5. Proposed Mitigation Concepts

Remediation and closure activities in the MPC Restoration Project will impact potential ESHAs, including potentially state and federal jurisdictional waters/wetlands. Required remediation and closure activities are likely to impact the following potential ESHAs and jurisdictional features:

- Ponded wetlands (7.56 acres total)
  - OU-E lowland: Pond 6 (0.17 acre) and Pond 7 (0.10 acre)
  - Pond 8 (7.29 acres)

- Bedrock groundwater seeps and wetlands adjacent to the Pond 8 spillway are not expected to be disturbed during removal of the spillway; in some areas, seeps that are currently covered by concrete will be daylighted

Impacts to these potential ESHAs, including potential state and federal waters/wetlands, will require compensatory mitigation meeting requirements of the federal Clean Water Act, Porter-Cologne Water Quality Control Act, California Fish and Game Code, and CCA, as administered by the City and the CCC. Therefore, the MPC Restoration Project preferred alternative proposes to create, restore, and enhance stream, wetland and upland habitats in the OU-E lowland, MCRC, MSRA, and the South Ponds Riparian Corridor. These restoration activities will restore a broad range of habitat types in an integrated ecosystem within the Mill Site Specific Plan Open Space component that will reflect habitat and hydrologic conditions historically present on the site prior to development. Figure 5-1 depicts the footprint of the MPC Restoration Project preferred alternative overlain on the Mill Site Specific Plan land use plan.

Waters/wetlands and other habitat areas currently existing on the site are degraded and possess limited functional value, primarily because they are small and isolated from one another by large areas with ruderal and impervious surfaces and lack natural hydrology (Section 2.3). Proposed activities will create two new waters/wetlands systems that will have increased ecological function, water quality benefits, and visual conditions, and provide for improved community recreational, educational, and stewardship opportunities, through the following design aspects:

- Creating larger contiguous waters/wetlands systems in the OU-E lowland, thereby, creating an interconnected system with increased structural diversity allowing for greater variation in microhabitats

- Increasing the percentage of wetlands in the system with a consistent hydrologic source (i.e., groundwater), thereby reducing dependence on high-intensity, short-duration storm flows from the site and City

- Creating natural stream habitats, including associated riparian floodplains and upland buffers, to hydrologically connect the wetland areas to the landscape; streams and riparian areas will:
  - allow for more consistent inflows and outflows of surface water compared to culvert and pipes
  - mitigate the influence of flashy storm flows by increasing the cross-sectional flow area and increasing the roughness of the bed surface
  - provide a source of course organic matter and nutrient input into the wetland and stream habitats and a natural point for carbon and nutrient export

- Creating corridors for wildlife movement that are largely absent on the site, thereby decreasing ecological isolation of the various ecosystem components

- Creating new upland and ecotone habitats at the waters/wetlands edges to:
  - allow refuge for wetland dependent species during flood events
  - reduce velocity and erosive potential of surface flow from surrounding areas during storm events
  - create a natural transition between wetland/aquatic habitats and upland habitats, which is largely absent from most of the site currently

- Controlling invasive species, to the extent practical, allowing for more diverse native vegetation in the newly created habitats

In addition to the ecological benefits that the MPC Restoration Project will provide, proposed activities will help protect water quality and improve flood attenuation in the system. Creating stream habitats with broad vegetated floodplains and adjacent vegetated upland habitats will reduce the intensity and magnitude of peak flows and lengthen the duration of storm-flow into the wetlands. This will reduce velocity of flow, decreasing erosion and allow for greater residence time in the wetland areas. Additionally, the sinuous nature of the proposed low marsh in the OU-E lowland will help retain water for longer periods of time, rather than letting flows pass directly from the inlet to the outlet, as currently occurs in Pond 8. The increased hydrologic residence time afforded by these features will allow more nutrient and pollutant removal through biological and physical processes and will attenuate storm-flows over a longer period of time.

