

4.2 BIOLOGICAL RESOURCES

4.2.1 ENVIRONMENTAL SETTING

IN THIS SECTION:

- Regulatory Setting
- Vegetation Communities
- Sensitive Habitat Areas
- Special Status Species

The following section is based on a Biological Resources Assessment prepared for the proposed project by WRA, Environmental Consultants in March 2012. The assessment included the project site and the adjacent state-owned river park property. A wetland delineation conducted in 2010 was verified by the U.S. Army Corps of Engineers in November 2011. The biological resources assessment report, wetlands delineation and wetlands delineation verification is included in Technical Appendix C-2, which is available on the DEIR CD, on the City's website at <http://cityofpetaluma.net/cdd/riverfront.html>, and on file for review at the City of Petaluma Community Development Department, Planning Division, located at 11 English Street in Petaluma, on Monday through Thursday between the hours of Hours: 8 AM to 12 PM and 1 PM to 5 PM. The section also draws from analyses contained in the City of Petaluma *General Plan 2025 Environmental Impact Report (EIR)* that was certified on May 19, 2008. The City's General Plan and EIR are also available for review at the Planning Division office and online at: <http://cityofpetaluma.net/cdd/plan-general-plan.html>.

REGULATORY SETTING

Federal Regulations

FEDERAL ENDANGERED SPECIES ACT

The federal Endangered Species Act (ESA) of 1973 provides legal protection for plant and animal species in danger of extinction, and requires definitions of critical habitat and development of recovery plans for specific species. The law prohibits federal agencies from authorizing, permitting or funding any action that would result in biological jeopardy to a species listed as Threatened or Endangered. The ESA prohibits the "take" of federally listed endangered or threatened animal species without a permit. ESA defines "take" to mean to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

Projects that would result in adverse effects on federally-listed threatened or endangered species are required to consult with, and mitigate through consultation with, the U.S. Fish and Wildlife Service (USFWS). The objective of consultation is to determine whether the project would adversely affect a protected species or its designated critical habitat, and to identify mitigation measures to avoid or reduce impacts to the species. This consultation can be pursuant to either Sections 7 or 10 of the FESA. Section 7 consultation is required when a federal agency is involved in project approval, funding, or permitting. Section 10 consultation is required when no federal agencies are involved with the project.

BIRDS OF CONSERVATION CONCERN

The USFWS developed the *Birds of Conservation Concern* (BCC) in 2008 to fulfill the mandate of the 1988 amendment to the Fish and Wildlife Conservation Act (Public Law 100-653 (102 Stat. 3825) to “identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973” and to stimulate coordinated and proactive conservation actions among federal and state agencies and private entities (U.S. Fish and Wildlife Service, December 2008). The bird species included on the BCC list include “nongame birds, gamebirds without hunting seasons, and Endangered Species Act candidate, proposed endangered or threatened, and recently delisted species”.

MIGRATORY BIRD TREATY ACT

All migratory birds and their nests are federally protected under the Migratory Bird Treaty Act of 1918 (MBTA) and by California Department of Fish and Game code that support the act. The MBTA makes it unlawful to “take” any migratory bird or raptor listed in Title 50 Code of Federal Regulations, including their nests, eggs or products.

WETLANDS AND WATERS OF THE U.S.

The U.S. Army Corps of Engineers (ACOE) has regulatory authority for activities within wetlands and waters of the U.S. protected under the Clean Water Act (CWA, 1977, as amended), which serves as the primary federal law protecting the quality of the nation’s surface waters. Section 404 of the CWA establishes a program to regulate discharge of dredged or fill material into “waters of the United States,” which is administered by the ACOE. The term “waters” includes wetlands and non-wetland bodies of water that meet specific criteria as defined in the Code of Federal Regulations. In general, a permit must be obtained before fill can be placed in wetlands or other waters of the U.S. The type of permit depends on the amount of acreage and the purpose of the proposed fill, subject to discretion of the ACOE. Under Section 404, general permits may be issued on a nationwide, regional, or state basis for particular types of activities that will have only minimal adverse impacts. Individual permits are required for projects with potentially significant impacts.

Under Section 401 of the CWA, the California Regional Water Quality Control Boards (RWQCB) has regulatory authority over actions in waters of the U.S. through issuance of water quality certifications, which are issued in combination with permits issued by the ACOE under section 404 of the Clean Water Act. A 401 Certification is required from the RWQCB whenever improvements are made within Jurisdictional Waters of the U.S.

