

CHAPTER 10: PROJECT IDENTIFICATION

In order to ensure that the watershed issues and concerns identified in the watershed Assessment were addressed in this ERP, the management concerns identified in the seven watershed Assessment chapters (land use trends, water resources, sediment, water quality, vegetation communities, fisheries, and wildlife) were compiled and analyzed by the Placer County staff/consultant team. These management concerns fell within three primary areas of restoration activity: water quality enhancement, plant community enhancement/establishment, and wildlife/fisheries population enhancement/establishment. Goals, objectives, strategies, and tasks have been identified by watershed to address each of these management concerns (see Tables 10-1 through 10-5).

The tasks identified in this chapter comprise the restoration projects identified in this ERP. These tasks, or projects, were prioritized based on their ability to achieve the goals and objectives of this ERP. It is important to note that these projects represent a general list of tasks to be completed in order to achieve the established watershed goals. The completion of each objective, in most cases, requires the preparation and establishment of a management plan that will specify the restoration details necessary to implement the strategy. In addition, individual projects may only be implemented given they are assigned a “yes” ranking as identified in the Critical Acceptance Criteria outlined in Table 2-3 and a source for funding has been obtained.

Markham Ravine Watershed

Water Quality Enhancement Goal

- Minimize the input to and transport of sediment and pollutants, by flows in the channel downstream to the East Side Canal.

Plant Community Enhancement/Establishment Goal

- Increase the Quality and Quantity of Plant Communities Consistent with Land Use and Water Resources Management Activities.

Wildlife/Fisheries Population Enhancement/Establishment Goal

- Optimize Habitat Quality and Quantity for Wildlife Species Consistent with Land Use and Water Resources Management Activities.

Table 10-1. Markham Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>Markham Ravine Water Quality (MR WQ) MR WQ 1. Reduce the amount of pollutants entering the channel and being transported to downstream areas by 50% by 2010.</p>	<ol style="list-style-type: none"> 1. In cooperation with the City of Lincoln, adjacent landowners, and other interested stakeholders, assess the current sediment and pollutant deliveries to the channel and develop a plan to reduce loadings and concentrations of sediments and pollutants delivered to the channel. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 4. Implement a program to reduce sediment and pollutant delivery to the channel. 5. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Complete an assessment of sediment and pollutant delivery to the channel by 2005. 2. If the assessment concludes that remedial action is needed, develop an action plan to implement the needed measures to accomplish the objective (2006). 3. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	<p>WM M6 LU M1, 5 WQ M6, 7</p>

Table 10-1. Markham Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>Markham Ravine Plant Communities (MR PC) MR PC-1: Develop a list of areas on which riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types have the potential to be created/expanded/enhanced for the watershed before 2004.</p>	<ol style="list-style-type: none"> 1. Develop accurate mapping and acreage calculations for all riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types in all watersheds (information is currently lacking for Sutter County). 2. Identify areas where riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types are candidates for creation/expansion/enhancement of these habitat types, based on aerial photo interpretation, vegetation mapping, soils mapping, and field site visits. 	<ol style="list-style-type: none"> 1. Obtain recent orthorectified color aerial photographs for areas currently lacking coverage (2002). 2. Complete habitat mapping based on aerial photographs and field site visits (2003). 3. Finish digitizing mapped riparian forest habitat type and digitize willow scrub, freshwater marsh, and adjacent upland habitats. Import data to County GIS and calculate acreages (2003). 4. Develop overlays of riparian vegetation types and soils on aerial photo base (2003). 5. Identify, document, and prioritize new areas where opportunities exist to create/expand/enhance riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types (2003). 	<p>LU M3</p>

Table 10-1. Markham Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>MR PC-2: Replace 75 percent of existing Himalayan blackberry (HBB) with native understory species by 2015.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify areas for HBB management based on feasibility and potential ecosystem benefits. 2. Use annual monitoring and adaptive management to modify the conversion program as needed. 	<ol style="list-style-type: none"> 1. Develop a protocol for determining which areas are suitable for HBB management and conversion to native species (2002). 2. Based on results from 1, identify potential conversion areas (2002). 3. Identify and prioritize areas for HBB conversion (2003). 4. Prepare HBB management and conversion plan and implementation templates; plan to address initial control methods, revegetation with native species, and long term maintenance (2003). 5. Implement management plan (2004). 6. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	<p>PC M1-3 PC M6 WR M1, 5</p>

Table 10-1. Markham Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>MR PC-3: Create/expand/enhance 75 percent of the total area identified as existing and/or potential riparian forest habitat type, as identified in MR PC-1, by 2015.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, resource agencies, local jurisdictions, and other stakeholders, develop generic revegetation/enhancement concepts for this habitat type. 2. Implement improvements on a 3-year moving average of 8% of the total area identified, on an annual basis. 3. Incorporate, where practicable, actions on adjacent upland habitats to provide flood management benefits, meet water quality objectives, and meet wildlife resource objectives (e.g., raptor foraging areas). 4. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Develop generic enhancement concepts to be applied in appropriate settings in the watershed areas (2003). 2. Identify specific enhancement strategies and design enhancement templates (2003). 3. Implement projects, in coordination with MR PC-6 as appropriate, beginning 2004. 4. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	<p>WQ M1 PC M4 WR M2, 9</p>

Table 10-1. Markham Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>MR PC-4: Create/expand/enhance 100% of the total area identified as existing and/or potential willow scrub habitat type, as identified in MR PC-1, by 2010.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, resource agencies, local jurisdictions, and other stakeholders, develop generic revegetation/enhancement concepts for this habitat type. 2. Implement improvements on a 3-year moving average of 17% of the total area identified, on an annual basis. 3. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Develop generic enhancement concepts to be applied in appropriate settings in the watershed areas (2003). 2. Identify specific enhancement strategies and design enhancement templates (2003). 3. Implement projects, in coordination with MR PC-6 as appropriate beginning in 2004. 4. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	

Table 10-1. Markham Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>MR PC-5: Create/expand by 100% the total area, as identified in MR PC-1, of freshwater marsh habitat type, by 2010.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, implement improvements on a 3-year moving average of 17% of the total area identified, on an annual basis. 2. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Identify specific enhancement strategies and design enhancement templates in 2003. 2. Implement projects, in coordination with MR PC-6 as appropriate beginning in 2004. 3. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	<p>WR M7</p>

Table 10-1. Markham Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>MR PC-6: Restore riparian corridor structure and function, as feasible and consistent with flood management, water quality, and aquatic and wildlife resources objectives from approximately Gladding Road downstream to its confluence with the East Side Canal by 2015.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, reclamation districts, local jurisdictions, and other stakeholders; identify mechanisms, strategies, and funding sources to implement the restoration program. 2. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Develop an implementation protocol, in cooperation with stakeholders, for a pilot project and full implementation (2003). 2. Complete necessary engineering studies, including hydrologic and hydraulic evaluations (2004). 3. Purchase conservation easements where necessary, conduct necessary environmental review, and obtain necessary permits (2004). 4. Relocate levees (2005). 5. Initiate enhancement of expanded riparian corridor using strategies and templates described under MR PC-3, 4, and 5 (2005). 6. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	<p>WM M1, 8 PC M4-6 WQ M1 WR M8 WR M9 LU M1, 2, 4</p>

Table 10-1. Markham Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>MR PC-7: Restore existing riparian corridors impacted by grazing by implementing grazing management plans for all appropriate riparian areas by 2006.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, develop optimum grazing prescriptions for riparian zones. 2. Provide landowners with technical assistance and educational materials to identify the benefits of healthy riparian corridors. 3. Use financial incentives (e.g., conservation easements), if necessary, to encourage landowner participation in the program. 4. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Identify candidate areas along grazed stream reaches within the watersheds (2003). 2. Develop and/or implement a mechanism to obtain input from stakeholders on grazing management needs (2003). 3. Develop grazing management plans and several grazing prescription templates for various riparian types (2003). 4. Establish a public outreach program (2003). 5. Implement grazing management plans and purchase conservation easements as necessary (2004). 6. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	<p>PC M5 WR M4</p>

Table 10-1. Markham Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>MR PC-8: Conserve ecological structure and function of riparian corridors by establishing and maintaining minimum buffer widths along riparian corridors; optimize buffers along 50 percent of stream reach in watershed areas by 2012. (Some of these buffers may be incorporated into projects completed under other objectives).</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify specific criteria (e.g., width, activities allowed) for riparian buffers. 2. Implement buffer criteria on a 3-year moving average of 7% of the total area identified, on an annual basis. 3. Provide landowners with technical assistance and educational materials to identify the benefits of healthy riparian corridors. 4. Use financial incentives (e.g., conservation easements), if necessary, to encourage landowner participation in the program. 5. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Develop preliminary list of riparian buffer criteria. (2002). 2. Evaluate the use and effectiveness of existing regulatory programs to protect riparian buffers and achieve identified criteria (2002). 3. Develop final buffer criteria and management plan. (2004). 4. Implement buffer management plan. (2005). 5. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	<p>WR M3</p>

Table 10-1. Markham Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>Markham Ravine Wildlife Resources (MR WR) MR WR-1: Optimize American beaver population in the watershed by 2011.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, resource agencies, local jurisdictions, and other stakeholders, assess current beaver population levels, distribution, and effects on stream channel structure and function. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Develop and implement a beaver management plan addressing optimum population levels. 4. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 5. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Conduct field studies to determine beaver population levels, distribution, and document effects on riparian vegetation, channel hydrodynamics, and fish passage (2003). 2. Develop a beaver management plan focusing on optimum population levels, consistent with other biological resources and channel stability objectives (2004). 3. Implement management plan beginning in 2005 4. Perform annual monitoring and adaptive management to gage success and modify the program as needed. (2005). 	<p>WR M5, 11 FR M10</p>

Table 10-1. Markham Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>MR WR-2: Optimize the number of potential nest sites and any additional acreage of foraging habitat necessary to support these new nests along the channel, for Swainson’s hawk, by 2010.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify areas with potential to support additional nest sites and identify potentially suitable foraging habitat in proximity to the new nest sites. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 4. Create/expand/enhance potential foraging habitat in proximity to new nest sites. 5. Implement a program to increase the number of new potential nest sites and secure any additional foraging habitat necessary to support those nest sites, in conjunction with other riparian management actions identified in this ERP. 6. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Verify known Swainson’s hawk nest sites and conduct additional surveys to determine if new nests have been established recently (2003). 2. Develop criteria to support selection of potential new nest sites. 3. Evaluate the riparian area to determine if potential new nest sites exist and if so, evaluate the presence or suitability of adjacent upland areas to support sufficient foraging habitat to support any new nests. 4. Implement any financial incentive or technical assistance program needed. 5. Implement any conservation or improvement programs needed to create/expand/enhance potential nest sites and/or foraging habitats. 6. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	<p>WR M12</p>

Table 10-1. Markham Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>MR WR-3: Increase the potential habitat for Valley elderberry longhorn beetle by creating a density of elderberry plants equivalent to 100 plants per linear mile of stream channel along those channels with suitable conditions to support elderberry plants and six plants per acre in other suitable riparian habitat types by 2012.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify areas with existing plants that could be enhanced or new areas for establishing elderberry plants. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 4. Implement a program to increase the number of new plants on sites with existing plants, in conjunction with other riparian management actions identified in this ERP. 5. Install plantings at new sites and in conjunction with other riparian management actions identified in this ERP 6. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Identify areas where elderberry plants can be enhanced, existing areas with plants expanded, and areas where new elderberry plants can be established and maintained (2002). 2. Obtain landowner cooperation through use of the financial incentives and/or technical assistance program (2002). 3. Protect and restore those areas where plants currently exist. 4. In new areas without existing plants, install plantings, in accordance with Fish and Wildlife Service mitigation guidelines (2005). 5. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	<p>WR M15</p>

Table 10-1. Markham Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>MR WR-4: Delineate existing habitat occupied by the giant garter snake (GGS), enhance existing occupied habitat as needed, and add 200 acres of additional suitable habitat in the lower watershed area by 2010.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, reclamation districts, resource agencies, local jurisdictions, and other stakeholders, map those habitat areas that are currently occupied by GGS, evaluate these areas in terms of overall quality, and identify areas where new suitable habitat could be created. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 4. Implement a program to enhance existing occupied habitat, as needed and in conjunction with other riparian management actions identified in this ERP. 5. Implement a program to provide additional suitable habitat for GGS. 6. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Complete a survey to determine which areas are currently occupied by GGS, evaluate the quality of the occupied habitat and identify areas suitable for creation of new habitat in the lower watershed (2002). 2. Obtain landowner cooperation through use of the financial incentives and/or technical assistance program (2003). 3. Initiate enhancement of existing occupied habitat, as needed (2003). 4. Create new habitat for GGS in areas identified. 5. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	<p>WR M13</p>

Auburn Ravine Watershed

Water Quality Enhancement Goal

- Minimize the input to and transport of sediment and pollutants, by flows in the channel downstream to the East Side Canal.