Community benefits provided by the MPC Restoration Project preferred alternative include:

- Improved visual conditions in the central portion of the Mill Site, the MSRA, and in the Open Space south of Pond 8

- Recreational access along the CCT between the north and south CCT segments through and around the OU-E lowland and Soldier Bay, MCRC, and MSRA

- The restoration and successional development of the physical structure and ecological function of the aquatic and terrestrial habitat areas to provide a substantial educational opportunity for the community and numerous opportunities of community stewardship of the habitat areas in the future

Table 5-1 presents a habitat accounting for the MPC Restoration Project that provides the foundation for addressing compensatory mitigation requirements of the participating regulatory agencies. Table 5-1 presents the following:

- Acreages of the various habitat types currently present that may be affected by remediation or restoration activities

- Acreages of impacts anticipated to result from remediation activities and disturbances required to create the proposed MPC Restoration Project

- Expected acreages to be restored/created for each of the various habitat types and the resulting net gain or loss of each habitat type

- Acreages of enhancement for habitats not directly restored or created by the MPC Restoration Project, but positively affected by proposed activities

In addition to the habitat acreages presented in Table 5-1, the MPC Restoration Project proposes to create 50-foot-wide buffers around all the restoration areas, consistent with CCA policy. Buffers around the restoration areas generally fit within the Mill Site Specific Plan Open Space designated areas (Figure 4-2). Where buffers are within designated Open Space areas, the MPC Restoration Project proposes that buffers be seeded with native vegetation consistent with Specific Plan Open Space policies. Where buffers will extend beyond designated Open Space areas, buffers may be a mixture of native and/or landscaped vegetation. The MPC Restoration Project preferred alternative proposes to use buffers 50 feet in width, because this buffer width allows for increased upland habitat restoration acreage, and (in combination with the restored upland habits adjacent to the waters/wetlands) provides abundant mitigation of potential influences from development surrounding the more sensitive waters/wetlands habitats.

The MPC Restoration Project, as currently conceived, anticipates a range of mitigation ratios depending on the type and quality of the habitat impacted and the type, quality, and prevalence of the habitat type restored. The dominant habitat types on site under current conditions are former industrial ponds that provide open water and vegetated perennial wetland. There are several small areas that are bedrock groundwater seeps along the coastal bluffs, a few small seep wetlands are present in the OU-E lowland, and

the MSRA provides a small channelized stream and riparian canopy consisting of a mix of native and non-native species.

As described in Section 2.3, most of the wetland habitats on the site are of low-quality and provide less than half of the ecological function of a typical reference wetland system. Using details presented for the MPC Restoration Project preferred alternative, ARCADIS estimated CRAM scores for the OU-E lowland, enhanced reach of Maple Creek (i.e., Drainage D-1), and MCRC portions of the MPC Restoration Project. Appendix A presents details of this evaluation. Results of the CRAM evaluation for restored conditions in the OU-E lowland suggest that the restored low and high marsh wetland system will increase the overall ecological function of the OUE- lowland wetlands from its current state of 51 percent (calculated as the average CRAM score for potential wetlands in the OU-E lowland) to 82 percent. This represents an approximate 60 percent increase in functional capacity of the restored depressional wetland system compared to its current conditions. Results of the CRAM evaluation for restored conditions in the enhanced section of Maple Creek (i.e. Drainage D-1) suggest that the restored riverine wetland habitat will increase the overall ecological function of this remnant of Maple Creek from its current state of 50 percent to 70 percent. This represents an approximate 40 percent increase in functional capacity of the restored riverine and riparian system compared to its current state. The newly created MCRC system is estimated to have a functional capacity of 73 percent of a reference system.

Figure 5-2 presents results for each of the CRAM attributes, scaled to 100% of their total possible scores, and presents the overall CRAM score, scaled to 100% of their total possible scores, for proposed conditions of the OU-E lowland, enhanced reach of Maple Creek, and MCRC. Figure 5-2 also presents similar information for current conditions of wetlands in these areas for comparison. Current conditions for the MCRC are not presented in Figure 5-2, because this habitat does not currently exist on the site.

The MPC Restoration Project wetlands are not expected to achieve a CRAM ecological function score equivalent to a reference wetland, because a reference wetland is assumed to have minimal adjacent development and would have an upgradient watershed that provides a full range of hydrologic functions (e.g., flow attenuation, groundwater infiltration and water storage). By contrast, the restored OU-E lowland, enhanced section of Maple Creek, and MCRC CRAM scores are specifically limited by the upgradient urban watershed hydrology (i.e., high intensity flows or short duration) and landscape connectivity, which is a physical constraint of the existing and future surrounding developed landscape. The constraints of landscape connectivity and water source are aspects of the overall surrounding landscape that are likely outside of the influence of the restoration design, because current development will not be removed and future development is an integral component of the Mill Site Specific Plan. These aspects are further discussed below.