State Regulations

The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act and protects streams and water bodies through the Streambed Alteration Agreement under Section 1600 of the California Fish and Game Code.

CALIFORNIA ENDANGERED SPECIES ACT

The 1984 California Endangered Species Act (CESA) (Fish & Game Code, Section 2050-2098) declares that deserving plant or animal species be given protection by the State because they are of ecological, historic, educational, recreational, aesthetic, economic, and scientific value to the people of the State. CESA establishes that it is state policy to conserve, protect, restore, and enhance endangered species and their habitats. Under state law, plant and animal species may be formally designated rare, threatened, or endangered by official listing by the CDFW. A permit must be obtained from the CDFW if a project has the potential to result in “take” of species of plants or animals listed under CESA, either during construction or over the life of the project.

CDFW SPECIES OF SPECIAL CONCERN AND FULLY PROTECTED SPECIES

In addition to lists of designated Endangered, Threatened, and Rare plant and animal species, the CDFW maintains a list of animal “Species of Special Concern,” most of which are species whose breeding populations in California may face extirpation. Although these species have no legal status under the CESA, the CDFW recommends considering these species during analysis of proposed project impacts to protect declining populations, and to avoid the need to list them as threatened or endangered in the future. These species may “be considered rare or endangered [under CEQA] if the species can be shown to meet the criteria”.

The classification of Fully Protected Species was the State's initial effort in the 1960s to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians and reptiles, birds and mammals. The California Fish and Game Code contains lists of vertebrate species designated as “Fully Protected” (California Fish & Game Code 3511 [birds], 4700 [mammals], 5050 [reptiles and amphibians], and 5515 [fish]). Most fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be

issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

CDFW STREAMBED ALTERATION AGREEMENTS

Jurisdictional authority of the CDFW over stream areas is established under Section 1600 of the Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. Section 1602 of the Fish and Game Code stipulates that it is unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake without notifying the CDFW, incorporating necessary mitigation, and obtaining a Streambed Alteration Agreement. Typical activities that require a Streambed Alteration Agreement include excavation or fill placed within a channel, vegetation clearing, structures for diversion of water, installation of culverts and bridge supports, cofferdams for construction dewatering, and bank reinforcement.

VEGETATION COMMUNITIES

The project's biological resources assessment identified eight vegetation communities, 56 plant species and 19 wildlife species on the project site, and indicated that the project site has been significantly altered from its native state. Gravel roads, concrete slabs, and gravel piles occupy approximately 11.2 acres, while approximately 26.9 acres of the site are dominated by non-native species.

As discussed in the PROJECT DESCRIPTION (Chapter 3.0) section of this EIR, the project site was filled between 1914 and 1944 by hydraulic dredge spoils from the Petaluma River with construction of dikes used to contain the soils. The northern portion of the site was used in the 1960s and 1970s as a settling pond for the former Petaluma Wastewater Treatment Plant located to the west of the project. Historically, the project site has had limited biological value. Since 2005, the site has been used for the crushing and storage of roadbed materials. A portion of the site is being used for construction staging in conjunction with the current Highway 101 HOV project. Therefore, the substrate throughout the site has been substantially altered with the construction of levees, gravel roads, gravel piles, and stockpiling of dredge material. The majority of the site is characterized by invasive and non-native plant species adapted to extremely disturbed conditions (e.g. stinkwort and perennial pepperweed).

Four non-sensitive and four sensitive vegetation communities occur within the project site, which are summarized on Table 4.2-1 and shown on Figure 4.2-1¹. The non-sensitive communities include disturbed land, ruderal herbaceous stands, and non-native annual

¹ All figures are included at the end of the document in Section 7.0 for ease of reference as some figures are referenced in several sections.

grassland. The sensitive vegetation communities, which are all types of wetlands or waters, found on the project site include: a drainage ditch, seasonal wetland swale, seasonal wetland depression, and coastal brackish marsh.

There are several Monterey pine (*Pinus radiata*) and Monterey cypress (*Hesperocyparis macrocarpa*) trees located on the river bank, which is within the southwestern portion of the proposed offsite Riverfront Park. These trees appear to be between 25 and 50 years of age. Monterey pine and Monterey cypress are not native to Sonoma County and do not appear on the list of protected trees in the City of Petaluma Tree Preservation Ordinance; therefore, these trees are not considered sensitive. As proposed, these trees will be left in place.