Plant Community Enhancement/Establishment Goal

- Increase the Quality and Quantity of Plant Communities Consistent with Land Use and Water Resources Management Activities.

Wildlife/Fisheries Population Enhancement/Establishment Goals

- Optimize Anadromous and Native Fish Habitat Quantity, Quality, and Use in Watershed Streams, Consistent with Land Use and Water Resources Management Activities.
- Optimize Habitat Quality and Quantity for Wildlife Species Consistent with Land Use and Water Resources Management Activities.

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>Auburn Ravine Water Quality (AR WQ) AR WQ 1: Reduce the amount of pollutants entering the channel and being transported to downstream areas by 50% by 2010.</p>	<ol style="list-style-type: none"> 1. In cooperation with the City of Lincoln, adjacent landowners, and other interested stakeholders, assess the current sediment and pollutant deliveries to the channel and develop a plan to reduce loadings and concentrations of sediments and pollutants delivered to the channel. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 4. Implement a program to reduce sediment and pollutant delivery to the channel. 5. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Complete an assessment of sediment and pollutant delivery to the channel by 2005. 2. If the assessment concludes that remedial action is needed, develop an action plan to implement the needed measures to accomplish the objective (2006). 3. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	<p>LU M1, 5 WM M6 WQ M5, 6, 7</p>

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>Auburn Ravine Plant Communities (AR PC) AR PC-1: Develop a list of areas on which riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types have the potential to be created/expanded/enhanced for all four watersheds within the ERP planning area before 2004.</p> <p>Integrate this objective with Objectives AR FR 1-2, AR PC 1-3, AR PC 6-8, and WR 1-4.</p>	<ol style="list-style-type: none"> 1. Develop accurate mapping and acreage calculations for all riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types in all watersheds (information is currently lacking for Sutter County). 2. Identify areas where riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types are candidates for creation/expansion/enhancement of these habitat types, based on aerial photo interpretation, vegetation mapping, soils mapping, and field site visits. 	<ol style="list-style-type: none"> 1. Obtain recent orthorectified color aerial photographs for areas currently lacking coverage (2002). 2. Complete habitat mapping based on aerial photographs and field site visits (2003). 3. Finish digitizing mapped riparian forest habitat type and digitize willow scrub, freshwater marsh, and adjacent upland habitats. Import data to County GIS and calculate acreages (2003). 4. Develop overlays of riparian vegetation types and soils on aerial photo base (2003). 5. Identify, document, and prioritize new areas where opportunities exist to create/expand/enhance riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types (2003). 	<p>LU M3</p>
<p>AR PC-2: Replace 75 percent of existing Himalayan blackberry (HBB) with native understory species in all watershed areas by 2015.</p> <p>Integrate this objective with Objectives AR FR 1-2, AR PC 1-3, AR PC 6-8, and WR 1-4.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify areas for HBB management based on feasibility and potential ecosystem benefits. 2. Use annual monitoring and adaptive management to modify the conversion program as needed. 	<ol style="list-style-type: none"> 1. Develop a protocol for determining which areas are suitable for HBB management and conversion to native species (2002). 2. Based on results from 1, identify potential conversion areas (2002). 3. Identify and prioritize areas for HBB conversion (2003). 	<p>PC M1-3 PC M6 WR M1 WR M5</p>

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<ol style="list-style-type: none"> 4. Prepare HBB management and conversion plan and implementation templates; plan to address initial control methods, revegetation with native species, and long term maintenance (2003). 5. Implement management plan (2004). 6. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	
<p>AR PC-3: Create/expand/enhance 75 percent of the total area identified as existing and/or potential riparian forest habitat type, as identified in AR PC-1, by 2015.</p> <p>Integrate this objective with Objectives AR FR 1-2, AR PC 1-3, AR PC 6-8, and WR 1-4.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, resource agencies, local jurisdictions, and other stakeholders, develop generic revegetation/enhancement concepts for this habitat type. 2. Implement improvements on a 3-year moving average of 8% of the total area identified, on an annual basis. 3. Incorporate, where practicable, actions on adjacent upland habitats to provide flood management benefits, meet water quality objectives, and meet wildlife resource objectives (e.g., raptor foraging areas). 4. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Develop generic enhancement concepts to be applied in appropriate settings in the watershed areas (2003). 2. Identify specific enhancement strategies and design enhancement templates (2003). 3. Implement projects, in coordination with AR PC-6 as appropriate, beginning in 2004. 4. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	WQ M1, 2, 3 PC M4 S M18, 21, 26, 29, 30 FR M6, 7 WR M2, 9
<p>AR PC-4: Create/expand/enhance 100% of the total area identified as existing and/or potential willow scrub</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, resource agencies, local jurisdictions, and other stakeholders, develop generic 	<ol style="list-style-type: none"> 1. Develop generic enhancement concepts to be applied in appropriate settings in the watershed areas 	

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
habitat type, as identified in AR PC-1, by 2010.	revegetation/enhancement concepts for this habitat type. 2. Implement improvements on a 3-year moving average of 17% of the total area identified, on an annual basis. 3. Use annual monitoring and adaptive management to modify the program as needed.	(2003). 2. Identify specific enhancement strategies and design enhancement templates (2003). 3. Implement projects, in coordination with AR PC-6 as appropriate beginning in 2004. 4. Perform annual monitoring and adaptive management to gauge success and modify the program as needed.	
AR PC-5: Create/expand by 100% the total area, as identified in AR PC-1, freshwater marsh habitat type, by 2010.	1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, implement improvements on a 3-year moving average of 17% of the total area identified, on an annual basis. 2. Use annual monitoring and adaptive management to modify the program as needed.	1. Identify specific enhancement strategies and design enhancement templates in 2003. 2. Implement projects, in coordination with AR PC-6 as appropriate beginning in 2004. 3. Perform annual monitoring and adaptive management to gauge success and modify the program as needed.	WR M7
AR PC-6: Restore riparian corridor structure and function, consistent with flood management, water quality, and aquatic and wildlife resources objectives, in the lower reach of Auburn Ravine downstream from approximately Brewer Road to its confluence with the East Side Canal by 2010. Integrate this objective with Objectives AR FR 1-2, AR PC 1-3, AR PC 6-8, and	1. In cooperation with landowners, water agencies, resource agencies, reclamation districts, local jurisdictions, and other stakeholders; identify mechanisms, strategies, and funding sources to implement the restoration program. 2. Use annual monitoring and adaptive management to modify the program as needed.	1. Develop an implementation protocol, in cooperation with stakeholders, for a pilot project and full implementation (2003). 2. Complete necessary engineering studies, including hydrologic and hydraulic evaluations (2004). 3. Purchase conservation easements where necessary, conduct necessary environmental review, and obtain necessary	PC M4-6 WQ M1 S M24, 26, 29, 30 WM M1, 8 WR M8, 9 LU M1, 2, 4

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
WR 1-4.		permits (2004). 4. Relocate levees as identified (2005). 5. Initiate enhancement of expanded riparian corridor using strategies and templates described under AR PC-3, 4, and 5 (2005). 6. Perform annual monitoring and adaptive management to gauge success and modify the program as needed.	
<p>AR PC-7: Restore existing riparian corridors impacted by grazing by implementing grazing management plans for all appropriate riparian areas by 2006.</p> <p>Integrate this objective with Objectives AR FR 1-2, AR PC 1-3, AR PC 6-8, and WR 1-4.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, develop optimum grazing prescriptions for riparian zones. 2. Provide landowners with technical assistance and educational materials to identify the benefits of healthy riparian corridors. 3. Use financial incentives (e.g., conservation easements), if necessary, to encourage landowner participation in the program. 4. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Identify candidate areas along grazed stream reaches within the watersheds (2003). 2. Develop and/or implement a mechanism to obtain input from stakeholders on grazing management needs (2003). 3. Develop grazing management plans and several grazing prescription templates for various riparian types (2003). 4. Establish a public outreach program (2003). 5. Implement grazing management plans and purchase conservation easements as necessary (2004). 6. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	PC M5 WR M4

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>AR PC-8: Conserve ecological structure and function of riparian corridors by establishing and maintaining minimum buffer widths along riparian corridors; optimize buffers along 50 percent of stream reach in watershed areas by 2012. (Some of these buffers may be incorporated into projects completed under other objectives).</p> <p>Integrate this objective with Objectives AR FR 1-2, AR PC 1-3, AR PC 6-8, and WR 1-4.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify specific criteria (e.g., width, activities allowed) for riparian buffers. 2. Implement buffer criteria on a 3-year moving average of 7% of the total area identified, on an annual basis. 3. Provide landowners with technical assistance and educational materials to identify the benefits of healthy riparian corridors. 4. Use financial incentives (e.g., conservation easements), if necessary, to encourage landowner participation in the program. 5. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Develop preliminary list of riparian buffer criteria. (2002). 2. Evaluate the use and effectiveness of existing regulatory programs to protect riparian buffers and achieve identified criteria (2002). 3. Develop final buffer criteria and management plan. (2004). 4. Implement buffer management plan. (2005). 5. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	<p>WR M3</p>
<p>Auburn Ravine Wildlife Resources (AR WR) AR WR-1: Optimize American beaver population in the watershed by 2011.</p> <p>Integrate this objective with Objectives AR FR 1-2, AR PC 1-3, AR PC 6-8, and WR 1-4.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, resource agencies, local jurisdictions, and other stakeholders, assess current beaver population levels, distribution, and effects on stream channel structure and function. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Develop and implement a beaver management plan addressing optimum population levels. 4. Use financial incentives, and/or technical assistance 	<ol style="list-style-type: none"> 1. Conduct field studies to determine beaver population levels, distribution, and document effects on riparian vegetation, channel hydrodynamics, and fish passage (2003). 2. Develop a beaver management plan focusing on optimum population levels, consistent with other biological resources and channel stability objectives (2004). 3. Implement management plan beginning in 2005. 	<p>FR M10 WR M5, 11</p>

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
	and education to facilitate landowner participation. 5. Use annual monitoring and adaptive management to modify the program as needed.	4. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. (2005).	
<p>AR WR-2: Optimize the number of potential nest sites and any additional acreage of foraging habitat necessary to support these new nests along streams in lower watershed, for Swainson’s hawk, by 2010.</p> <p>Integrate this objective with Objectives AR FR 1-2, AR PC 1-3, AR PC 6-8, and WR 1-4.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify areas with potential to support additional nest sites and identify potentially suitable foraging habitat in proximity to the new nest sites. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 4. Create/expand/enhance potential foraging habitat in proximity to new nest sites. 5. Implement a program to increase the number of new potential nest sites and secure any additional foraging habitat necessary to support those nest sites, in conjunction with other riparian management actions identified in this ERP. 6. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Verify known Swainson’s hawk nest sites and conduct additional surveys to determine if new nests have been established recently (2003). 2. Develop criteria to support selection of potential new nest sites. 3. Evaluate the riparian area to determine if potential new nest sites exist and if so, evaluate the presence or suitability of adjacent upland areas to support sufficient foraging habitat to support any new nests. 4. Implement any financial incentive or technical assistance program needed. 5. Implement any conservation or improvement programs needed to create/expand/enhance potential nest sites and/or foraging habitats. 6. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	WR M12

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>AR WR-3: Increase the potential habitat for Valley elderberry longhorn beetle by creating a density of elderberry plants equivalent to 100 plants per linear mile of stream channel along those channels with suitable conditions to support elderberry plants and six plants per acre in other suitable riparian habitat types by 2012.</p> <p>Integrate this objective with Objectives AR FR 1-2, AR PC 1-3, AR PC 6-8, and WR 1-4.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify areas with existing plants that could be enhanced or new areas suitable for establishment of elderberry plants. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 4. Implement a program to increase the number of new plants on sites with existing plants, in conjunction with other riparian management actions identified in this ERP. 5. Install plantings at new sites and in conjunction with other riparian management actions identified in this ERP 6. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Identify areas where elderberry plants can be enhanced, existing areas with plants expanded, and areas where new elderberry plants can be established and maintained (2002). 2. Obtain landowner cooperation through use of the financial incentives and/or technical assistance program (2002). 3. Protect and restore those areas where plants currently exist. 4. In new areas without existing plants, install plantings, in accordance with Fish and Wildlife Service mitigation guidelines (2005). 5. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	<p>WR M15</p>
<p>AR WR-4: Delineate existing habitat occupied by the giant garter snake (GGS), enhance existing occupied habitat as needed, and add 500 acres of additional suitable habitat in the lower watershed area by 2010.</p> <p>Integrate this objective with Objectives AR FR 1-2, AR</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, reclamation districts, resource agencies, local jurisdictions, and other stakeholders, map those habitat areas that are currently occupied by GGS, evaluate these areas in terms of overall quality, and identify areas where new suitable habitat could be 	<ol style="list-style-type: none"> 1. Complete a survey to determine which areas are currently occupied by GGS, evaluate the quality of the occupied habitat and identify areas suitable for creation of new habitat in the lower watershed (2002). 2. Obtain landowner cooperation through use 	<p>WR M13</p>

