

## **City of Salem, Oregon Bird Conservation Strategy**

### **2017 Miscellaneous (Special Purpose) Permit MB98752B-0 Renewal (Migratory Bird Treaty Act, 16 USC 703-712)**

#### **I. Purpose**

The purpose of this Bird Conservation Strategy (BCS) is to describe measures that the City of Salem (City) implements to prevent injury to or death of migratory birds during execution of City projects and operation and maintenance of City assets.

#### **II. Background**

The Migratory Bird Treaty Act (MBTA) makes it illegal for anyone to take, possess, import, export, transport, sell, or offer for sale, purchase, or barter, any migratory bird, or other parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to federal regulations. The MBTA protects more than 800 species of migratory birds in the U.S. and is administered by the U.S. Fish and Wildlife Service (USFWS). The Migratory Bird Treaty Reform Act of 2004 amended the MBTA to clarify that it applies only to migratory bird species that are native to the U.S. or its territories.

Salem's jurisdictional limits encompass approximately 49 square miles and include a variety of natural features that support multiple migratory bird species. More than 200 species of migratory birds occur within the Salem area for all or part of their respective life histories. In addition to native bird species, there are several non-native bird species that occur in Salem. These non-native species include, but are not limited to, rock pigeons (*Columba livia*), house sparrows (*Passer domesticus*), European starlings (*Sturnus vulgaris*), ring-necked pheasant (*Phasianus colchicus*), domestic ducks and geese, and peacocks. Appendix A includes a listing of migratory bird species known to occur in the Salem area.

The conservation measures in this document do not apply to non-native bird species. Two species of native migratory birds known to occur in Salem are listed under the Endangered Species Act (ESA) and Bald and Golden Eagle Protection Act (BGEPA): streaked horn lark (*Eremophila alpestris strigata*) and bald eagle (*Haliaeetus leucocephalus*), respectively. While these species are protected by the MBTA, management and conservation of the species defaults to the ESA and BGEPA because of the detailed, species-specific conservation criteria required by these laws.

To date, the City has addressed migratory bird management and conservation, and compliance with the MBTA at the department or division level. The Salem Airport (McNary Field) and Parks Operations maintain cooperative agreements with the U.S. Department of Agriculture Animal and Plant Health Inspection Service (APHIS) for assistance with wildlife control measures on airport

and park properties, respectively. These agreements authorize APHIS to conduct bird nesting prevention measures, bird hazing (for aircraft operations/safety), and active bird nest removal for nests with eggs and/or dependent juveniles. Other City divisions and departments have, at times, used Parks' agreement with APHIS to address a MBTA compliance issue; however, availability of this permit to departments or divisions other than Salem Airport and Parks Operations is not guaranteed. Moreover, the lack of a City-wide BCS has prevented a consistent, proactive approach to MBTA compliance.

The goal of this BCS is to provide a comprehensive migratory bird conservation strategy that is applicable to all City departments and divisions and supports MBTA Miscellaneous (Special Purpose) Permits that annually address bird management and take for all City activities.

### III. Common Salem Bird Habitats, Projects, and Bird Stressors

#### Common Migratory Bird Habitats

Birds in the Salem area can be found nesting in a variety of places, even in very developed areas. The following habitat categories provide a general overview of the types of habitats used by migratory birds.