SENSITIVE HABITAT AREAS

Sensitive habitats are generally considered by local, state or federal agencies as those habitats that support special status species, provide important habitat values for wildlife, represent areas of unusual or regionally restricted habitat types, and/or provide high biological diversity. Habitat types considered sensitive include those listed on the California Natural Diversity Data Base (CNDDB) working list of working list as “high priority” habitats (i.e., those habitats that are rare or endangered within California). Generally, wetland and riparian communities are considered sensitive habitat due to their value to wildlife, limited distribution, and decreasing acreages statewide.

The biological resources assessment did not identify riparian habitat on the project site or the adjacent Riverfront Park site where offsite improvements are proposed. However, four sensitive vegetation community types (all of which qualify as wetlands or drainages under federal and/or state regulations) cover a total of 0.58 acres of the project site as shown on Figure 4.2-2. These include a drainage ditch through the site (0.16 acres), small seasonal and isolated depressions (0.10 acres), a seasonal wetland swale (0.02 acre) on the project site, as well as a seasonal wetland swale (0.29 acres) and coastal brackish march (0.01 acre) on the Riverfront Park site adjacent to the Petaluma River. A summary is provided below, and further description is provided in Appendix C-2.

- Seasonal Wetland Swale (0.31 acres). Seasonal wetland swale vegetation communities typically occur in concave linear topography where water flows at velocity to contribute to down-cutting, but without precluding the establishment and maintenance of vegetation. The hydroperiod is seasonal with the majority of inundation and saturation in the winter and spring. Approximately 0.31 acres of two man-made seasonal wetland swales is present within the western and southern portions of the project site. The wetland swale in the southern portion was likely created by the erection of the landward and waterward levees where surface waters collect for a duration sufficient to create wetland conditions. The wetland swale in

the western portion of the Project Site appears to be created from historic grading activities.

TABLE 4.2-1: Vegetation Communities of Study Area

Vegetation Community	Vegetation Alliance	Acres
Ruderal Herbaceous Patches	Upland Mustards (<i>Brassica nigra</i> Semi-natural Herb Stands); Poison Hemlock Patches (<i>Conium maculatum</i> Semi-natural Herb Stands); Italian Thistle Patches (<i>Carduus pycnocephalus</i> Semi-natural Herb Stands); Perennial Pepperweed Patches (<i>Lepidium latifolium</i> Semi-natural Herb Stands)	26.25
Disturbed Land	Stinkwort Patches (<i>Dittrichia graveolens</i> Semi-natural Herb Stands)	11.19
Non-Native Grassland	Soft Chess Grasslands (<i>Bromus hordeaceus</i> Semi-natural Herb Stands); Non-native grassland Italian Rye Grass Grasslands (<i>Festuca perennis</i> Semi-natural Herb Stands)	0.66
Ruderal Scrub	Coyote Brush Scrub (<i>Baccharis pilularis</i> Shrubland Alliance)	0.55
Seasonal Wetland Swale	Italian Rye Grass Grasslands (<i>Festuca perennis</i> Seasonal wetland Semi-natural Herb Stands); Rough Cocklebur Patches (<i>Xanthium strumarium</i> Herb Alliance)	0.31
Drainage Ditch	Poison Hemlock Patches (<i>Conium maculatum</i> Semi-natural Herb Stands); Italian Rye Grass Grasslands (<i>Festuca perennis</i> Semi-natural Herb Stands)	0.14
Seasonal Wetland Depression	Italian Rye Grass Grasslands (<i>Festuca perennis</i> Seasonal wetland Semi-natural Herb Stands); Rough Cocklebur Patches (<i>Xanthium strumarium</i> Herb Alliance)	0.10
Coastal Brackish Marsh	Salt Marsh Bulrush Marshes (<i>Bolboschoenus maritimus</i> Herb Alliance)	0.01
TOTAL		39.21

SOURCE: WRA, March 2012

- Drainage Ditch (0.16 acres). Drainage ditches are human-created vegetation communities typically composed of non-native and native hydrophytic species adapted to disturbance and a seasonal hydroperiod. An approximately 1,345 linear foot drainage ditch flows from north to south in the western portion of the project site. This ditch receives regular maintenance to drain surrounding upland landscape to prevent flooding. Vegetation alliances within the ditch are short-lived due to regular maintenance, but most closely resemble poison hemlock patches and Italian

rye grass grassland. Dominant species include poison hemlock, Italian rye grass, Mediterranean barley, rough cocklebur, and dooryard knotweed.