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
PC 1-3, AR PC 6-8, and WR 1-4.	created. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 4. Implement a program to enhance existing occupied habitat, as needed and in conjunction with other riparian management actions identified in this ERP. 5. Implement a program to provide additional suitable habitat for GGS. 6. Use annual monitoring and adaptive management to modify the program as needed.	of the financial incentives and/or technical assistance program (2003). 3. Initiate enhancement of existing occupied habitat, as needed (2003). 4. Create new habitat for GGS in areas identified. 5. Perform annual monitoring and adaptive management to gauge success and modify the program as needed.	
AR WR-5: Determine the current status of California red-legged frog (CLRF) in the watershed and determine if the potential exists to increase the population and/or geographic distribution in the watershed by 2005.	1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, evaluate CLRF population levels, geographic distribution, and factors that may be limiting the species. 2. Integrate these assessments with other resource assessments outlined in this ERP.	1. Determine the geographic distribution of California red-legged frog (CLRF) in upper watershed areas, map suitable habitats, and determine if habitat or some other factor(s) (e.g., predators or competition, etc.) are limiting CLRF populations and/or distribution (2002). 2. If necessary, given the results of the evaluation in 1 above, develop a detailed plan to enhance the population and/or area of suitable habitat for CLRF (2004).	WR M14
Auburn Ravine Fisheries Resources (AR FR) AR FR 1: Reduce stream channel sediment	AR FR 1 Fire and Fuels: Reduce the risk of catastrophic wildfire in the watershed by reducing fire fuels, consistent	AR FR 1 Fuels/Wildlife Task 1: Complete a fuels reduction program on the Mackenroth property	S M16, 17, 19, 20, 22, 23, 24, 25, 28, 31

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>concentration (particles < 6.35 mm in diameter to less than 20 percent and particles <0.833 mm in diameter to less than 10%) of the gravel/ cobble substrate composition in Auburn Ravine upstream of Nelson Lane, near Lincoln, by 2010.</p> <p>Integrate this objective with Objectives AR FR 2, AR PC 1-3, AR PC 6-8, and WR 1-4.</p>	<p>with fuels and wildlife management objectives.</p>	<p>upstream of Goldhill Road by 2004.</p> <p>AR FR 1 Fuels/Wildlife Task 2: Complete a fuels level/fire potential/erosive soils assessment by November 2003.</p> <p>AR FR 1 Fuels/Wildlife Task 3: Begin implementation of the fuels reduction program developed in AR FR 1 Fuels/Wildlife Task 2 above by November 2004.</p>	<p>FR M3 LU M1</p>
	<p>AR FR 1 Roads/Culverts Sediment Source Inventory: Identify and catalog sources of sediment delivery to the channel along all roads and culverts in the watershed.</p>	<p>AR FR 1 Roads/Culverts Task 1: Complete an inventory and proposed remediation plan for all roads and culverts with sediment delivery potential in the watershed before 2004.</p> <p>AR FR 1 Roads/Culverts Task 2: Beginning in 2004, implement the five year program developed in AR FR 1 Roads/Culverts Task 1 above, beginning with the highest priority projects upstream of Highway 65 first.</p>	
	<p>AR FR 1 Individual Landowner Sediment Source Inventory and Control: In cooperation with adjacent landowners, identify and catalog, or reduce sediment sources along the main channel and any tributary channels.</p>	<p>AR FR 1 Individual Landowner Main Channel/Tributary Channel Sediment Reduction Task 1: Complete an inventory and proposed remediation plan for all mainstem stream and tributary channels with sediment delivery potential in the watershed by 2004.</p>	

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>Main Channel/Tributary Channel Sediment Reduction Task 2: Complete a watershed restoration program on Dutch Ravine by 2005. Restoration objectives include fuels reduction, riparian vegetation improvement, 95% reduction in sediment delivered to the active channel, sediment removal from active channel as appropriate, aquatic habitat improvements as appropriate, and optimization of wildlife values consistent with landowner objectives.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 3: Complete a channel and adjacent lands restoration program on Auburn Ravine between river mile 22.0 and 27.6 as defined in the sediment chapter of the assessment (Chapter 5) by 2005. Restoration objectives will include fuels reduction within 100 yards of the stream channel or as appropriate to reduce the potential for sediment to be delivered to the channel after a wildfire or during heavy runoff periods, rehabilitation of eroding stream banks, rehabilitation or enhancement of riparian vegetation for bank stability and wildlife objectives consistent with adjacent landowner objectives, and</p>	

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>any sediment removal or aquatic habitat improvement as appropriate.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 4: Complete a channel and adjacent lands restoration program on Auburn Ravine between river mile 18.5 and 22.0 as defined in the sediment chapter of the assessment (Chapter 5) by 2006. Restoration objectives will include fuels reduction within 100 yards of the stream channel or as appropriate to reduce the potential for sediment to be delivered to the channel after a wildfire or during heavy runoff periods, rehabilitation of eroding stream banks, rehabilitation or enhancement of riparian vegetation for bank stability and wildlife objectives consistent with adjacent landowner objectives, any sediment removal or aquatic habitat improvement as appropriate, and installation of means to facilitate stream sediment transport as appropriate.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 4: Complete a channel and adjacent lands restoration program on Auburn Ravine in the vicinity of the Fowler Road crossing by 2004. Restoration objectives include rehabilitation of eroding stream banks,</p>	

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>rehabilitation or enhancement of riparian vegetation for bank stability and wildlife objectives consistent with adjacent landowner objectives, any sediment removal or aquatic habitat improvement as appropriate, and installation of means to facilitate stream sediment transport as appropriate.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 5: Complete a channel and adjacent lands restoration program on Auburn Ravine from the point where Sierra College Blvd, if extended, would cross the stream, downstream to the Highway 193 crossing in the City of Lincoln by 2007. Restoration objectives include rehabilitation of eroding stream banks, rehabilitation or enhancement of riparian vegetation for bank stability and wildlife objectives consistent with adjacent landowner objectives, any sediment removal or aquatic habitat improvement as appropriate, and installation of means to facilitate stream sediment transport as appropriate.</p> <p>Main Channel/ Tributary Channel Sediment Reduction Task 6: Complete an intensive evaluation of the NID gauging structure, just west of Hwy. 65, to determine its</p>	

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>effect on sediment deposition, sediment transport, and channel stability by 2004. Initiate corrective actions in 2004 if warranted.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 7: Complete a channel and adjacent lands restoration program on Auburn Ravine from the Highway 193 crossing in the City of Lincoln, downstream to the Nelson Lane crossing by 2009. Restoration objectives include rehabilitation of eroding stream banks, rehabilitation or enhancement of riparian vegetation for bank stability and wildlife objectives consistent with adjacent landowner objectives, any sediment removal or aquatic habitat improvement as appropriate, and installation of means to facilitate stream sediment transport as appropriate.</p>	
<p>AR FR 2: Increase the quantity and quality of riparian habitats, consistent with flood management and landowner objectives, by 100 percent downstream from Nelson Lane to the confluence with the East Side Canal by 2010.</p> <p>Integrate this objective with Objectives AR FR 1, AR PC 1-3, AR PC 6-8, and WR 1-4.</p>	<p>AR FR 2 Protection and Management of Riparian/Floodplain Areas: In cooperation with watershed landowners, Placer County, City of Auburn, City of Lincoln, and others; identify and evaluate ways to protect and manage (e.g., conservation easements, flood plain zoning restrictions, vegetative planting programs, etc.) the riparian areas of the main channel and significant tributaries to reduce or prevent sediment input to Auburn Ravine</p>	<p>AR FR 2 Riparian/Floodplain Task 1: In cooperation with adjacent landowners, Placer County, Cities of Auburn and Lincoln, and others, complete an assessment of opportunities to complete specific vegetative planting projects, conservation easements, floodplain zoning restrictions, etc., designed to reduce sediment input to Auburn Ravine, by 2003.</p>	<p>WQ M1, 3 FR M5 PC M4</p>

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>AR FR 2 Riparian/Floodplain Task 2: City of Lincoln completes floodplain management plan for Auburn Ravine within its city limits, by 2004.</p> <p>AR FR 2 Riparian/Floodplain Task 3: County of Placer completes floodplain management plan for Auburn Ravine by 2004.</p> <p>AR FR 2 Riparian/Floodplain Task 4: Complete a pilot project to determine if sediment levels in the channel can be reduced either by mechanical means or through improvements in channel hydraulics. Project to be conducted between Nelson Lane and the confluence with East Side Canal by 2005.</p> <p>AR FR 2 Riparian/Floodplain Task 5: Placer County, Sutter County, City of Lincoln, stakeholders, and interested landowners shall prepare and deliver a request to the State Reclamation Board and U.S. Army Corps of Engineers to change the operational guidelines on opening the Fremont and Sacramento weirs on the Sacramento River during high flow events by 2003. The objective of the request will be to determine if the weirs can be opened at</p>	

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>lower water surface elevations in order to reduce the backwatering into the Cross and East Side canals.</p> <p>AR FR 2 Riparian/Floodplain Task 6: Placer and Sutter counties complete a pilot project to evaluate a setback levee project designed to reduce the extent and acreage susceptible to flooding, reduce sediment input to the channel, test the utility of conservation easements, test the feasibility of riparian restoration in conjunction with acceptable farming practices, and explore mechanisms to remove sediment or increase sediment transport potential within the channel proper by 2006.</p>	
<p>AR FR 3: Provide adult chinook salmon and steelhead trout unrestricted access over diversion structures or gauging stations to spawning areas, by 2008.</p>	<p>AR FR 3 Diversion Dam Installation and Removal Timing: Consult with diversion dam owners to determine if acceptable changes in diversion dam installation and removal timing can be implemented that will allow fish access, without significantly influencing water deliveries.</p>	<p>AR FR 3 Diversion Dam Installation and Removal Timing Task 1: Review current literature to define adult migration timing for steelhead and chinook salmon into Auburn Ravine. Literature review completed by November 2002.</p> <p>AR FR 3 Diversion Dam Installation and Removal Timing Task 2: If necessary, conduct adult migration timing surveys for steelhead and chinook salmon to more specifically define spawning migration timing into Auburn Ravine. Study completed by June 2004.</p>	<p>WM M2, 3, 4, 5, 7 FR M1, 2, 6, 7, 8</p>

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
	<p>AR FR 3 Diversion Dam Adult Fish Passage: Provide fish passage improvements and/or structure (e.g., fish ladder) at diversion dams where operational constraints overlap with fish spawning migration timing.</p>	<p>AR FR 3 Diversion Dam Adult Fish Passage Task 1: Complete minor infrastructure modifications at all South Sutter Water District diversion dams by November 2004.</p> <p>AR FR 3 Diversion Dam Adult Fish Passage Task 2: Design and complete a temporary steep pass project at two diversion dams which will provide passage during the period from dam flashboards installation until May 15th. Project completed by July 2005.</p> <p>AR FR 3 Diversion Dam Adult Fish Passage Task 3: Depending on the outcome of AR FR 2 Diversion Dam Adult Fish Passage Task 2 above, Implement steep pass projects at all remaining splash board diversion dams, as appropriate, by June 2007.</p> <p>AR FR 3 Diversion Dam Adult Fish Passage Task 4: Design and construct a fish passage structure at NID’s Auburn Ravine One Diversion Dam by October 2005.</p> <p>AR FR 3 Diversion Dam Adult Fish Passage Task 5: Design and construct a fish passage structure at NID’s Hemphill Diversion Dam by October 2006.</p>	