- The landscape connectivity score of the Buffer and Landscape Context attribute for the OU-E lowland is unlikely to increase due to current and future development associated with the City and the Mill Site

Specific Plan, particularly due to development east of Highway 1. For the landscape connectivity score to approach that of a reference riverine wetland system, the MPC Restoration Project would require at least 400 meters of riparian buffer both upstream and downstream of the evaluated reach. Furthermore, the buffer width score of the Buffer and Landscape Context attribute approaching a reference system requires an average buffer width of at least 190 meters (approximately 625 feet) for depressional and riverine wetland systems. Therefore, it is apparent that current and proposed development constraints surrounding the MPC Restoration Project area prevent approaching reference scores for either landscape connectivity or buffer width in the Buffer and Landscape Context attribute.

- The water source score in the Hydrology attribute is unlikely to increase due to the flashy nature of stormwater flows resulting from a developed landscape with abundant impervious surfaces. In terms of the CRAM evaluation the low hydrology score results from more than 20% of the upgradient watershed being primarily urban runoff. Although some improvements in hydrology may be achieved through the programmatic control of impervious surfaces and future improvement in the City's storm drainage system, substantial changes in the flows dynamics entering Maple Creek are unlikely to occur in the foreseeable future due to the presence of City development.

Using the CRAM analysis to evaluate the overall increase in function that the MPC Restoration Project provides does not fully account for the hydrological and ecological connectivity of the proposed integrated habitat area. The CRAM analysis for each component of the MPC Restoration Project reflects conditions as specifically developed for distinct wetland types (e.g., depressional and riverine). While some aspects of landscape connectivity are captured in CRAM scores, because of the separation of different wetlands into distinct assessment areas some integrated ecological functions provided by connections between a diversity of landscape and wetland types are not fully reflected. Therefore, the proposed project will provide additional ecological benefit not strictly evaluated in the quantitative CRAM analysis.

In the process of restoring habitat types that existed on the site historically, but are now rare on the site and within the developed portions of the City, the MPC Restoration Project will also meet remedial objectives for the site and provide compensatory mitigation for impacts resulting from soil/sediment management activities. Where such habitats are identified and can be restored, it is within the participating agencies policies to allow out-of-kind mitigation (i.e., perennial ponded wetland such as Pond 8 is replaced in part with stream and riparian woodland corridor) and to provide mitigation ratios on the order of 1:1. The proposed MPC Restoration Project design has been developed with anticipation that such opportunities will be evaluated and incorporated into the final design where feasible.

6. Conceptual Construction Schedule

Implementation of the MPC Restoration Project will require the careful scheduling and integration of the remediation, demolition, restoration and revegetation components of the project. This section provides a conceptual overview of the construction sequencing currently envisioned to complete the MPC Restoration Project. This schedule is driven by the DSOD requirement that the Pond 8 dam be removed by the end of 2015. Specifics regarding construction sequencing are preliminary and may change as the project undergoes specific engineering studies and design or if the conceptual design changes. The conceptual schedule is also depicted in a Gantt chart in Figure 6-1 (in preparation).

OU-E Lowland Remediation and Demolition

- Manage sediment and backfill Ponds 6 and 7.
- Manage soil/sediment in other areas identified in the OU-E Remedial Action Plan (RAP).
- Demolish and remove remaining foundations and other OU-E lowland infrastructure. North wall support provided by the concrete retaining wall will remain.

Construction of Outfall Culverts at Beach Berm

- Survey and stake for construction at the beach berm to provide a new outfall for drainage (i.e., Station 0+00; Figure 4-3).
- Excavate beach berm, construct headwall and apron formwork, and place three 10-foot by 3-foot box culverts.
- Construct beach berm headwall and apron, install piping control measures, install impermeable membrane, and backfill with imported clay soils (less permeable than excavated sands).
- Place limited riprap to control erosion of beach and berm from potentially accelerated flows.
- Reface outboard surface of the beach berm and/or revegetate.

Grading of Proposed Wetland at OU-E Lowland

- Survey and stake OU-E lowland area (Station 1+00 to 14+00; Figure 4-3), delineating and protecting existing jurisdictional ESHAs on the hillsides.

- Excavate proposed low marsh and pond wetlands in OU-E lowland.
- Buttress slope of Pond 8 north wall with spoils from proposed low marsh and ponded wetlands.
- Excavate proposed high marsh wetland area and cut tie-in to existing topography.
- Install erosion control measures and plant/seed wetland and north OU-E coastal shrub habitats, as necessary.