- Seasonal Wetland Depression (0.10 acres). Seasonal wetland depression vegetation communities typically occur in concave topography where the hydrology is predominantly direct precipitation, high water table, and/or sheet flow from adjacent lands, but inlets/outlets are typically absent. Four seasonal wetland depressions totaling 0.1 acre are present within the northern and southern portions of the project site. The hydroperiod for the depressions appears to be relatively short in normal precipitation years, with inundation and saturation likely declining shortly following the cessation of rainfall in spring, with some extended duration in the southern depressions due to the contribution of hydrology from the drainage ditch. The depressions located in the northern portion of the site appear to be created from historic grading activities and the presence of compacted gravel roads creating a dam for surface flows. The depressions located in the southern portion appear to be created as settling basins for the drainage ditch.
- Coastal Brackish March (0.01 acres). Coastal brackish marsh vegetation communities typically occur in flats along tidal sloughs and coastlines in the upper reaches of the San Francisco Bay and Sacramento Delta region. Approximately 0.01 acre of marsh is present in southern portion of the Project Site along the Petaluma River.

WRA conducted a wetland delineation of all of study area wetland and drainage features in 2010. The mapped wetland delineation, shown on Figure 4.2-2, identifies 0.53 acres of jurisdictional wetland and 0.05 acres as non-jurisdictional wetland². The jurisdictional delineation was verified by the U.S. Army Corps of Engineers (ACOE) on November 1, 2011 and will remain in effect for a period of five years unless new information or change in field conditions warrants a revision. (The ACOE verification is included in Appendix C-2). The seasonal wetland depressions in the northern portion of the site are considered isolated and therefore jurisdictional only under the Porter-Cologne Act of Waters of the State.

SPECIAL STATUS SPECIES

The project site has been highly modified by human activities. The limited habitats present are in a disturbed state that precludes the presence of most special status wildlife species.

The Petaluma General Plan 2025 EIR (Figure 3.8-1) identifies potential habitat for special status plant species (Franciscan Onion, Alkali Milk Vetch, Point Reyes Checkerbloom, Petaluma Popcorn-flower, Sonoma Spineflower, and Round-leaved Filaree) on the project site

² Jurisdictional wetlands refers to wetlands subject to ACOE regulatory authority under section 404 of the Clean Water Act.

and on lands to the west of the project area. The project biological assessment reports that a total of 69 special status plant species have been documented in the vicinity of the project site, but no potential special status plant species were identified during the site-specific field investigation conducted for the project site. The habitat was determined to be unsuitable to these species for a variety of factors, including lack of native vegetation communities, the lack of high quality vegetation communities, lack of appropriate substrates or landforms, and/or site elevation, which is lower than the typical elevation range of many of the species. In summary, no special status plant species were observed or are likely to occur within the project site, and therefore, no further actions were recommended for special status plant species.

The Petaluma General Plan 2025 EIR (Figure 3.8-1) also identifies potential habitat for special status wildlife species (San Pablo song sparrow) on the project site and in areas to the north, east and southwest of the project site. According to the Riverfront biological assessment, six special status bird species are present or have the potential to occur within the project site, none of which are state or federally listed as endangered or threatened. However, they are CDFW Species of Special Concern, CDFW fully protected species or USFWS Bird of Conservation Concern. The species include Northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), Allen's hummingbird (*Selasphorus sasin*), loggerhead shrike (*Lanius ludovicianus*), San Francisco common yellowthroat (*Geothlypis trichas sinuosa*), and Samuels song sparrow (*Melospiza melodia samuelis*).

A white-tailed kite and song sparrows were observed during a January 2012 site visit, while the four other bird species have a moderate potential to occur at the project site. In addition, a variety of non-special status native birds protected by the Migratory Bird Treaty Act (MBTA) also have a potential to nest within the project site.

