

<b>Project Performance Measures Table</b> <b>Project Title: City Watersheds of Sonoma Valley</b> <b>Category of Project Work Tasks: Planning, Research, Monitoring and Assessment</b>					
A	B	C	D	E	F
Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Measurement Tools and Methods	Targets
<p>Alleviate flooding within the Fryer Creek subwatershed and contain, at a minimum, the 10-year storm event along the mainstem of Fryer Creek</p>	<ol style="list-style-type: none"> <li>1. Construct basin on the Montini site that alleviates flooding on Fryer Creek and provides ecological value.</li> <li>2. Replaced culvert at West MacArthur Street</li> <li>3. No flooding that affects residences or structures during the 10-year storm event</li> <li>4. Significant reductions in flooding for larger storm events than the 10-year</li> </ol>	<ol style="list-style-type: none"> <li>1. Release RFP, hire design consultant and assemble project team</li> <li>2. Hold project kickoff meeting</li> <li>3. Conduct field assessments</li> <li>4. Reach agreement on conceptual (10%) plan</li> <li>5. Prepare initial study for CEQA</li> <li>6. Develop 30% design submittal</li> <li>7. Submit permit applications</li> <li>8. Develop construction plans specifications and cost estimates</li> <li>9. Bid and award construction</li> <li>10. Construct projects</li> </ol>	<ol style="list-style-type: none"> <li>1. Get approved as a Negative Declaration</li> <li>2. Get permit approval</li> <li>3. Montini basin gets built</li> <li>4. MacArthur culvert is replaced</li> <li>5. Flooding during 10-year storm event is eliminated</li> <li>6. Flood levels and frequency decrease for the 25-year and greater storms</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor flooding along Fryer Creek during storm events, following storm events using high water indicators, and by soliciting participation from the local residents.</li> <li>2. Monitor water levels and sediment deposition in the new West MacArthur Street culvert</li> <li>3. Monitor water level in basin and measure basin inflow and outflow to verify flood reduction benefit. Measure flow using a weir if available in the flow control structures or by measuring flow in the pipe using acoustic Doppler current profiling equipment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Hire consultant and assemble design team by September 2014.</li> <li>2. Conduct field investigations (borings, biological assessments, wetland delineation, survey) in September 2014</li> <li>3. Agree on conceptual plan in November 2014</li> <li>4. Develop 30% design submittal in February 2014</li> <li>5. Obtain CEQA approval and permits</li> <li>6. Final plans in January 2015</li> <li>7. Advertise bid February 2015</li> <li>8. Construct June – Sept 2015</li> <li>9. Measure flow reduction through the basin that meets the basin design criteria</li> </ol>

<b>Project Performance Measures Table</b> <b>Project Title: City Watersheds of Sonoma Valley</b> <b>Category of Project Work Tasks: Habitat Restoration</b>					
A	B	C	D	E	F
Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Measurement Tools and Methods	Targets
Provide ecosystem benefits through habitat restoration/enhancements on Fryer Creek, creation of wetland habitat, and removal of a fish-passage barrier	<ol style="list-style-type: none"> <li>1. Enhance and/or restore approximately 1-acre of riparian habitat along 1,200 linear feet of Fryer Creek</li> <li>2. Create 1.8 acres of seasonal wetland in the detention basin</li> <li>3. Enhance 7.1 acres of upland habitat replacing non-native plants with natives</li> <li>4. Eliminate fish passage barrier on Fryer Creek at the West MacArthur St. culvert</li> </ol>	<ol style="list-style-type: none"> <li>1. Obtain planting plan from SEC for Montini basin site that is approved by project team.</li> <li>2. Number of native plants installed</li> <li>3. Acres or channel length of habitat converted, enhanced or restored</li> <li>4. Area or number of exotic species removed</li> </ol>	<ol style="list-style-type: none"> <li>1. Acres of wetland restored or enhanced</li> <li>2. Acres of upland restored or enhanced</li> <li>3. Acres of riparian restored or enhanced</li> <li>4. Plant survival</li> <li>5. Culvert installation meets fish passage criteria</li> </ol>	<ol style="list-style-type: none"> <li>1. Implementation of monitoring and maintenance plans</li> <li>2. Surveying and GIS mapping of habitat boundaries</li> <li>3. Purchase invoices for plants purchased and installed</li> <li>4. Volume measurements (truck loads)</li> <li>5. Photograph matching</li> <li>6. Vegetative cover sampling (line intercept, quadrat or point)</li> <li>7. Preparation and submittal of monitoring reports</li> <li>8. Measure water velocity meter and depth to verify culvert meets fish passage criteria.</li> </ol>	<ol style="list-style-type: none"> <li>1. 1 acre of native riparian plantings along 1200 feet of Fryer Creek channel by November 2015</li> <li>2. 1.8 acres of wetland graded and planted within the Montini basin by November 2015</li> <li>3. Installation of 1.7 acres of native upland plantings on the Montini site, including some trees.</li> <li>4. 75% survival of installed plants by November 2016</li> <li>5. Planting at a density of 3 feet on center in riparian and wetland areas, and 5 feet on center in upland areas</li> </ol>