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>AR FR 3 Diversion Dam Adult Fish Passage Task 6: Correct fish passage impediments at the NID gauging station, near Highway 65 either by improving structure hydraulics or replacing the structure with a pool and chute fishway (Recommendation to replace the structure is based on sediment and channel morphology analysis completed and presented in Chapter 5 of the Watershed Assessment. Complete this project by November 2006.</p>	
	<p>AR FR 3 Water Flows for Adult Fish Passage: Provide sufficient water flows (chinook salmon require a minimum water depth of ≥ 0.24 meters, while steelhead trout need depths of ≥ 0.18 meters), under the existing channel configuration, during spawning migration periods so that fish have access to upstream areas.</p>	<p>AR FR 3 Water Flows for Adult Fish Passage Task 1: Evaluate and develop an implementation plan, if necessary, to provide sufficient water depth, through additional flows, to allow upstream passage of adult chinook salmon and/or steelhead. Depending on if and how effluent from the new Lincoln Wastewater Treatment and Reclamation Facility is discharged, requirements could change dramatically. Complete evaluation and plan by August 2004. Implement supplemental flows by October 2005.</p>	
	<p>AR FR 3 Channel Morphology Changes to Facilitate Adult Fish Passage: Create a thalweg in the channel downstream of approximately Fowler Road near Lincoln, to provide sufficient</p>	<p>AR FR 3 Channel Morphology Changes to Facilitate Adult Fish Passage Task 1: Evaluate and develop an implementation plan, if</p>	

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
	<p>water depth and resting habitat that would require less water flow than the existing channel cross section;</p>	<p>necessary, to provide sufficient water depth, through changes in channel morphology, to allow upstream passage of adult chinook salmon and/or steelhead. Depending on if and how effluent from the new Lincoln Wastewater Treatment and Reclamation Facility is discharged, requirements could change dramatically. Complete evaluation and plan by June 2003. Implement measures to change channel morphology by October 2004.</p>	
	<p>AR FR 3 Alternative Water Diversion/Supply Techniques to Facilitate Adult Fish Passage: In cooperation with the diversion owner, evaluate and implement an acceptable alternative water diversion/supply technique (e.g., replacing a diversion dam with a pumping station, switching to ground water as a water supply during the spawning migration period only, etc.) that removes a physical barrier migrating fish.</p>	<p>AR FR 3 Alternative Water Diversion/ Supply Techniques to Facilitate Adult Fish Passage Task 1: Evaluate and develop an implementation plan, if necessary, to provide sufficient water flow and/or alternative water diversion techniques to facilitate upstream passage of adult chinook salmon and/or steelhead. Complete evaluation and plan by June 2003.</p>	
<p>AR FR 4: Provide juvenile chinook salmon and steelhead trout unrestricted access to the Sacramento River during emigration, by 2009.</p>	<p>AR FR 4 Juvenile Mortality Reduction at Pumps: Provide agency approved fish exclusion devices on pumps diverting water from the stream.</p>	<p>AR FR 4 Juvenile Mortality Reduction at Pumps Task 1: Provide a fish exclusion device at the private pumping station located near Pleasant Grove Road by November 2005.</p> <p>AR FR 4 Juvenile Mortality Reduction at Pumps Task 2: Provide a fish exclusion device at the private pumping station</p>	<p>FR M4</p>

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		located near Brewer Road by November 2005. AR FR 4 Juvenile Mortality Reduction at Pumps Task 3: Provide a fish exclusion device at the private pumping station located near Nelson Lane by November 2006.	
	AR FR 4 Juvenile Mortality Reduction at Gravity Flow Diversions: Provide agency approved fish exclusion devices on gravity flow diversions.	AR FR 4 Juvenile Mortality Reduction at Gravity Flow Diversions Task 1: Complete installation of a fish exclusion device at NID's Auburn Ravine One diversion point by October 2005. AR FR 4 Juvenile Mortality Reduction at Gravity Flow Diversions Task 2: Complete installation of a fish exclusion device at NID's Hemphill Diversion Dam by October 2006. AR FR 4 Juvenile Mortality Reduction at Gravity Flow Diversions Task 3: Complete installation of a fish exclusion device at the diversion point located on the former Aitken Ranch property by October 2004.	
	AR FR 4 Juvenile Fish Passage at Diversion Dams: During emigration periods (late November through mid-May), provide for downstream passage of juvenile salmonids at all diversion dams, as appropriate.	AR FR 4 Juvenile Fish Passage at Diversion Dams Task 1: Provide a notch with a minimum of 8 inches of water flowing through it and a splash pool at the bottom of the diversion dam to prevent injury or may be	

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		combined with tasks identified in AR FR 3 Diversion Dam Adult Fish Passage Tasks 2 and 3. Implement projects at all diversion dams, as appropriate, by November 2006.	
<p>AR FR 5: Optimize (pool to riffle ratio to approximate 60 percent pool habitat and 40 percent riffle habitat.) juvenile salmonid rearing habitat upstream of Moore Road, by 2009.</p>	<p>AR FR 5 Optimize the Stream’s Pool to Riffle Ratio: Where practical and feasible, cause the stream’s pool to riffle ratio to approximate 60 percent pool habitat and 40 percent riffle habitat.</p>	<p>AR FR 5 Optimize the Stream’s Pool to Riffle Ratio Task 1: Complete an hydrological and stream dynamics analysis in order to determine if it is feasible to alter the pool to riffle ratio of the stream if desired. Complete this analysis by September 2003.</p> <p>AR FR 5 Optimize the Stream’s Pool to Riffle Ratio Task 2: In cooperation with adjacent landowners, complete a physical habitat inventory which includes pool:riffle ratios and adjacent riparian vegetation by December 2003.</p> <p>AR FR 5 Optimize the Stream’s Pool to Riffle Ratio Task 3: Based on the results from tasks AR FR 5 Optimize the Stream’s Pool to Riffle Ratio Tasks 1 and 2, above, develop an implementation plan to begin altering the pool to riffle ratio at selected sites by :June 2004.</p> <p>AR FR 5 Optimize the Stream’s Pool to Riffle Ratio Task 4: Begin implementation of changes in pool to riffle ratio at sites</p>	<p>FR M8 S M27</p>

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		beginning upstream and working downstream by September 2005.	
	<p>AR FR 5 Conserve, Protect, Rehabilitate, and Reestablish Riparian Vegetation: Insure riparian vegetation is sufficient to provide bank stability; provide for large woody debris input to the main stream channel; and leaf and litter fall is close enough to the stream channel to fall directly in the water, be blown in by wind, or transported to the channel by overbank flows or heavy rainfall events</p>	<p>AR FR 5 Conserve, Protect, Rehabilitate, and Reestablish Riparian Vegetation Task 1: Using the results from the evaluation completed in AR FR 5 Optimize the Stream's Pool to Riffle Ratio Task 2 above, initiate a series of riparian conservation, protection, rehabilitation, and replanting projects beginning somewhere near Fowler Road and moving downstream in subsequent years. Initiate first project by September 2004. Subsequent projects to occur yearly thereafter.</p> <p>AR FR 5 Conserve, Protect, Rehabilitate, and Reestablish Riparian Vegetation Task 2: Using part of the results from the evaluation completed in AR FR 5 Optimize the Stream's Pool to Riffle Ratio Task 1 above, complete a concept design document that would provide for low height levees to contain flood waters. These levees would be less than 5 ft. high and encompass enough flood plain area to meet the vegetative needs of riparian dependent species of fish and wildlife, accommodate reasonable flood flows, and reduce the overall area subjected to flooding in all but the higher flood flow occurrences. Emphasis</p>	

Table 10-2. Auburn Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>would be placed on minimizing changes in adjacent land uses and developing a funding mechanism to fully compensate adjacent landowners. Complete conceptual design by September 2006.</p> <p>AR FR 5 Conserve, Protect, Rehabilitate, and Reestablish Riparian Vegetation Task 3: Implement the design proposed in AR FR 5 Conserve, Protect, Rehabilitate, and Reestablish Riparian Vegetation Task 2 above, starting at the upstream end of the project and working downstream. Initial project phase to be initiated by October 2008.</p>	

Doty Ravine Watershed

Water Quality Enhancement Goal

- Minimize the input to and transport of sediment and pollutants, by flows in the channel downstream to the East Side Canal.

Plant Community Enhancement/Establishment Goal

- Increase the Quality and Quantity of Riparian Plant Communities Consistent with Land Use and Water Resources Management Activities.

Wildlife/Fisheries Population Enhancement/Establishment Goal

- Optimize Habitat Quality and Quantity for Wildlife Species Consistent with Land Use and Water Resources Management Activities.
- Optimize Anadromous and Native Fish Habitat Quantity, Quality, and Use in Watershed Streams, Consistent with Land Use and Water Resources Management Activities.

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
<p>Doty Ravine Water Quality (DR WQ) DR WQ 1: Reduce the amount of pollutants entering the channel and being transported to downstream areas by 50% by 2010.</p>	<ol style="list-style-type: none"> 1. In cooperation with the City of Lincoln, adjacent landowners, and other interested stakeholders, assess the current sediment and pollutant deliveries to the channel and develop a plan to reduce loadings and concentrations of sediments and pollutants delivered to the channel. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 4. Implement a program to reduce sediment and pollutant delivery to the channel. 5. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Complete an assessment of sediment and pollutant delivery to the channel by 2005. 2. If the assessment concludes that remedial action is needed, develop an action plan to implement the needed measures to accomplish the objective (2006). 3. Perform annual monitoring and adaptive management to gage success and modify the program as needed. 	<p>LU M1, 5 WM M6 WQ M6, 7</p>
<p>Doty Ravine Plant Communities (DR PC) DR PC-1: Develop a list of areas on which riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types have the potential to be created/expanded/enhanced for all four watersheds within the ERP planning area before 2004.</p>	<ol style="list-style-type: none"> 1. Develop accurate mapping and acreage calculations for all riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types. 2. Identify areas where riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types are candidates for creation/expansion/enhancement of these habitat types, based on aerial photo interpretation, vegetation mapping, soils mapping, and field site visits. 	<ol style="list-style-type: none"> 1. Obtain recent orthorectified color aerial photographs for areas currently lacking coverage (2002). 2. Complete habitat mapping based on aerial photographs and field site visits (2003). 3. Finish digitizing mapped riparian forest habitat type and digitize willow scrub, freshwater marsh, and adjacent upland habitats. Import data to County GIS and calculate acreages 	<p>LU M3</p>

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
		(2003). 4. Develop overlays of riparian vegetation types and soils on aerial photo base (2003). 5. Identify, document, and prioritize new areas where opportunities exist to create/expand/enhance riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types (2003).	
DR PC-2: Replace 75 percent of existing Himalayan blackberry (HBB) with native understory species by 2015.	1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify areas for HBB management based on feasibility and potential ecosystem benefits. 2. Use annual monitoring and adaptive management to modify the conversion program as needed.	1. Develop a protocol for determining which areas are suitable for HBB management and conversion to native species (2002). 2. Based on results from 1, identify potential conversion areas (2002). 3. Identify and prioritize areas for HBB conversion (2003). 4. Prepare HBB management and conversion plan and implementation templates; plan to address initial control methods, revegetation with native species, and long-term maintenance (2003). 5. Implement management plan (2004). 6. Perform annual	PC M1-3, 6 WR M1, 5

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
		monitoring and adaptive management to gauge success and modify the program as needed.	
<p>DR PC-3: Create/expand/enhance 75 percent of the total area identified as existing and/or potential riparian forest habitat type, as identified in DR PC-1, by 2015.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, resource agencies, local jurisdictions, and other stakeholders, develop generic revegetation/enhancement concepts for this habitat type. 2. Implement improvements on a 3-year moving average of 8% of the total area identified, on an annual basis. 3. Incorporate, where practicable, actions on adjacent upland habitats to provide flood management benefits, meet water quality objectives, and meet wildlife resource objectives (e.g., raptor foraging areas). 4. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Develop generic enhancement concepts to be applied in appropriate settings in the watershed areas (2003). 2. Identify specific enhancement strategies and design enhancement templates (2003). 3. Implement projects, in coordination with DR PC-6 as appropriate, beginning in 2004. 4. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	WQ M1, 2 S M14, 15 PC M4 WR M2, 9
<p>DR PC-4: Create/expand/enhance 100% of the total area identified as existing and/or potential willow scrub habitat type, as identified in DR PC-1, by 2010.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, resource agencies, local jurisdictions, and other stakeholders, develop generic revegetation/enhancement concepts for this habitat type. 2. Implement improvements on a 3-year moving average of 17% of the total area identified, on an annual basis. 3. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Develop generic enhancement concepts to be applied in appropriate settings in the watershed areas (2003). 2. Identify specific enhancement strategies and design enhancement templates (2003). 3. Implement projects, in coordination with DR PC-6 as appropriate beginning in 2004. 4. Perform annual monitoring and 	