4.2.2 IMPACTS AND MITIGATION MEASURES

CRITERIA FOR DETERMINING SIGNIFICANCE ANALYSIS

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines (including Appendix G), City of Petaluma plans, policies and/or guidelines, and agency and professional standards, a project impact would be considered significant if the project would:

- 2a Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife (formerly Fish and Game) or U.S. Fish and Wildlife Service;
- 2b Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

- 2c Have a substantial adverse effect, either directly or through habitat modifications on; or substantially reduce the number or restrict the range of any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (formerly Fish and Game) or U.S. Fish and Wildlife Service;
- 2d Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- 2e Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- 2f Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan; or
- 2g Substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community.

IMPACT ANALYSIS

Based on the significance criteria identified above and on the analyses in the Revised Initial Study (Appendix A of this DEIR), the project would not directly or indirectly impact riparian habitat as none exists on the project site (2a), would not interfere with wildlife movement (2d), and would not conflict with local ordinances (2e) or with an adopted Habitat Conservation Plan or Natural Community Conservation Plan (2f). Given the disturbed nature of the site and no significant onsite habitat areas, the project would not substantially reduce the habitat of a fish or wildlife species, cause population declines or threaten to eliminate a plant or animal community (2g). It is also noted that existing trees along the property's southern boundary adjacent to the Petaluma River are planned to be retained and incorporated into the proposed Riverfront Park.

The following impact analyses address potential impacts to jurisdictional wetlands (2b) and special status species (2c).

Sensitive Habitat

Impact 4.2-1 - Wetlands: The proposed project would result in fill of 0.24 acres of onsite wetlands, most of which are jurisdictional wetlands. Although, the fill will not result in significant impacts to special status species or habitat value, due to the fact wetlands are considered sensitive habitats, this is a *potentially significant* impact.

The proposed project would result in the conversion of 0.24 acres of seasonal wetlands to developed land. As shown on Figure 4.2-2, these include the onsite wetlands labeled WL-5, WL-6, WL-7, DD-9 and the offsite wetlands labeled WL-1. A majority of the onsite wetland fill would

be within the drainage channel that runs through the site (DD-8-0.16 acres) as well as small isolated wetland features on the site. The offsite seasonal wetland feature (WL-8) will be subject to fill adjacent to the planned southern project street. Figure 4.2-3 provides a layout of the subdivision with the existing wetlands highlighted. As can be seen most of the fill would be for residential lots, although some roadway areas and the planned park contain wetlands.

The 0.34 remaining acres of wetland will be retained, all of which are offsite in the proposed Riverfront Park. These wetland areas include mostly a seasonal wetland swale, as well as, a seasonal wetland depression and coastal brackish marsh.

Since wetlands are considered sensitive habitat areas, fill of the 0.24 acres on the project site would be considered a significant impact. However, the biological assessment notes that the existing wetland habitat is considered to be low quality due to disturbed soils, presence of non-native species, and the lack of significant habitat value. Of the 0.24 acres that will be impacted, approximately 0.20 acres of seasonal wetland habitat is under ACOE jurisdiction pursuant to Section 404 of the Clean Water Act, while 0.05 acres (seasonal wetland depressions in northern portion of the site) is under the jurisdiction of the Regional Water Quality Control Board under the Clean Water Act and/or the Porter Cologne Act. As indicated above, approximately 0.34 acres of wetlands will be retained. Fill of jurisdictional wetlands will require authorization from the ACOE for use of a Section 404 Nationwide Permit #29, Residential, Commercial, and Institutional Developments, and a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB). Implementation of mitigation measure BIO-1 will ensure that potential impacts due to fill of wetlands are offset through the purchase of credits via a mitigation bank. Thus, potential impacts will be reduced to levels below significance.

The proposed project includes construction of a trail and sitting area, as well as revegetation enhancement, in the approximate 3.6-acre Riverfront Park on the state-owned land contiguous to the project's southern boundary. A conceptual park layout includes a public access trail, two overlooks, a viewing area with picnic tables, and a sloped turf area for picnicking and viewing the river, as shown on Figure 1-8. The public access trail and amenities will be developed in accordance with the *Petaluma Bicycle and Pedestrian Plan* (2008) and the *Petaluma River Access and Enhancement Plan* (1996). From mapping included in the project biological assessment, it appears that wetlands within the proposed Riverfront Park mostly will be avoided. The seasonal wetland swale along the riverbank and a seasonal wetland depression within the proposed Riverfront Park will be protected and remain in place. However, a small, non-jurisdictional wetland depression north of the proposed trail will be filled as discussed above.