<b>Project Performance Measures Table</b> <b>Project Title: City Watersheds of Sonoma Valley</b> <b>Category of Project Work Tasks: Sediment Load Reduction</b>					
A	B	C	D	E	F
Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Measurement Tools and Methods	Targets
Capture and removal of sediment from the Fryer Creek system	1. Capture of sediment in the Montini detention basin before it re-enters the Fryer Creek pipe system and eventually settles out downstream	Construction of the basin	<ol style="list-style-type: none"> <li>1. Sediment being trapped and building up in the basin following significant rainfall events.</li> <li>2. Reduced sediment deposition in lower reaches of Fryer Creek.</li> </ol>	<ol style="list-style-type: none"> <li>1. Observations and photo logs</li> <li>2. Sediment samples</li> <li>3. Measurements of depth and area and surveys of deposits to estimate sediment volume captured.</li> <li>4. Records of volume of sediment removed</li> <li>5. Photos and measurements of sediment depth at areas historically prone to sedimentation (upstream of MacArthur culvert near Arroyo Way).</li> </ol>	<ol style="list-style-type: none"> <li>1. Capture of between 130 and 200 tons/year of sediment</li> <li>2. Establish record of sediment produced during significant storm events.</li> <li>3. A 75% reduction in sedimentation rate at Arroyo Way.</li> </ol>

<b>Project Performance Measures Table</b> <b>Project Title: City Watersheds of Sonoma Valley</b> <b>Category of Project Work Tasks: Groundwater Recharge and Water Supply Reliability</b>					
A	B	C	D	E	F
Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Measurement Tools and Methods	Targets
Enhance groundwater recharge and water supply reliability	<ol style="list-style-type: none"> <li>1. Infiltration into the Montini detention basin</li> <li>2. Increase in groundwater level or pressure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Construction of the basin and observation that it captures and holds water</li> <li>2. Develop monitoring plan.</li> <li>3. Obtain monitoring equipment.</li> <li>4. Install up monitoring wells.</li> </ol>	<ol style="list-style-type: none"> <li>1. Groundwater level and hydraulic head increases.</li> <li>2. Lowering of stage in the basin at higher rate than measured discharge would cause.</li> <li>3. Decreases in groundwater specific conductance below the basin indicating dilution from infiltrated water</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitoring wells showing groundwater level and hydraulic head, and specific conductance (SC), which can be compared to SC of water in basin.</li> <li>2. Tracking of inflow, outflow, and stage in order to calculate infiltration rate. Ideally an automatic stage sensor would be deployed in the basin and a recording flow meter would be deployed in the pipes.</li> </ol>	<ol style="list-style-type: none"> <li>1. Construction of the basin in 2015.</li> <li>2. Set up monitoring equipment prior to 11/2015</li> <li>2. Infiltration rate of at least 0.5 feet/day.</li> <li>3. 80 acre-feet per year of recharge.</li> </ol>

<b>Project Performance Measures Table</b>					
<b>Project Title: City Watersheds of Sonoma Valley</b>					
<b>Category of Project Work Tasks: Education, Outreach, and Capacity-building</b>					
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
<b>Project Goals</b>	<b>Desired Outcomes</b>	<b>Output Indicators</b>	<b>Outcome Indicators</b>	<b>Measurement Tools and Methods</b>	<b>Targets</b>
Enhance public recreational, educational, and environmental awareness opportunities	<ol style="list-style-type: none"> <li>1. Increased environmental awareness of residents of Sonoma Valley of the importance, function and significance of streams, wetlands, groundwater, and riparian corridors</li> <li>2. Volunteers participating in the planting activities of the restoration projects,</li> </ol>	<ol style="list-style-type: none"> <li>1. Installation of the interpretive elements.</li> <li>2. Utilization of community volunteers for restoration planting and vegetation work.</li> </ol>	<ol style="list-style-type: none"> <li>1. Number of students and hikers in the Montini preserve reading the interpretive sign associated with the basin.</li> <li>2. The reaction of residents in Sonoma Valley to the multi-use detention basin and associated maintenance activities.</li> <li>3. Reaction of the Sonoma Valley residents to channel enhancements.</li> </ol>	<ol style="list-style-type: none"> <li>1. Voluntary surveys or comment cards from visitors.</li> <li>2. Web-based opportunities for the public to comment on and ask questions about the basin.</li> <li>3. Public comment during the CEQA process.</li> <li>4. Comments received during SEC staff tours.</li> </ol>	<ol style="list-style-type: none"> <li>1. 400 students per year visiting the sign with SEC tours.</li> <li>2. 9,000 visitors to the interpretive element per year.</li> <li>3. 75% of respondents having a favorable opinion of the multi-use basin concept.</li> </ol>