Grading of Proposed Maple Creek Riparian Corridor

- Survey and stake proposed MCRC with temporary channel to bypass Pond 8.
- Excavate proposed MCRC and temporary bypass channel to discharge into the Forebay on east end of OU-E lowland (Station 14+00; Figure 4-4).
- Abandon existing Maple Creek pipeline to Pond 8.
- Construct new Alder Creek outfall and reroute existing Alder Creek storm drain pipeline.

South Ponds Riparian Corridor

- Survey and set offset stakes for the proposed channel alignment per the final drawings, including the main channel, floodplain, and 3:1 transition slopes to route South Pond and Basin S flow around Pond 8.
- Excavate the South Ponds Riparian Corridor from the low-lying area where South Pond pipeline surfaces to the bluff. This will include the main channel, floodplain, and 3:1 transition slope of variable width to tie in to existing topography.
- Connect the South Ponds Channel to the historical creek discharge on the coastal bluff (i.e., side slopes up to existing grade and channel bottom) to minimize destructive erosion condition.
- Install rock geomorphic flow control structures along channel, as necessary, paying particular attention along the descent to the bluff.
- Tie in Basin O-2 surface drainage and storm drains from the Planer building that currently discharge to Pond 8 west.

- Install erosion control measures and revegetate riparian area.
- Install flow control discharge weir and begin discharge to the South Ponds Riparian Corridor.

Pond 8 Sediment Management and Regrading

- Manage sediment in Pond 8 in accordance with requirements of the OU-E RAP. The OU-E RAP will be prepared following the completion of the OU-E Feasibility Study.
- Backfill and compact Pond 8 beginning at northeastern end and working westward.
- Remove north wall supports and utilities and regrade to tie in to OU-E lowland and Pond 8 upland surfaces at 5:1 slope.
- Remove dam concrete spillway and exposed portions of the cribwall, and regrade established stable slope from Planer Building elevation to coastal bluff bedrock.
- Vegetate former Pond 8 and slope with native upland grasses and coastal shrub species.
- Once backfilling in the alignment of proposed downstream location of MCRC is complete, excavate final downstream end of proposed MCRC.
- Install rock geomorphic flow control structures and install floodplain wetland depressions.
- Install erosion control measures and re-vegetate corridor.
- Abandon Maple Creek bypass channel.

Maple Street Riparian Area Regrading and Slope Stabilization

- Survey and stake MSRA for remediation (as needed) and regrading.
- Install temporary diversion conduits from Maple Creek headwall at Highway 1 to bypass existing Maple Street corridor and discharge into completed MCRC.
- Install temporary weir/check dam in MSRA Wetland L to capture base flow and reroute via temporary overland pipe to the MCRC.

- Remediate Wetland L sediment as required by the OU-E RAP; backfill and restore banks as needed.

- Remove MSRA Wetland L culvert, install step/pool transition to Maple Creek channel and regrade slopes in MSRA, lay back slope from existing toe of slope to approximately 3:1 proposed slope, and rehabilitate low flow channel.

- Place erosion control protection and re-vegetate MSRA as transition to proposed MCRC.

- Abandon diversion conduit that bypasses Maple Creek and allow flow to discharge into newly graded channel.

Post Dam Removal Construction

- Complete "Soldier Bay" CCT segment across the beach berm, install beach access, and install CCT crossing at South Pond Riparian Corridor.

- Develop MCRC road cross and utility corridor (To be determined).

7. References

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TABLES

Table 2-1
Mill Pond Complex Restoration Project Existing Features

Mill Pond Complex Restoration Draft Conceptual Design
Former Georgia-Pacific Wood Products Facility
Fort Bragg, California

