cowichan River and explore linking to SCADA system 3. Establish a monitoring program to identify sources, trends, tendencies, key time periods, storm-event driven issues and hotspots 4. Specific projects to address TSS issues e.g. Broadway (possibly requiring Stoltz like project) 5. Various other point/ and non point source remediation projects. 	<p>In-kind staff.</p> <p>Approx. \$20K for equipment & \$4K to maintain & calibrate (TBD)</p> <p>\$30K (Covered within \$370K Gas Tax Request)</p> <p>Preliminary estimate for Broadway \$800K (TBD -Conservation partners - possibly. Living Rivers, HCTF, Catalyst, Salmon Commission, govts. Etc.)</p> <p>Unknown (Responsibility of TSS generators)</p>
ESTUARINE HEALTH (Shellfish)	
<ol style="list-style-type: none"> 1. Establish a Technical Working Group including shellfish and pollution prevention specialists and provide support for meetings etc. 2. Develop map of Cowichan Bay indicating known information and closures 3. Design Sampling Program 4. Conduct tissue sampling 	<p>Staff/volunteer in-kind and \$5K for support TBD (Govt. agencies)</p> <p>Staff/volunteer in-kind Plus up to \$5K GIS support (possibly from \$150K Gas Tax funding)</p> <p>Staff in kind</p> <p>Staff/volunteer in-kind -possibly funding of \$30K for initial assessment and then TBD as required. (Responsible govt. agencies)</p>

<p>5. Conduct point source/non point source background monitoring program.</p> <p>6. Review Liquid Waste Management Plan and include rain water management planning 2012/13</p> <p>7. Various other point/ and non point source remediation projects.</p>	<p>Approx. \$80K (Up until summer 2013 covered within \$370K Gas Tax Request)</p> <p>Approx. \$75K (Responsible govts.)</p> <p>Unknown (Responsibility of TSS generators. Could be significant infrastructure costs)</p>
WATER USE	
<p>Domestic Water Use</p> <p>1. Various initiatives by local governments to determine current levels of water use and reduce use. (would vary from monitoring and education to installation of meters, establishing volume based pricing and public education depending on jurisdiction).</p> <p>2. Supplementary public education, social marketing to support local governments.</p> <p>Catalyst Initiative</p>	<p>TBD (local governments)</p> <p>\$25K (from \$150K Gas Tax funding) and potentially \$15K (Covered within \$370K Gas Tax Request for 2012 and 2013)</p> <p>TBD (Catalyst)</p>
WATERSHED IQ	
<p>Grade 4s or Grade 5s Know Their Watershed</p> <p>1. Pilot field trips/virtual field trip for selected Grade 4 or 5 classes in the fall of 2011.</p> <p>2. Expand the opportunity to include more classes in 2012 with the goal of engaging all Grade 4s or Grade 5s beginning in 2013.</p> <p>Residents Increasingly Know and Value Their Watershed</p> <p>1. Regular articles for local papers, newsletters, website, supplemented with radio spots etc.</p> <p>2. Ongoing briefings of local politicians & other opinion leaders to increase knowledge/support.</p>	<p>\$8K for 2011 start up (from \$150K Gas Tax funding)</p> <p>\$8K in each of 2012 and 2013 (Covered within \$370K Gas Tax Request for 2012 and 2013) Additional funding TBD (from partners/sponsors yet to be identified)</p> <p>(Some funding available from basic operating funds and \$150K Gas Tax funding Board seeking additional operating funds from Senior Govts.)</p>

<p>3. Annual survey to assess watershed knowledge/ appreciation.</p>	<p>Tentatively partner with VIU through grant supporting annual research project approx. \$2K. (Enhanced operating funds from Sr. Govt. or other fund-raising initiative.)</p>
<p>RIPARIAN HABITAT</p>	
<p>Securing Properties/Habitat</p> <ol style="list-style-type: none"> 1. Inventory and classify riparian habitats for estuary, mainstem and lakeshore; 2. Assess feasibility of alternatives to acquisition for securing lands & prioritize areas for acquisitions & other approaches; 3. Confirm appropriate target; 4. Establish partnership to lead initiative; 5. Seek/secure funds; and 6. Execute plan –ongoing to 2021. 	<p>Approx.\$15K plus staff/volunteer in-kind (possibly from \$150K Gas Tax funding)</p> <p>Staff/volunteer in-kind</p> <p>Staff/volunteer in-kind</p> <p>Staff/volunteer in-kind</p> <p>Staff/volunteer in-kind</p> <p>\$millions (all levels of govt., conservancy NGOs, foundations etc. -possible linkages to carbon/conservation credits??)</p>
<p>Restore/Enhance Habitats</p> <ol style="list-style-type: none"> 1. Inventory and classify status of riparian habitat, estuary, mainstem and lake; 2. Identify practical restoration options and prioritize areas for restoration; 3. Determine appropriate target; 4. Establish partnership to spearhead initiative; 5. Seek/secure multi-year restoration funding; 	<p>(See bullet 1 securing habitat above)</p> <p>Staff/volunteer in-kind</p> <p>Staff/volunteer in-kind</p> <p>Staff/volunteer in-kind</p> <p>Staff/volunteer in-kind</p>

<p>6. Execute the plan - ongoing to 2021 -</p>	<p>\$millions (all levels of govt., conservancy NGOs, foundations etc.)</p>
<p>Fish Sustainability Target</p> <ol style="list-style-type: none"> 1. Conduct annual steelhead fry stock monitoring at 10 river index sites consistent with past years’ practices and report results. 2. Include results of annual Cowichan trout snorkel surveys (typically in late July under base flows) to broaden the “snapshot” of river health, as reflected by trends in native fish populations. 	<p>Approx. \$10K annually. (Cost currently covered by FLNRO, Living Rivers)</p>
<p>SUMMER/AUTUMN FLOWS</p> <ol style="list-style-type: none"> 1. Maintain 3 Water Survey of Canada stations & calibrate each year to summer base flows 2. Re-establish Heather Mountain snow pillow. 3. Ensure weir operators have ability to utilize best available information to make real-time decisions. 4. Establish expert panel (TAC plus others)to discuss: <ol style="list-style-type: none"> a. instrumentation required for more certainty to weir operators b. review long-term achievability of 7cms given impacts of climate change; c. assess relationship between groundwater & Cowichan River summer flows d. review flow requirements below Catalyst intake vis-a-vis maintaining biological, fisheries and human health requirements. 5. Continue assessing options re acceptable/certain 	<p>Ongoing initiative of Canada with some cost recovery (Catalyst).</p> <p>\$10K to partner with Living Rivers (Covered within \$370K Gas Tax Request for 2012 and 2013)</p> <p>TBD (Catalyst to address issue)</p> <p>(covered under pt.3 above)</p> <p>TBD (portions of b. and c. covered as part of \$150K Gas Tax funding and \$370K Gas Tax Request for 2012 and 2013)</p> <p>TBD (DFO and potential CWB Pacific Salmon Commission Request)</p> <p>TBD (included as part of \$150K Gas</p>

<p>conservation flows in Cowichan River i.e.:</p> <ul style="list-style-type: none">a. Rule band vs. rule curveb. Communication plan for impacted properties upstream/downstream of weirc. Assessing the benefits and impacts of increased storage on Lake Cowichan	<p>Tax funding and \$370K Gas Tax Request for 2012 and 2013 as per CWB commitment to complete studies and report) Additional funds may be required depending on findings of studies.</p>
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