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
		adaptive management to gage success and modify the program as needed.	
<p>DR PC-5: Create/expand by 100% the total area, as identified in DR PC-1, freshwater marsh habitat type, by 2010.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, implement improvements on a 3-year moving average of 17% of the total area identified, on an annual basis. 2. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Identify specific enhancement strategies, design enhancement templates in 2003. 2. Implement projects, in coordination with DR PC-6 as appropriate beginning in 2004. 3. Perform annual monitoring and adaptive management to gage success and modify the program as needed. 	WR M7
<p>DR PC-6: Restore riparian corridor structure and function, consistent with flood management, water quality, and aquatic and wildlife resources objectives, downstream from approximately Wise Road to its confluence with Coon Creek by 2010.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, reclamation districts, local jurisdictions, and other stakeholders; identify mechanisms, strategies, and funding sources to implement the restoration program. 2. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Develop an implementation protocol, in cooperation with stakeholders, for a pilot project and full implementation (2003). 2. Complete necessary engineering studies, including hydrologic and hydraulic evaluations (2004). 3. Purchase conservation easements where necessary, conduct necessary environmental review, and obtain necessary permits (2004). 4. Relocate levees (2005). 5. Initiate enhancement of expanded riparian corridor using strategies and templates described under DR PC-3, 4, and 5 (2005). 6. Perform annual 	WM M1, 8 WR M8, M9 LU M1, 2, 4 S M15 PC M4-6

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
		monitoring and adaptive management to gauge success and modify the program as needed.	
DR PC-7: Restore existing riparian corridors impacted by grazing by implementing grazing management plans for all appropriate riparian areas by 2006.	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, develop optimum grazing prescriptions for riparian zones. 2. Provide landowners with technical assistance and educational materials to identify the benefits of healthy riparian corridors. 3. Use financial incentives (e.g., conservation easements), if necessary, to encourage landowner participation in the program. 4. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Identify candidate areas along grazed stream reaches within the watersheds (2003). 2. Develop and/or implement a mechanism to obtain input from stakeholders on grazing management needs (2003). 3. Develop grazing management plans and several grazing prescription templates for various riparian types (2003). 4. Establish a public outreach program (2003). 5. Implement grazing management plans and purchase conservation easements as necessary (2004). 6. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	S M14 WR M4
DR PC-8: Conserve ecological structure and function of riparian corridors by establishing and maintaining minimum buffer widths along riparian corridors; optimize buffers along 50 percent of stream reach in watershed areas by	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify specific criteria (e.g., width, activities allowed) for riparian buffers. 2. Implement buffer criteria on a 3-year moving average of 7% of the total area identified, on an annual 	<ol style="list-style-type: none"> 1. Develop preliminary list of riparian buffer criteria. (2002). 2. Evaluate the use and effectiveness of existing regulatory programs to protect riparian buffers and achieve identified 	WR M3

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
2012. (Some of these buffers may be incorporated into projects completed under other objectives).	basis. 3. Provide landowners with technical assistance and educational materials to identify the benefits of healthy riparian corridors. 4. Use financial incentives (e.g., conservation easements), if necessary, to encourage landowner participation in the program. 5. Use annual monitoring and adaptive management to modify the program as needed.	criteria (2002). 3. Develop final buffer criteria and management plan. (2004). 4. Implement buffer management plan. (2005). 5. Perform annual monitoring and adaptive management to gauge success and modify the program as needed.	
Doty Ravine Wildlife Resources (DR WR) DR WR-1: Optimize American beaver population in the watershed by 2007.	1. In cooperation with landowners, resource agencies, local jurisdictions, and other stakeholders, assess current beaver population levels, distribution, and effects on stream channel structure and function. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Develop and implement a beaver management plan addressing optimum population levels. 4. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 5. Use annual monitoring and adaptive management to modify the program as needed.	1. Conduct field studies to determine beaver population levels, distribution, and document effects on riparian vegetation, channel hydrodynamics, and fish passage (2003). 2. Develop a beaver management plan focusing on optimum population levels, consistent with other biological resources and channel stability objectives (2004). 3. Implement management plan beginning in 2005 4. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. (2005).	WR M11, 5 FR M10
DR WR-2: Optimize the number of potential Swainson's hawk nest sites and any additional acreage of foraging habitat	1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify areas with potential to support additional nest	1. Verify known Swainson's hawk nest sites and conduct additional surveys to determine is new nests	WR M12

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
<p>necessary to support these new nests along the stream downstream of Gladding Road by 2010.</p>	<p>sites and identify potentially suitable foraging habitat in proximity to the new nest sites.</p> <ol style="list-style-type: none"> 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 4. Create/expand/enhance potential foraging habitat in proximity to new nest sites. 5. Implement a program to increase the number of new potential nest sites and secure any additional foraging habitat necessary to support those nest sites, in conjunction with other riparian management actions identified in this ERP. 6. Use annual monitoring and adaptive management to modify the program as needed. 	<p>have been established recently (2003).</p> <ol style="list-style-type: none"> 2. Develop criteria to support selection of potential new nest sites. 3. Evaluate the riparian area to determine if potential new nest sites exist and if so, evaluate the presence or suitability of adjacent upland areas to support sufficient foraging habitat to support any new nests. 4. Implement any financial incentive or technical assistance program needed. 5. Implement any conservation or improvement programs needed to create/expand/enhance potential nest sites and/or foraging habitats. 6. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	
<p>DR WR-3: Increase the potential habitat for Valley elderberry longhorn beetle by creating a density of elderberry plants equivalent to 100 plants per linear mile of stream channel along those channels with suitable conditions to support elderberry plants and six plants per acre in other suitable riparian habitat</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify areas with existing plants that could be enhanced or new areas suitable for establishment of elderberry plants. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Use financial incentives, and/or technical assistance and education 	<ol style="list-style-type: none"> 1. Identify areas where elderberry plants can be enhanced, existing areas with plants expanded, and areas where new elderberry plants can be established and maintained (2002). 2. Obtain landowner cooperation through use of the financial 	<p>WR M15</p>

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
types by 2012.	to facilitate landowner participation. 4. Implement a program to increase the number of new plants on sites with existing plants, in conjunction with other riparian management actions identified in this ERP. 5. Install plantings at new sites and in conjunction with other riparian management actions identified in this ERP 6. Use annual monitoring and adaptive management to modify the program as needed.	incentives and/or technical assistance program (2002). 3. Protect and restore those areas where plants currently exist. 4. In new areas without existing plants, install plantings, in accordance with Fish and Wildlife Service mitigation guidelines (2005). 5. Perform annual monitoring and adaptive management to gauge success and modify the program as needed.	
DR WR-4: Determine the current status of California red-legged frog (CLRF) in the watershed and determine if the potential exists to increase the population and/or geographic distribution in the watershed by 2005.	1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, evaluate CLRF population levels, geographic distribution, and factors that may be limiting the species. 2. Integrate these assessments with other resource assessments outlined in this ERP.	1. Determine the geographic distribution of California red-legged frog (CLRF) in upper watershed areas, map suitable habitats, and determine if habitat or some other factor(s) (e.g., predators or competition, etc.) are limiting CLRF populations and/or distribution (2002). 2. If necessary, given the results of the evaluation in 1 above, develop a detailed plan to enhance the population and/or area of suitable habitat for CLRF (2004).	WR M14
Doty Ravine Fisheries Resources (DR FR) DR FR 1: Reduce stream channel sediment	DR FR 1 Fire and Fuels: Reduce the risk of catastrophic wildfire in the watershed by reducing fire fuels, consistent with fuels and wildlife management objectives.	DR FR 1 Fuels/Wildlife Task 1: Complete a fuels level/fire potential/erosive soils assessment by November 2003.	S M13 LU M1 FR M3

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
<p>concentration (particles < 6.35 mm in diameter to less than 20 percent and particles < 0.833 mm in diameter to less than 10 percent) of the gravel/cobble substrate composition upstream of Crosby Herold Road, by 2010.</p>		<p>DR FR 1 Fuels/Wildlife Task 2: Begin implementation of the fuels reduction program developed in DR FR 1 Fuels/Wildlife Task 1 above by November 2004.</p>	
	<p>DR FR 1 Roads/Culverts Sediment Source Inventory: Identify and catalog sources of sediment delivery to the channel along all roads and culverts in the watershed.</p>	<p>DR FR 1 Roads/Culverts Task 1: Complete an inventory and proposed remediation plan for all roads and culverts with sediment delivery potential in the watershed before 2004.</p> <p>DR FR 1 Roads/Culverts Task 2: Beginning in 2004, implement the five-year program developed in DR FR 1 Roads/Culverts Task 1 above, beginning with the highest priority projects upstream of Crosby Herold Road first.</p>	
	<p>DR FR 1 Individual Landowner Sediment Source Inventory and Control: In cooperation with adjacent landowners, identify and catalog, or reduce sediment sources along the main channel and any tributary channels.</p>	<p>DR FR 1 Individual Landowner Main Channel/Tributary Channel Sediment Reduction Task 1: Complete an inventory and proposed remediation plan for all mainstem stream and tributary channels with sediment delivery potential in the watershed by 2004.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 2: Complete a watershed restoration program between Crosby Herold and</p>	

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
		<p>Wise Roads by 2005. Restoration objectives include fuels reduction, riparian vegetation improvement, 95% reduction in sediment delivered to the active channel, sediment removal from active channel as appropriate, aquatic habitat improvements as appropriate, and optimization of wildlife values consistent with landowner objectives.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 3: Complete a channel and adjacent lands restoration program upstream of Wise Road by 2008. Restoration objectives will include fuels reduction within 100 yards of the stream channel or as appropriate to reduce the potential for sediment to be delivered to the channel after a wildfire or during heavy runoff periods, rehabilitation of eroding stream banks, rehabilitation or enhancement of riparian vegetation for bank stability and wildlife objectives consistent with adjacent landowner objectives, and any sediment removal or aquatic habitat improvement as appropriate.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 4: Complete a channel and</p>	

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
		<p>adjacent lands restoration program between Crosby Herold and Gladding Roads by 2007. Restoration objectives will include fuels reduction within 100 yards of the stream channel or as appropriate to reduce the potential for sediment to be delivered to the channel after a wildfire or during heavy runoff periods, rehabilitation of eroding stream banks, rehabilitation or enhancement of riparian vegetation for bank stability and wildlife objectives consistent with adjacent landowner objectives, any sediment removal or aquatic habitat improvement as appropriate, and installation of means to facilitate stream sediment transport as appropriate.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 5: Complete a channel and adjacent lands restoration program between Gladding Road downstream to the channel's confluence with Coon Creek near Hwy 65 by 2010. Restoration objectives include rehabilitation of eroding stream banks, rehabilitation or enhancement of riparian vegetation for bank stability and wildlife objectives consistent with adjacent landowner objectives, any sediment removal or aquatic habitat improvement as</p>	

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
		appropriate, and installation of means to facilitate stream sediment transport as appropriate.	
<p>Objective DR FR 2: Increase the quantity and quality of riparian habitats, consistent with flood management and landowner objectives, by 100 percent by 2010.</p>	<p>DR FR 2 Protection and Management of Riparian/Floodplain Areas: In cooperation with watershed landowners, Placer County, City of Auburn,, and others; identify and evaluate ways to protect and manage (e.g., conservation easements, flood plain zoning restrictions, vegetative planting programs, etc.) the riparian areas of the main channel and significant tributaries to reduce or prevent sediment input.</p>	<p>DR FR 2 Riparian/Floodplain Task 1: In cooperation with adjacent landowners, Placer County, City of Auburn, and others, complete an assessment of opportunities to complete specific vegetative planting projects, conservation easements, floodplain zoning restrictions, etc., designed to reduce sediment input by 2003.</p> <p>DR FR 2 Riparian/Floodplain Task 2: County of Placer completes floodplain management plan by 2004.</p> <p>DR FR 2 Riparian/Floodplain Task 3: Complete a pilot project to determine if sediment levels in the channel can be reduced either by mechanical means or through improvements in channel hydraulics. Project to be conducted between Crosby Herold and Wise Roads by 2005.</p>	<p>PC M4 FR M5</p>
<p>Objective DR FR 3: Provide adult chinook salmon and steelhead trout unrestricted access over diversion structures to spawning areas, by 2008.</p>	<p>DR FR 3 Diversion Dam Installation and Removal Timing: Consult with diversion dam owners to determine if acceptable changes in diversion dam installation and removal timing can be implemented that will allow fish access, without significantly influencing water deliveries.</p>	<p>DR FR 3 Diversion Dam Installation and Removal Timing Task 1: Review current literature to define adult migration timing for steelhead and chinook salmon into Doty Ravine. Literature review completed by November 2002.</p>	<p>WM M2, 3, 4, 5, 7 FR M1, 2, 6, 7, 8</p>