Waters/Wetlands Identification	General Site Location	Historical Use	Hydrologic Inputs	USACE Jurisdictional Status*	MPC Restoration Project Influence
OU-E lowlands and Adjacent Areas					
Pond 5	Central portion of site, east of OU-E lowland	Water storage for fire suppression	Direct precipitation and overland flow from Highway 1 and portions of site Basin O-1.	Non-jurisdictional	Enhanced through creation of 50-foot buffer.
Pond 6	OU-E lowland	Used as a settling basin for process water used during the operation of the powerhouse.	Groundwater seep, overland flow from the OU-E lowland and direct precipitation.	Jurisdictional	Following sediment management activities, the area will be restored as part of the OU-E lowland wetland system.
Pond 7	OU-E lowland	Used as a settling basin for process water used during the operation of the powerhouse.	Groundwater seep, overland flow from the OU-E lowland and direct precipitation.	Non-jurisdictional	Following sediment management activities, the area will be restored as part of the OU-E lowland wetland system.
Pond 8	Central portion of site, adjacent to southern boundary of OU-E lowland	Created from rerouted and culverted flow from Maple and Alder Creeks. Used to float logs for processing during site operations.	Stormwater flow from City Basins C and D and site Basins O-1, O-2, S, F, E, and J. May have minor groundwater influence. Direct precipitation.	Jurisdictional	Following sediment management activities, the area will be restored as part of the coastal shrub habitat adjacent to the OU-E lowland.
North Pond	OU-E lowland	Used as a settling basin for water used during the operation of the hydraulic debarker.	Direct precipitation and overland flow from the OU-E lowland and adjacent hillsides.	Jurisdictional	Following sediment management activities, the area will be restored as part of the OU-E lowland wetland system.
Wetland E-1	OU-E lowland	None	Groundwater seep, overland flow from the OU-E lowland, and direct precipitation.	Undetermined**	Wetland areas will be regraded and restored as part of the OU-E lowland wetland system.
Wetland E-2	OU-E lowland	None	Groundwater seep, overland flow from the OU-E lowland, and direct precipitation.	Undetermined**	Wetland areas will be regraded and restored as part of the OU-E lowland wetland system.
Wetland E-3	OU-E lowland	None	Water seep from Pond 8.	Undetermined**	Wetland areas will be regraded and restored as part of the OU-E lowland wetland system.
Wetland E-4	OU-E lowland	Building foundation	Groundwater and direct precipitation.	Undetermined**	Wetland areas will be regraded and restored as part of the OU-E lowland wetland system.
Wetland E-5/E-6	OU-E lowland	None	Groundwater seep, overland flow from the OU-E lowland, and direct precipitation.	Undetermined**	Wetland areas will be regraded and restored as part of the OU-E lowland wetland system.
Wetland E-7	OU-E lowland	None	Overland flow from the OU-E lowland and direct precipitation.	Undetermined**	Enhanced through creating of surrounding coastal shrub habitat.
Wetland E-8	OU-E lowland	None	Groundwater seep, overland flow from the OU-E lowland, and direct precipitation.	Undetermined**	Enhanced through creating of surrounding coastal shrub habitat.
Wetland B	OU-E lowland	None	Groundwater seep, overland flow and direct precipitation.	Jurisdictional	Enhanced through creating of surrounding coastal shrub habitat.
Wetland C	OU-E lowland	None	Groundwater seep, overland flow and direct precipitation.	Jurisdictional	Enhanced through creating of surrounding coastal shrub habitat.
Wetland D	OU-E lowland	None	Culverted stormwater flow from upland portions of site basin O-1 and direct precipitation.	Non-jurisdictional	Enhanced through creating of surrounding coastal shrub habitat.
Maple Creek and Maple Street Riparian Area					
Wetland L	Maple Street Riparian Area, between former Ash Pile and Highway 1	None. Likely part of the riparian areas associated with the historical flow of Maple Creek.	Overland flow from Site Basin E, groundwater, and direct precipitation.	Jurisdictional	Areas disturbed by remediation will be restored and revegetated. Wetland L will be connected to Maple Creek through daylighting of the culverted flow at the northern end.
Wetland J	North of Maple Street Riparian Area, directly adjacent to Maple Creek	None. Likely part of the riparian areas associated with the historical flow of Maple Creek.	Overland flow from site Basin J, groundwater, and direct precipitation.	Jurisdictional	Enhanced through control of invasive species and connection to newly created Maple Creek Riparian Corridor.
Drainage D1	Southern portion of the site, North of Maple Street Riparian Area and directly adjacent to Highway 1	Flow path for Maple Creek drainage following rerouting and culverting during City and site development	Primarily stormwater flow from City Basin C. Lesser inputs from overland flow originating from direct precipitation; groundwater; and site Basins E, F, and J.	Jurisdictional	Enhanced through regrading of incised channel, control of invasive species, and connection to newly created Maple Creek Riparian Corridor.

Notes:

MPC - Mill Pond Complex

USACE - United States Army Corps of Engineers

* Delineated boundaries of potential waters/wetlands have been submitted to Regional Water Quality Control Board (RWQCB) and California Coastal Commission (CCC). However, jurisdiction other than that for USACE (i.e., waters of the state by RWQCB or coastal environmentally sensitive habitat area by CCC) has not yet been determined.