The limited development of the trail and amenities (i.e. benches, overlooks, etc.) may inadvertently impact the wetland areas if they are not protected during construction. Due to close proximity of river trail improvements to wetlands along the river, there could be indirect construction impacts if the wetlands are not properly staked and protection fencing installed.

The park also includes habitat enhancement by planting native trees (i.e. big leaf maple, coast live oak, and buckeye), primarily along the north side of the trail. Some of the mapped areas on the conceptual park plan do not seem to match the locations of wetlands or habitat as shown on the habitat and wetland maps in the project biological assessment. A final design shall be developed that identifies wetland avoidance measures and the protection of wetland areas. Implementation of mitigation measure BIO-2, will ensure that potential impacts to wetlands within the Riverfront Park area are reduced to levels below significance.

Mitigation Measures

Implementation of Mitigation Measures BIO-1 and BIO-2 below will reduce the project impacts to wetlands to a less-than-significant level.

BIO-1: To mitigate for the impacts to 0.24 acres of seasonal wetland habitat, the developer shall consult with agencies to identify feasibility of creating onsite mitigation areas through remediation within the Riverfront park area. If onsite mitigation is determined to be infeasible then, credits shall be purchased from an approved mitigation bank at a ratio of one acre for every one acre impacted, or as otherwise directed by the regulatory agencies. Due to general low-quality of the existing wetland habitat (e.g. presence of non-native species, disturbed soils) within the project site, a mitigation ratio of one acre mitigated for each acre impacted is recommended by the biologist. Prior to issuance of grading permit, proof of purchase of mitigation bank credit or verification of onsite wetland remediation to offset losses shall be submitted to the City and U.S. Army Corps of Engineers.

According to information provided by the project biologist, the Burdell wetland mitigation bank, located just south of Petaluma, has mitigation bank credits available.

BIO-2: Develop final Riverfront Park design that avoids and protects wetlands. The design shall also investigate the feasibility of creating wetland habitat as part of the proposed Riverfront Park, which could serve to offset losses in lieu of purchasing credits (See BIO-1). Implement standard best management practices (BMP) to protect wetland areas during and after construction of the Riverfront Park to include, but not be limited to installation of protective staking and silt fencing to prevent inadvertent intrusion by equipment during construction.

Special Status Species

Impact 4.2-2 – *Special Status Species*: Site preparation could result in direct impacts to nesting bird species, if they are present, including potential special status bird species. This is considered a *potentially significant* impact.

Project grading and site preparation could result in direct impacts to nesting bird species, including special status species, due to the removal or modification of trees, shrubs or other vegetation as part of site preparation if nesting birds are present. The disturbance to nesting birds, which could lead to destruction or injury of special status bird adults, young and/or eggs, is considered a potentially significant impact. Indirect impacts to nesting special status bird species may include nest abandonment due to noise, increased nighttime lighting and/or other human disturbances during construction. Abandonment of an active special status species nest (i.e., one containing eggs and/or young) would constitute a potentially significant impact. In addition to potential special status bird species, a variety of non-special status species protected by the MBTA also have the potential to nest within the project site. Standard mitigation for avoiding take of migratory birds is the removal of vegetation within the areas to be developed outside of the bird breeding season (i.e., from September 1 to January 31). Otherwise, it is recommended that pre-construction surveys and temporary avoidance of any active nests be implemented during the breeding season.

Mitigation Measures

Implementation of Mitigation Measure BIO-3 below will reduce the potential impacts to nesting birds, including special status species to a less-than-significant level.

BIO-3: Conduct vegetation removal within areas to be developed between September 1 and January 30, outside of the general breeding bird season. If this is completed, no further mitigation is required. Otherwise, if vegetation removal or modification occurs between February 1 and June 15, require pre-construction nesting surveys within 14 days prior to such activities to determine the presence and location of nesting bird species. If vegetation removal or modification occurs between June 16 and August 31, pre-construction surveys shall be performed within 30 days prior to such activities. If active nests are present, establish temporary protective breeding season buffers to avoid direct or indirect mortality of these birds, nests or young. The appropriate buffer distance is dependent on the species, surrounding vegetation and topography and shall be determined by a qualified biologist as appropriate to prevent nest abandonment and direct mortality during construction.