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
		<p>DR FR 3 Diversion Dam Installation and Removal Timing Task 2: If necessary, conduct adult migration timing surveys for steelhead and chinook salmon to more specifically define spawning migration timing. Study completed by June 2004.</p>	
	<p>DR FR 3 Diversion Dam Adult Fish Passage: Provide fish passage improvements and/or structure (e.g., fish ladder) at diversion dams where operational constraints overlap with fish spawning migration timing.</p>	<p>DR FR 3 Diversion Dam Adult Fish Passage Task 1: Complete comprehensive assessment of fish passage needs at the NID's Doty South Diversion Dam by 2004.</p> <p>DR FR 3 Diversion Dam Adult Fish Passage Task 2: If passage improvements are needed, implement these improvements by November 2006.</p>	
	<p>DR FR 3 Water Flows for Adult Fish Passage: Provide sufficient water flows (chinook salmon require a minimum water depth of > 0.24 meters, while steelhead trout need depths of > 0.18 meters), under the existing channel configuration, during spawning migration periods so that fish have access to upstream areas.</p>	<p>DR FR 3 Water Flows for Adult Fish Passage Task 1: Evaluate and develop an implementation plan, if necessary, to provide sufficient water depth, through additional flows, to allow upstream passage of adult chinook salmon and/or steelhead. Complete evaluation and plan by August 2004. Implement supplemental flows by October 2005.</p>	
	<p>DR FR 3 Channel Morphology Changes to Facilitate Adult Fish Passage: Create a thalweg in the channel downstream of approximately Highway 65 near Lincoln, to provide sufficient water depth and resting</p>	<p>DR FR 3 Channel Morphology Changes to Facilitate Adult Fish Passage Task 1: Evaluate and develop an implementation plan, if</p>	

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
	habitat that would require less water flow than the existing channel cross section;	necessary, to provide sufficient water depth, through changes in channel morphology, to allow upstream passage of adult chinook salmon and/or steelhead. Complete evaluation and plan by June 2003. Implement measures to change channel morphology by October 2004.	
	DR FR 3 Alternative Water Diversion/Supply Techniques to Facilitate Adult Fish Passage: In cooperation with the diversion owner, evaluate and implement an acceptable alternative water diversion/supply technique (e.g., replacing a diversion dam with a pumping station, switching to ground water as a water supply during the spawning migration period only, etc.) that removes a physical barrier migrating fish.	DR FR 3 Alternative Water Diversion/Supply Techniques to Facilitate Adult Fish Passage Task 1: Evaluate and develop an implementation plan, if necessary, to provide sufficient water flow and/or alternative water diversion techniques to facilitate upstream passage of adult chinook salmon and/or steelhead. Complete evaluation and plan by June 2003.	
DR FR 4: Provide juvenile chinook salmon and steelhead trout unrestricted access to the Sacramento River during emigration, by 2009.	DR FR 4 Juvenile Mortality Reduction at Gravity Flow Diversions: Provide agency approved fish exclusion devices on gravity flow diversions.	DR FR 4 Juvenile Mortality Reduction at Gravity Flow Diversions Task 1: Provide a fish exclusion device at NID's Doty South Diversion Dam by November 2005.	FR M4
DR FR 5: Optimize (pool to riffle ratio to approximate 60 percent pool habitat and 40 percent riffle habitat.) juvenile salmonid rearing habitat upstream of NID's Doty South Diversion Dam, by 2009.	DR FR 5 Optimize the Stream's Pool to Riffle Ratio: Where practical and feasible, cause the stream's pool to riffle ratio to approximate 60 percent pool habitat and 40 percent riffle habitat.	DR FR 5 Optimize the Stream's Pool to Riffle Ratio Task 1: Complete a hydrological and stream dynamics analysis in order to determine if it is feasible to alter the pool to riffle ratio of the stream if desired. Complete this analysis by September 2003.	

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
		<p>DR FR 5 Optimize the Stream's Pool to Riffle Ratio Task 2: In cooperation with adjacent landowners, complete a physical habitat inventory that includes pool: riffle ratios and adjacent riparian vegetation by December 2003.</p> <p>DR FR 5 Optimize the Stream's Pool to Riffle Ratio Task 3: Based on the results from tasks DR FR 5 Optimize the Stream's Pool to Riffle Ratio Tasks 1 and 2, above, develop an implementation plan to begin altering the pool to riffle ratio at selected sites by June 2005.</p> <p>DR FR 5 Optimize the Stream's Pool to Riffle Ratio Task 4: Begin implementation of changes in pool to riffle ratio at sites beginning upstream and working downstream by September 2006.</p>	
	<p>DR FR 5 Conserve, Protect, Rehabilitate, and Reestablish Riparian Vegetation: Insure riparian vegetation is sufficient to provide bank stability; provide for large woody debris input to the main stream channel; and leaf and litter fall is close enough to the stream channel to fall directly in the water, be blown in by wind, or transported to the channel by overbank flows or heavy rainfall events</p>	<p>DR FR 5 Conserve, Protect, Rehabilitate, and Reestablish Riparian Vegetation Task 1: Initiate riparian conservation, protection, rehabilitation, and replanting projects beginning at the confluence with Coon Creek and moving upstream in subsequent years to Gladding Road and further upstream as warranted.</p>	

Table 10-3. Doty Ravine Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERNS ADDRESSED
		Initiate first project by September 2004. Subsequent projects to occur yearly thereafter.	

Coon Creek Watershed

Water Quality Enhancement Goal

- Minimize the input to and transport of sediment and pollutants, by flows in the channel downstream to the East Side Canal.

Plant Community Enhancement/Establishment Goal

- Increase the Quality and Quantity of Riparian Plant Communities Consistent with Land Use and Water Resources Management Activities.

Wildlife/Fisheries Population Enhancement/Establishment Goals

- Optimize Habitat Quality and Quantity for Wildlife Species Consistent with Land Use and Water Resources Management Activities.
- Optimize Anadromous and Native Fish Habitat Quantity, Quality, and Use in Watershed Streams, Consistent with Land Use and Water Resources Management Activities.

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>Coon Creek Water Quality (CC WQ) CC WQ 1: Reduce the amount of pollutants entering the channel and being transported to downstream areas by 50% by 2010.</p>	<ol style="list-style-type: none"> 1. In cooperation with the City of Lincoln, adjacent landowners, and other interested stakeholders, assess the current sediment and pollutant deliveries to the channel and develop a plan to reduce loadings and concentrations of sediments and pollutants delivered to the channel. 2. Integrate these assessments with other resource assessments 	<ol style="list-style-type: none"> 1. Complete an assessment of sediment and pollutant delivery to the channel by 2005. 2. If the assessment concludes that remedial action is needed, develop an action plan to implement the needed measures to 	<p>LU M1, 5, 6 WQ M6, 7</p>

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
	<p>outlined in this ERP.</p> <ol style="list-style-type: none"> 3. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 4. Implement a program to reduce sediment and pollutant delivery to the channel. 5. Use annual monitoring and adaptive management to modify the program as needed. 	<p>accomplish the objective (2006).</p> <ol style="list-style-type: none"> 3. Perform annual monitoring and adaptive management to gage success and modify the program as needed. 	
<p>Coon Creek Plant Communities (CC PC) CC PC-1: Develop a list of areas on which riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types have the potential to be created/expanded/enhanced for all four watersheds within the ERP planning area before 2004.</p>	<ol style="list-style-type: none"> 1. Develop accurate mapping and acreage calculations for all riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types in all watersheds (information is currently lacking for Sutter County). 2. Identify areas where riparian forest, willow scrub, freshwater marsh, and adjacent upland habitat types are candidates for creation/expansion/enhancement of these habitat types, based on aerial photo interpretation, vegetation mapping, soils mapping, and field site visits. 	<ol style="list-style-type: none"> 1. Obtain recent orthorectified color aerial photographs for areas currently lacking coverage (2002). 2. Complete habitat mapping based on aerial photographs and field site visits (2003). 3. Finish digitizing mapped riparian forest habitat type and digitize willow scrub, freshwater marsh, and adjacent upland habitats. Import data to County GIS and calculate acreages (2003). 4. Develop overlays of riparian vegetation types and soils on aerial photo base (2003). 5. Identify, document, and prioritize new areas where opportunities exist to create/expand/enhance riparian forest, willow scrub, 	<p>LU M3</p>

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		freshwater marsh, and adjacent upland habitat types (2003).	
<p>CC PC-2: Replace 75 percent of existing Himalayan blackberry (HBB) with native understory species in all watershed areas by 2015.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify areas for HBB management based on feasibility and potential ecosystem benefits. 2. Use annual monitoring and adaptive management to modify the conversion program as needed. 	<ol style="list-style-type: none"> 1. Develop a protocol for determining which areas are suitable for HBB management and conversion to native species (2002). 2. Based on results from 1, identify potential conversion areas (2002). 3. Identify and prioritize areas for HBB conversion (2003). 4. Prepare HBB management and conversion plan and implementation templates; plan to address initial control methods, revegetation with native species, and long-term maintenance (2003). 5. Implement management plan (2004). 6. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	<p>PC M1-3, 6 WR M1, 5</p>
<p>CC PC-3: Create/expand/enhance 75 percent of the total area identified as existing and/or potential riparian forest habitat type, as identified in</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, resource agencies, local jurisdictions, and other stakeholders, develop generic revegetation/enhancement concepts for this habitat type. 	<ol style="list-style-type: none"> 1. Develop generic enhancement concepts to be applied in appropriate settings in the watershed 	<p>S M8, 9, 11, 12 WQ M1, 2 PC M4 WR M2, 9</p>

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
CC PC-1, by 2015.	<ol style="list-style-type: none"> 2. Implement improvements on a 3-year moving average of 8% of the total area identified, on an annual basis. 3. Incorporate, where practicable, actions on adjacent upland habitats to provide flood management benefits, meet water quality objectives, and meet wildlife resource objectives (e.g., raptor foraging areas). 4. Use annual monitoring and adaptive management to modify the program as needed. 	<p>areas (2003).</p> <ol style="list-style-type: none"> 2. Identify specific enhancement strategies and design enhancement templates (2003). 3. Implement projects, in coordination with CC PC-6 as appropriate, beginning in 2004. 4. Perform annual monitoring and adaptive management to gage success and modify the program as needed. 	
<p>CC PC-4: Create/expand/enhance 100% of the total area identified as existing and/or potential willow scrub habitat type, as identified in CC PC-1, by 2010.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, resource agencies, local jurisdictions, and other stakeholders, develop generic revegetation/enhancement concepts for this habitat type. 2. Implement improvements on a 3-year moving average of 17% of the total area identified, on an annual basis. 3. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Develop generic enhancement concepts to be applied in appropriate settings in the watershed areas (2003). 2. Identify specific enhancement strategies and design enhancement templates (2003). 3. Implement projects, in coordination with CC PC-6 as appropriate beginning in 2004. 4. Perform annual monitoring and adaptive management to gage success and modify the program as needed. 	
<p>CC PC-5: Create/expand by 100% the total area, as identified in CC PC-1,</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and 	<ol style="list-style-type: none"> 1. Identify specific enhancement strategies and design 	WR M7

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
freshwater marsh habitat type, by 2010.	other stakeholders, implement improvements on a 3-year moving average of 17% of the total area identified, on an annual basis. 2. Use annual monitoring and adaptive management to modify the program as needed.	enhancement templates in 2003. 2. Implement projects, in coordination with CC PC-6 as appropriate beginning in 2004. 3. Perform annual monitoring and adaptive management to gage success and modify the program as needed.	
CC PC-6: Restore riparian corridor structure and function, consistent with flood management, water quality, and aquatic and wildlife resources objectives, in the watershed downstream to its confluence with the East Side Canal by 2010.	1. In cooperation with landowners, water agencies, resource agencies, reclamation districts, local jurisdictions, and other stakeholders; identify mechanisms, strategies, and funding sources to implement the restoration program. 2. Use annual monitoring and adaptive management to modify the program as needed.	1. Develop an implementation protocol, in cooperation with stakeholders, for a pilot project and full implementation (2003). 2. Complete necessary engineering studies, including hydrologic and hydraulic evaluations (2004). 3. Purchase conservation easements where necessary, conduct necessary environmental review, and obtain necessary permits (2004). 4. Relocate levees (2005). 5. Initiate enhancement of expanded riparian corridor using strategies and templates described under CC PC-3, 4, and 5 (2005).	LU M1, 2, 4 WM M1, 8 S M7, 8, 9, 10, 12 PC M4-6 WR M8, 9