** Delineated boundaries of potential waters/wetlands have been submitted to USACE. However, jurisdiction has not yet been determined.

Table 4-1
Mill Pond Complex Restoration Potential Species List

Mill Pond Complex Restoration Draft Conceptual Design
Former Georgia-Pacific Wood Products Facility
Fort Bragg, California

Species Name	Common Name	California Indicator Status	Ponded Wetlands	Low Marsh	High Marsh	Wet Meadow/ Seasonal Wetland	Riparian Floodplain	Riparian Upland	Coastal shrub
Herbaceous Species									
Athyrium filix-femina	lady fern	FAC			x	x	x		
Agrostis pallens	seashore bentgrass	NI				x	x	x	
Carex lyngbyei	Lyngby's sedge	OBL		x	x				
Carex obnupta	slough sedge	OBL		x	x	x	x		
Carex viridula	green sedge	OBL			x	x	x		
Cyperus eragrostis	nutsedge	FACW		x	x	x	x		
Deschampsia cespitosa	tufted hairgrass	FACW		x	x	x	x		
Elymus glaucus	blue wildrye	FACU					x	x	x
Festuca idahoensis	Idaho fescue	UPL						x	x
Festuca rubra	red fescue	FAC				x	x	x	
Heracleum lanatum	cow parsnip	FACU							x
Hordeum brachyantherum	barley	FACW			x	x	x		
Hydrocotyle ranunculoides	marsh pennywort	OBL	x						
Iris douglasiana	Douglas iris	UPL							x
Juncus bolanderi	Bolander's rush	OBL		x	x	x			
Juncus effusus	soft rush	OBL		x	x	x	x		
Juncus patens	blue-green rush	FAC			x	x	x		
Lysichiton americanus	yellow skunk cabbage	OBL			x				
Mimulus guttatus	seep monkey flower	OBL		x	x	x			
Nuphar lutea ssp polysepalum	yellow pond lily	OBL	x						
Oenanthe sarmentosa	water parsely	OBL		x	x	x	x		
Polystichum munitum	western sword fern	UPL						x	
Potamogeton natans	pondweed	OBL	x						
Scirpus microcarpus	panicled bulrush	OBL		x	x	x	x		
Typha latifolia	cattail	OBL		x					
Woodwardia fimbriata	giant chain fern	FACW		x					
Shrub Species									
Baccharis pilularis	coyote brush	UPL							x
Gaultheria shallon	salal	UPL						x	x
Myrica californica	California wax myrtle	FAC			x		x	x	
Rhamnus californica	California coffeeberry	UPL							x
Rosa nutkana	Nootka rose	NI						x	
Salix hookeriana	coastal willow	FACW			x		x	x	
Salix lasiolepis	arroyo willow	FACW			x	x	x	x	
Sambucus racemosa	red elderberry	FACU			x			x	
Tree Species									
Abies grandis	grand fir	UPL					x		
Alnus rubra	red alder	FACW					x	x	
Lithocarpus densiflorus	tanbark oak	UPL							x
Pinus contorta	beach pine	FAC						x	
Pseudotsuga menziesii	Douglas fir	UPL						x	

Notes:

1. Indicator status does not include "+" or "-" values.
2. Indicator status from: USDA, NRCS. 2011. The PLANTS Database (http://plants.usda.gov, 6 April 2011). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

Definitions:

OBL: Obligate species likely found in wetland habitats
FACW: Facultative wetland species likely to be found in wetland habitats
FAC: Facultative species equally likely to be found in wetlands and upland habitats
FACU: Facultative species likely to be found in drier wetland habitats
UPL: Upland species not likely to be found in wetland habitats
NI: No indicator available

Table 5-1
Mill Pond Complex Restoration Habitat Accounting

Mill Pond Complex Restoration Draft Conceptual Design
Former Georgia-Pacific Wood Products Facility
Fort Bragg, California

OU-E Lowland and Maple Creek Riparian Corridor

	Current	Impacts	Restored/Created	Net Gain/Loss	Enhanced
Waters/Wetlands Habitat					
Ponded Wetlands	8.21	7.63	0.88	-6.75	0.58
Herbaceous Seep Wetlands	0.66	0.22	2.90	2.68	0.44
Herbaceous Seasonal Wetlands	1.00	0.99	2.49	1.50	0.01
Riparian Seep Wetlands	0.00	0.00	1.36	1.36	0.00
Riparian Seasonal Wetlands	0.76	0.00	0.69	0.69	0.72
Stream Channel	0.05	0.00	0.68	0.68	0.05
Waters/Wetlands Subtotal	**10.69**	**8.84**	**8.99**	**0.16**	**1.80**
Upland Habitat					
Riparian Upland Habitat	0.00	0.00	3.29	3.29	0.00
Coastal Shrub/Grassland	0.00	0.00	12.17	12.17	0.00
Upland Habitat Subtotal	**0.00**	**0.00**	**15.47**	**15.47**	**0.00**
TOTALS	**10.69**	**8.84**	**24.46**	**15.62**	**1.80**

Maple Street Riparian Area Tributary

	Current	Impacts	Restored/Created	Net Gain/Loss	Enhanced
Waters/Wetlands Habitat					
Ponded Wetlands	0.00	0.00	0.00	0.00	0.00
Herbaceous Seep Wetlands	0.00	0.00	0.00	0.00	0.00
Herbaceous Seasonal Wetlands	0.00	0.00	0.00	0.00	0.00
Riparian Seep Wetlands	0.00	0.00	0.00	0.00	0.00
Riparian Seasonal Wetlands	0.00	0.00	0.00	0.00	0.00
Stream Channel	0.00	0.00	0.01	0.01	0.00
Waters/Wetlands Subtotal	**0.00**	**0.00**	**0.02**	**0.02**	**0.00**
Upland Habitat					
Riparian Upland Habitat	0.00	0.00	0.18	0.18	0.00
Coastal Shrub/Grassland	0.00	0.00	0.00	0.00	0.00
Upland Habitat Subtotal	**0.00**	**0.00**	**0.18**	**0.18**	**0.00**
TOTALS	**0.00**	**0.00**	**0.20**	**0.20**	**0.00**

South Ponds Riparian Corrdior

	Current	Impacts	Restored/Created	Net Gain/Loss	Enhanced
Waters/Wetlands Habitat					
Ponded Wetlands	0.00	0.00	0.00	0.00	0.00
Herbaceous Seep Wetlands	0.00	0.00	0.00	0.00	0.00
Herbaceous Seasonal Wetlands	0.00	0.00	0.00	0.00	0.00
Riparian Seep Wetlands	0.00	0.00	0.12	0.12	0.00
Riparian Seasonal Wetlands	0.00	0.00	0.00	0.00	0.00
Stream Channel	0.00	0.00	0.13	0.13	0.00
Waters/Wetlands Subtotal	**0.00**	**0.00**	**0.25**	**0.25**	**0.00**
Upland Habitat					
Riparian Upland Habitat	0.00	0.00	0.83	0.83	0.00
Coastal Shrub/Grassland	0.00	0.00	0.00	0.00	0.00
Upland Habitat Subtotal	**0.00**	**0.00**	**0.83**	**0.83**	**0.00**
TOTALS	**0.00**	**0.00**	**1.08**	**1.08**	**0.00**

Combined Mill Pond Complex Restoration Project

	Current	Impacts	Restored/Created	Net Gain/Loss	Enhanced
Waters/Wetlands Habitat					
Ponded Wetlands	8.21	7.63	0.88	-6.75	0.58
Herbaceous Seep Wetlands	0.66	0.22	2.90	2.68	0.44
Herbaceous Seasonal Wetlands	1.00	0.99	2.49	1.50	0.01
Riparian Seep Wetlands	0.00	0.00	1.48	1.48	0.00
Riparian Seasonal Wetlands	0.76	0.00	0.69	0.69	0.72
Stream Channel	0.05	0.00	0.82	0.82	0.05
Waters/Wetlands Subtotal	**10.69**	**8.84**	**9.26**	**0.43**	**1.80**
Upland Habitat					
Riparian Upland Habitat	0.00	0.00	3.48	3.48	0.00
Coastal Shrub/Grassland	0.00	0.00	12.17	12.17	0.00
Upland Habitat Subtotal	**0.00**	**0.00**	**15.65**	**15.65**	**0.00**
TOTALS	**10.69**	**8.84**	**24.91**	**16.07**	**1.80**

Notes:
All values are presented in acres.
Estimates are based on conceptual designs developed for the Mill Pond Complex DRAFT Conceptual Design Report May 2011.