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		6. Perform annual monitoring and adaptive management to gage success and modify the program as needed.	
CC PC-7: Restore existing riparian corridors impacted by grazing by implementing grazing management plans for all appropriate riparian areas by 2006.	1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, develop optimum grazing prescriptions for riparian zones. 2. Provide landowners with technical assistance and educational materials to identify the benefits of healthy riparian corridors. 3. Use financial incentives (e.g., conservation easements), if necessary, to encourage landowner participation in the program. 4. Use annual monitoring and adaptive management to modify the program as needed.	1. Identify candidate areas along grazed stream reaches within the watersheds (2003). 2. Develop and/or implement a mechanism to obtain input from stakeholders on grazing management needs (2003). 3. Develop grazing management plans and several grazing prescription templates for various riparian types (2003). 4. Establish a public outreach program (2003). 5. Implement grazing management plans and purchase conservation easements as necessary (2004). 6. Perform annual monitoring and adaptive mgmnt. to gage success and modify the program as needed.	WQ M4 WR M4
CC PC-8: Conserve ecological structure and function of riparian corridors by establishing and	1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify	1. Develop preliminary list of riparian buffer criteria. (2002). 2. Evaluate the use and	WR M3

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>maintaining minimum buffer widths along riparian corridors; optimize buffers along 50 percent of stream reach in watershed areas by 2012. (Some of these buffers may be incorporated into projects completed under other objectives).</p>	<p>specific criteria (e.g., width, activities allowed) for riparian buffers.</p> <ol style="list-style-type: none"> 2. Implement buffer criteria on a 3-year moving average of 7% of the total area identified, on an annual basis. 3. Provide landowners with technical assistance and educational materials to identify the benefits of healthy riparian corridors. 4. Use financial incentives (e.g., conservation easements), if necessary, to encourage landowner participation in the program. 5. Use annual monitoring and adaptive management to modify the program as needed. 	<p>effectiveness of existing regulatory programs to protect riparian buffers and achieve identified criteria (2002).</p> <ol style="list-style-type: none"> 3. Develop final buffer criteria and management plan. (2004). 4. Implement buffer management plan. (2005). 5. Perform annual monitoring and adaptive management to gauge success and modify the program as needed. 	
<p>Coon Creek Wildlife Resources (CC WR) CC WR-1: Optimize American beaver population in the watershed by 2011.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, resource agencies, local jurisdictions, and other stakeholders, assess current beaver population levels, distribution, and effects on stream channel structure and function. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Develop and implement a beaver management plan addressing optimum population levels. 4. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 5. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Conduct field studies to determine beaver population levels, distribution, and document effects on riparian vegetation, channel hydrodynamics, and fish passage (2003). 2. Develop a beaver management plan focusing on optimum population levels, consistent with other biological resources and channel stability objectives (2004). 3. Implement management plan beginning in 2005 4. Perform annual monitoring and adaptive management to gage 	<p>FR M10 WR M5, 11</p>

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		success and modify the program as needed. (2005).	
<p>CC WR-2: Optimize the number of Swainson’s hawk potential nest sites and any additional acreage of foraging habitat necessary to support these new nests downstream of Gladding Road by 2010.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify areas with potential to support additional nest sites and identify potentially suitable foraging habitat in proximity to the new nest sites. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 4. Create/expand/enhance potential foraging habitat in proximity to new nest sites. 5. Implement a program to increase the number of new potential nest sites and secure any additional foraging habitat necessary to support those nest sites, in conjunction with other riparian management actions identified in this ERP. 6. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 1. Verify known Swainson’s hawk nest sites and conduct additional surveys to determine if new nests have been established recently (2003). 2. Develop criteria to support selection of potential new nest sites. 3. Evaluate the riparian area to determine if potential new nest sites exist and if so, evaluate the presence or suitability of adjacent upland areas to support sufficient foraging habitat to support any new nests. 4. Implement any financial incentive or technical assistance program needed. 5. Implement any conservation or improvement programs needed to create/expand/enhance potential nest sites and/or foraging habitats. 6. Perform annual monitoring and adaptive management to gage success and modify the program as 	<p>WR M12</p>

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>CC WR-3: Increase the potential habitat for Valley elderberry longhorn beetle by creating a density of elderberry plants equivalent to 100 plants per linear mile of stream channel along those channels with suitable conditions to support elderberry plants, including the East Side and Cross canals and six plants per acre in other suitable riparian habitat types by 2012.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, identify areas with existing plants that could be enhanced or new areas suitable for establishment of elderberry plants. 2. Integrate these assessments with other resource assessments outlined in this ERP. 3. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 4. Implement a program to increase the number of new plants on sites with existing plants, in conjunction with other riparian management actions identified in this ERP. 5. Install plantings at new sites and in conjunction with other riparian management actions identified in this ERP 6. Use annual monitoring and adaptive management to modify the program as needed. 	<p>needed.</p> <ol style="list-style-type: none"> 1. Identify areas where elderberry plants can be enhanced, existing areas with plants expanded, and areas where new elderberry plants can be established and maintained (2002). 2. Obtain landowner cooperation through use of the financial incentives and/or technical assistance program (2002). 3. Protect and restore those areas where plants currently exist. 4. In new areas without existing plants, install plantings, in accordance with Fish and Wildlife Service mitigation guidelines (2005). 5. Perform annual monitoring and adaptive management to gage success and modify the program as needed. 	<p>WR M15</p>
<p>CC WR-4: Delineate existing habitat occupied by the giant garter snake (GGS), enhance existing occupied habitat as needed, and add 500 acres of additional suitable habitat in the lower watershed, including the East Side and Cross canals by 2010.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, reclamation districts, resource agencies, local jurisdictions, and other stakeholders, map those habitat areas that are currently occupied by GGS, evaluate these areas in terms of overall quality, and identify areas where new suitable habitat could be created. 2. Integrate these assessments with 	<ol style="list-style-type: none"> 1. Complete a survey to determine which areas are currently occupied by GGS, evaluate the quality of the occupied habitat and identify areas suitable for creation of new habitat in the lower watershed (2002). 	<p>WR M13</p>

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
	<p>other resource assessments outlined in this ERP.</p> <ol style="list-style-type: none"> 3. Use financial incentives, and/or technical assistance and education to facilitate landowner participation. 4. Implement a program to enhance existing occupied habitat, as needed and in conjunction with other riparian management actions identified in this ERP. 5. Implement a program to provide additional suitable habitat for GGS. 6. Use annual monitoring and adaptive management to modify the program as needed. 	<ol style="list-style-type: none"> 2. Obtain landowner cooperation through use of the financial incentives and/or technical assistance program (2003). 3. Initiate enhancement of existing occupied habitat, as needed (2003). 4. Create new habitat for GGS in areas identified. 5. Perform annual monitoring and adaptive management to gage success and modify the program as needed. 	
<p>CC WR-5: Determine the current status of California red-legged frog (CLRF) in the watershed and determine if the potential exists to increase the population and/or geographic distribution in the watershed by 2005.</p>	<ol style="list-style-type: none"> 1. In cooperation with landowners, water agencies, resource agencies, local jurisdictions, and other stakeholders, evaluate CLRF population levels, geographic distribution, and factors that may be limiting the species. 2. Integrate these assessments with other resource assessments outlined in this ERP. 	<ol style="list-style-type: none"> 1. Determine the geographic distribution of California red-legged frog (CLRF) in upper watershed areas, map suitable habitats, and determine if habitat or some other factor(s) (e.g., predators or competition, etc.) are limiting CLRF populations and/or distribution (2002). 2. If necessary, given the results of the evaluation in 1 above, develop a detailed plan to enhance the population and/or area of suitable 	<p>WR M14</p>

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		habitat for CLRF (2004).	
<p>Coon Creek Fisheries Resources (CC FR) CC FR 1: Reduce stream channel sediment concentration (particles < 6.35 mm in diameter to less than 20 percent and particles < 0.833 mm in diameter to less than 10 percent) of the gravel/cobble substrate composition upstream of Gladding Road by 2010.</p>	<p>CC FR 1 Fire and Fuels: Reduce the risk of catastrophic wildfire in the watershed by reducing fire fuels, consistent with fuels and wildlife management objectives.</p>	<p>CC FR 1 Fuels/Wildlife Task 1: Complete a fuels level/fire potential/erosive soils assessment by November 2003.</p> <p>CC FR 1 Fuels/Wildlife Task 2: Begin implementation of the fuels reduction program developed in CC FR 1 Fuels/Wildlife Task 1 above by November 2004.</p>	
	<p>CC FR 1 Roads/Culverts Sediment Source Inventory: Identify and catalog sources of sediment delivery to the channel along all roads and culverts in the watershed.</p>	<p>CC FR 1 Roads/Culverts Task 1: Complete an inventory and proposed remediation plan for all roads and culverts with sediment delivery potential in the watershed before 2004.</p> <p>CC FR 1 Roads/Culverts Task 2: Beginning in 2004, implement the five year program developed in CC FR 1 Roads/Culverts Task 1 above, beginning with the highest priority projects upstream of McCourtney Road first.</p>	
	<p>CC FR 1 Individual Landowner Sediment Source Inventory and Control: In cooperation with adjacent landowners, identify and catalog, or reduce sediment sources along the main channel and any tributary channels.</p>	<p>CC FR 1 Individual Landowner Main Channel/Tributary Channel Sediment Reduction Task 1: Complete an inventory and proposed remediation plan for all</p>	

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>mainstem stream and tributary channels with sediment delivery potential in the watershed by 2004.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 2: Complete a watershed restoration program upstream of Garden Bar Road by 2005. Restoration objectives include fuels reduction, riparian vegetation improvement, 95% reduction in sediment delivered to the active channel, sediment removal from active channel as appropriate, aquatic habitat improvements as appropriate, and optimization of wildlife values consistent with landowner objectives.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 3: Complete a channel and adjacent lands restoration program between Gladding Road and Garden Bar Road by 2006. Restoration objectives will include fuels reduction within 100 yards of the stream channel or as appropriate to reduce the potential for sediment to be delivered to the channel</p>	

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>after a wildfire or during heavy runoff periods, rehabilitation of eroding stream banks, rehabilitation or enhancement of riparian vegetation for bank stability and wildlife objectives consistent with adjacent landowner objectives, and any sediment removal or aquatic habitat improvement as appropriate.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 4: Complete a channel and adjacent lands restoration program between Highway 65 and Gladding Road by 2006. Restoration objectives will include fuels reduction within 100 yards of the stream channel or as appropriate to reduce the potential for sediment to be delivered to the channel after a wildfire or during heavy runoff periods, rehabilitation of eroding stream banks, rehabilitation or enhancement of riparian vegetation for bank stability and wildlife objectives consistent with adjacent landowner objectives, any sediment removal or aquatic habitat improvement as appropriate, and</p>	

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>installation of means to facilitate stream sediment transport as appropriate.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 4: Complete a channel and adjacent lands restoration program between Brewer Road and Highway 65 by 2007. Restoration objectives include rehabilitation of eroding stream banks, rehabilitation or enhancement of riparian vegetation for bank stability and wildlife objectives consistent with adjacent landowner objectives, any sediment removal or aquatic habitat improvement as appropriate, and installation of means to facilitate stream sediment transport as appropriate.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 5: Complete a channel and adjacent lands restoration program between Coon Creek's confluence with the East Side Canal and Brewer Road by 2008. Restoration objectives include rehabilitation of eroding stream banks, rehabilitation or enhancement of riparian vegetation for bank</p>	

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>stability and wildlife objectives consistent with adjacent landowner objectives, any sediment removal or aquatic habitat improvement as appropriate, and installation of means to facilitate stream sediment transport as appropriate.</p> <p>Main Channel/Tributary Channel Sediment Reduction Task 6: Complete a channel and adjacent lands restoration program on the East Side Canal by 2009. Restoration objectives include rehabilitation of eroding stream banks, rehabilitation or enhancement of riparian vegetation for bank stability and wildlife objectives consistent with adjacent landowner objectives, any sediment removal or aquatic habitat improvement as appropriate, and installation of means to facilitate stream sediment transport as appropriate.</p>	
<p>CC FR 2: Increase the quantity and quality of riparian habitats, consistent with flood management and landowner objectives, by 100 percent downstream from Highway 65 to the confluence with the East Side Canal by 2010.</p>	<p>CC FR 2 Protection and Management of Riparian/Floodplain Areas: In cooperation with watershed landowners, Placer and Sutter Counties, and others; identify and evaluate ways to protect and manage (e.g., conservation easements, flood plain zoning restrictions, vegetative planting programs, etc.) the riparian areas of the main channel and</p>	<p>CC FR 2 Riparian/Floodplain Task 1: In cooperation with adjacent landowners, Placer and Sutter Counties, and others, complete an assessment of opportunities to complete specific vegetative planting projects,</p>	

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
	<p>significant tributaries to reduce or prevent sediment input to Coon Creek.</p>	<p>conservation easements, floodplain zoning restrictions, etc., designed to reduce sediment input to Coon Creek, by 2003.</p> <p>CC FR 2 Riparian/Floodplain Task 2: Placer and Sutter Counties complete floodplain management plan for Coon Creek by 2004.</p> <p>CC FR 2 Riparian/Floodplain Task 3: Complete a pilot project to determine if sediment levels in the channel can be reduced either by mechanical means or through improvements in channel hydraulics. Project to be conducted between Highway 65 and the confluence with East Side Canal by 2005.</p> <p>CC FR 2 Riparian/Floodplain Task 4: Placer County, Sutter County, City of Lincoln, stakeholders, and interested landowners shall prepare and deliver a request to the State Reclamation Board and U.S. Army Corps of Engineers to change the operational guidelines on opening the Fremont and Sacramento weirs on the Sacramento River during high flow events by</p>	

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>2003. The objective of the request will be to determine if the weirs can be opened at lower water surface elevations in order to reduce the backwatering into the Cross and East Side canals.</p> <p>CC FR 2 Riparian/Floodplain Task 5: Placer and Sutter counties complete a pilot project to evaluate a setback levee project designed to reduce the extent and acreage susceptible to flooding, reduce sediment input to the channel, test the utility of conservation easements, test the feasibility of riparian restoration in conjunction with acceptable farming practices, and explore mechanisms to remove sediment or increase sediment transport potential within the channel proper by 2006.</p>	
<p>Objective CC FR 3: Provide adult Chinook salmon and steelhead trout unrestricted access over diversion structures to spawning areas, by 2008.</p>	<p>CC FR 3 Diversion Dam Installation and Removal Timing: Consult with diversion dam owners to determine if acceptable changes in diversion dam installation and removal timing can be implemented that will allow fish access, without significantly influencing water deliveries.</p>	<p>CC FR 3 Diversion Dam Installation and Removal Timing Task 1: Review current literature to define adult migration timing for steelhead and chinook salmon into Coon Creek. Literature review completed by November 2002.</p>	

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>CC FR 3 Diversion Dam Installation and Removal Timing Task 2: If necessary, conduct adult migration timing surveys for steelhead and chinook salmon to more specifically define spawning migration timing into Coon Creek. Study completed by June 2004.</p>	
	<p>CC FR 3 Diversion Dam Adult Fish Passage: Provide fish passage improvements and/or structure (e.g., fish ladder) at diversion dams where operational constraints overlap with fish spawning migration timing.</p>	<p>CC FR 3 Diversion Dam Adult Fish Passage Task 1: Complete minor infrastructure modifications at all South Sutter Water District diversion dams by November 2004.</p> <p>CC FR 3 Diversion Dam Adult Fish Passage Task 2: Design and complete a temporary steep pass project at one diversion dam which will provide passage during the period from dam flashboards installation until May 15th. Project completed by July 2005.</p> <p>CC FR 3 Diversion Dam Adult Fish Passage Task 3: Depending on the outcome of CC FR 3 Diversion Dam Adult Fish Passage Task 2 above, Implement steep pass projects at all remaining splash board</p>	

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		diversion dams, as appropriate, by June 2006.	
	<p>CC FR 3 Water Flows for Adult Fish Passage: Provide sufficient water flows (chinook salmon require a minimum water depth of ≥ 0.24 meters, while steelhead trout need depths of ≥ 0.18 meters), under the existing channel configuration, during spawning migration periods so that fish have access to upstream areas.</p>	<p>CC FR 3 Water Flows for Adult Fish Passage Task 1: Evaluate and develop an implementation plan, if necessary, to provide sufficient water depth, through additional flows, to allow upstream passage of adult chinook salmon and/or steelhead. Complete evaluation and plan by August 2004. Implement supplemental flows by October 2005.</p>	
	<p>CC FR 3 Channel Morphology Changes to Facilitate Adult Fish Passage: Create a thalweg in the channel downstream of approximately Highway 65, to provide sufficient water depth and resting habitat that would require less water flow than the existing channel cross section;</p>	<p>CC FR 3 Channel Morphology Changes to Facilitate Adult Fish Passage Task 1: Evaluate and develop an implementation plan, if necessary, to provide sufficient water depth, through changes in channel morphology, to allow upstream passage of adult chinook salmon and/or steelhead. Complete evaluation and plan by June 2003. Implement measures to change channel morphology by October 2004.</p>	
	<p>CC FR 3 Alternative Water Diversion/Supply Techniques to Facilitate Adult Fish Passage: In cooperation with the diversion owner, evaluate and implement an acceptable alternative water diversion/supply technique (e.g., replacing a diversion dam with a</p>	<p>CC FR 3 Alternative Water Diversion/Supply Techniques to Facilitate Adult Fish Passage Task 1: Evaluate and develop an implementation plan, if</p>	

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
	pumping station, switching to ground water as a water supply during the spawning migration period only, etc.) that removes a physical barrier migrating fish.	necessary, to provide sufficient water flow and/or alternative water diversion techniques to facilitate upstream passage of adult chinook salmon and/or steelhead. Complete evaluation and plan by June 2003.	
CC FR 4: Provide juvenile chinook salmon and steelhead trout unrestricted access to the Sacramento River during emigration, by 2009.	CC FR 4 Juvenile Mortality Reduction at Pumps: Provide agency approved fish exclusion devices on pumps diverting water from the stream.	CC FR 4 Juvenile Mortality Reduction at Pumps Task 1: Provide a fish exclusion device at private pumping stations located by November 2007.	
	CC FR 4 Juvenile Mortality Reduction at Gravity Flow Diversions: Provide agency approved fish exclusion devices on gravity flow diversions.	CC FR 4 Juvenile Mortality Reduction at Gravity Flow Diversions Task 1: Complete installation of a fish exclusion device at gravity diversions by October 2006.	
	CC FR 4 Juvenile Fish Passage at Diversion Dams: During emigration periods (late November through mid-May), provide for downstream passage of juvenile salmonids at all diversion dams, as appropriate.	CC FR 4 Juvenile Fish Passage at Diversion Dams Task 1: Provide a notch with a minimum of 8 inches of water flowing through it and a splash pool at the bottom of the diversion dam to prevent injury or may be combined with tasks identified in CC FR 3 Diversion Dam Adult Fish Passage Tasks 2 and 3. Implement projects at all diversion dams, as appropriate, by November 2005.	
CC FR 5: Optimize (pool to riffle ratio to approximate 60 percent pool habitat and 40 percent riffle habitat.) juvenile salmonid rearing habitat	CC FR 5 Optimize the Stream's Pool to Riffle Ratio: Where practical and feasible, cause the stream's pool to riffle ratio to approximate 60 percent pool habitat	CC FR 5 Optimize the Stream's Pool to Riffle Ratio Task 1: Complete an hydrological and stream dynamics analysis	

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>upstream of Gladding Road, by 2009.</p>	<p>and 40 percent riffle habitat.</p>	<p>in order to determine if it is feasible to alter the pool to riffle ratio of the stream if desired. Complete this analysis by September 2003.</p> <p>CC FR 5 Optimize the Stream's Pool to Riffle Ratio Task 2: In cooperation with adjacent landowners, complete a physical habitat inventory which includes pool:riffle ratios and adjacent riparian vegetation, downstream of Gladding Road to the confluence with the East Side Canal by December 2003.</p> <p>CC FR 5 Optimize the Stream's Pool to Riffle Ratio Task 3: Based on the results from tasks CC FR 5 Optimize the Stream's Pool to Riffle Ratio Tasks 1 and 2, above, develop an implementation plan to begin altering the pool to riffle ratio at selected sites by June 2004.</p> <p>CC FR 5 Optimize the Stream's Pool to Riffle Ratio Task 4: Begin implementation of changes in pool to riffle ratio at sites beginning upstream and working downstream by September 2005.</p>	

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
	<p>CC FR 5 Conserve, Protect, Rehabilitate, and Reestablish Riparian Vegetation: Insure riparian vegetation is sufficient to provide bank stability; provide for large woody debris input to the main stream channel; and leaf and litter fall is close enough to the stream channel to fall directly in the water, be blown in by wind, or transported to the channel by overbank flows or heavy rainfall events</p>	<p>CC FR 5 Conserve, Protect, Rehabilitate, and Reestablish Riparian Vegetation Task 1: Using the results from the evaluation completed in CC FR 5 Optimize the Stream’s Pool to Riffle Ratio Task 2 above, initiate a series of riparian conservation, protection, rehabilitation, and replanting projects beginning at Highway 49 and moving downstream in subsequent years. Initiate first project by September 2004. Subsequent projects to occur yearly thereafter.</p> <p>CC FR 5 Conserve, Protect, Rehabilitate, and Reestablish Riparian Vegetation Task 2: Using part of the results from the evaluation completed in CC FR 5 Optimize the Stream’s Pool to Riffle Ratio Task 1 above, complete a concept design document that would provide for low height levees to contain flood waters. These levees would be less than 5 ft. high and encompass enough flood plain area to meet the vegetative needs of riparian dependent species of fish and wildlife, accommodate reasonable flood flows, and reduce the overall area subjected to flooding in all but the</p>	

Table 10-4. Coon Creek Watershed Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		<p>higher flood flow occurrences. Emphasis would be placed on minimizing changes in adjacent land uses and developing a funding mechanism to fully compensate adjacent landowners. Complete conceptual design by September 2004.</p> <p>CC FR 5 Conserve, Protect, Rehabilitate, and Reestablish Riparian Vegetation Task 3: Implement the design proposed in CC FR 5 Conserve, Protect, Rehabilitate, and Reestablish Riparian Vegetation Task 2: above, starting at the upstream end of the project and working downstream. Initial phase to be initiated by October 2006.</p>	

Overall ERP Planning Area

Public Outreach Goal

- Provide individuals with the best available scientific information, in a variety of formats, which they can use to support their decisions regarding the implementation of this Ecosystem Restoration Plan.

Table 10-5. Overall ERP Planning Area Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
<p>Public Outreach (PO) PO 1: Provide individuals involved in the implementation of this Ecosystem Restoration Plan with information regarding the scientific basis and rationale to support recommended actions by 2004.</p>	<ol style="list-style-type: none"> 1. Present the scientific basis and rationale for implementation actions in a variety of formats suitable for multiple venues. 2. Assess if existing public outreach tools currently exist for the topic areas and if so, can they be adapted for use in these watersheds. 3. If desired tools are not already available, develop new outreach materials to meet the programs needs. 	<ol style="list-style-type: none"> 1. Determine which formats (e.g., brochure, leaflets, short technical reports, slide presentation, computer generated presentation graphics, etc.) are suitable for outreach materials for the individuals in these watersheds (2003). 2. Develop a list of subject matter areas for which outreach materials are desired (2003). Suggested subject matter topics include but are not limited to: 1) fish screening, 2) fish passage, 3) need for survey and assessment data, 4) value and needs for riparian areas, 5) riparian restoration techniques, 6) flood management corridors, 7) native vegetation suitable for restoration activities, 8) understanding the federal and state endangered species acts, 9) financial incentive programs available to implement this plan, 10) sources of technical assistance available to help plan and implement actions recommended in this plan, 11) permitting and approval process necessary for each type of project to be implemented, 12) effects of nonnative plants and predators on the riparian ecosystem, and 12) others as needed. 3. Canvas resource agencies, watershed groups, and others to 	<p>WR M6</p>

Table 10-5. Overall ERP Planning Area Restoration Strategies

OBJECTIVES	STRATEGIES	TASKS	MANAGEMENT CONCERN ADDRESSED
		determine if needed subject area materials are already in use and determine if these materials can be adapted for these watersheds (2003). 4. Adapt existing outreach materials for use in these watersheds (2003). 5. Develop new materials for desired subject matter areas (2004).	

With the exception of those listed below, all of the management concerns identified in the watershed Assessment have been partially or completely addressed in the tasks listed in Tables 10-1 through 10-5.

S M1-5: Sediment and Erosion Management Concerns Associated with the Cross and East Side Canals

Maintenance of the Cross and East Side Canals is primarily the responsibility of reclamation districts. Management activities within these canals are typically associated with flood control. For this reason, no restoration activities have been identified in these locations. Should future restoration opportunities arise for either of these canals, these activities shall follow the guidelines established in this ERP.

WR M10: Wildlife Resource Management Concern

Biological surveys for both plant and wildlife species within individual restoration areas are included as part of the monitoring program identified in Chapter 12: Monitoring Guidelines. This data shall be submitted to Placer County for use in the NCCP/HCP process.