- **Trees:** Stick nests of migratory birds constructed in tree canopies are among the most conspicuous and familiar signs of nesting birds. These can be the easiest to detect and, thus, the easiest to avoid.
- **Shrubs:** The majority of nesting birds build a cup nest in dense vegetation in the shrub layer, often close to the ground. Protecting these species – sometimes called ‘tangle nesters’ – can be complicated. For example, the willow flycatcher (*Empidonax traillii*), a species listed as Sensitive-Vulnerable by the State of Oregon, actually builds nests in Himalayan blackberry, an invasive plant species heavily managed by the City.
- **Ground:** Many species place a well-concealed nest on the ground in either open areas or forested habitats. Examples include meadowlarks (*Sturnella sp.*), harriers (*Circus sp.*), killdeer (*Charadrius vociferous*), and Wilson’s warblers (*Cardellina pusilla*).
- **Cavity:** Rather than concealing a nest in vegetation, dozens of local species nest in cavities. These nests are often constructed in dead or dying trees, but can also be constructed in the ground or in a variety of structures in the urban environment. Tree swallows (*Tachycineta bicolor*), Bewick’s wrens (*Thryomanes bewickii*), and downy woodpeckers (*Picoides pubescens*) are common cavity nesters.
- **Streambanks:** The northern rough-winged swallow (*Stelgidopteryx serripennis*) and the American dipper (*Cinclus mexicanus*) are “cut bank” nesters, meaning they use holes excavated in streambanks for nesting. These species have also been known to use holes on steep slopes of dirt stock piles.
- **Structures:** Many birds use human-made structures for nesting. In addition to using bird boxes that are intended for such use, birds will nest on bridges, under house eaves, on building ledges, in utility and light poles, on railroad tracks, and even on gravel roads.

### **Common Projects and Birds Stressors**

The City includes multiple departments that provide critical services for its citizenry, support safe and livable neighborhoods, and promote economic development. The majority of the City's projects are planned and financed through implementation of the City's Capital Improvement Plan (CIP), which is a five-year plan that prioritizes and finances major public assets based on City-adopted master plans, goals, and policies. The purpose of the CIP is to match financial resources with the capital needs of the community and to preserve or enhance existing capital assets to provide City services. In addition to CIP projects, the City implements day-to-day maintenance and operations, and conducts restoration projects independent of the CIP.

The City's CIP provides a comprehensive basis for describing the general types of services and projects completed by City staff and their contractors that could present conflicts with migratory birds. Projects identified in the CIP typically fall into the following four main project types: community facilities, municipal facilities and equipment, transportation facilities and services, and utility facilities and services.

1. Community facilities include parks, libraries, and historic structures.
2. Municipal facilities and equipment include information technology and radio communication assets, municipal building and safety upgrades, and parking structure assets.
3. Transportation facilities and services include many work types, including but not limited to: bike/pedestrian facilities, railroad crossings, culvert/bridge repair, culvert/bridge replacement, traffic signal improvements, and pavement construction/preservation.
4. Utility facilities and services include projects required to maintain and expand stormwater collection systems, wastewater collection and treatment systems, and water source and delivery systems.

Multiple City divisions are involved in the management and implementation of the projects and activities addressed in the CIP. However, the vast majority of the activities completed by City resources that have the potential to result in migratory bird conflicts fall under the jurisdiction of the Public Works, Urban Development, or Human Resources Departments. The divisions within these departments that are involved in activities that could present migratory bird conflicts include:

- Engineering, Construction, Planning, and Development Services (Public Works),
- Parks (Public Works),
- Stormwater/Utilities/Transportation (Public Works),
- Environmental Services/Wastewater Treatment (Public Works),
- Salem Airport (Urban Development)
- Urban Renewal Projects (Urban Development), and
- Facilities (Human Resources).

The following actions carried out by City staff, City contractors, and volunteers have the potential to result in impacts on migratory birds and/or their habitat:

### ***Vegetation Maintenance***

Vegetation maintenance that could result in potential take of migratory birds includes alteration of vegetation that supports active nests (i.e., eggs or juveniles present). All of the City divisions listed above carry out various levels of vegetation maintenance. Four primary vegetation maintenance activities occur on City properties and in City-maintained areas: 1) habitat conservation and enhancement, 2) maintenance of landscaped areas, 3) control of nuisance vegetation, and 4) vegetation clearing for construction. Vegetation maintenance is primarily conducted by manual and/or mechanical removal of vegetation supplemented by herbicide treatments in areas requiring nuisance species control.

- City parks staff and contractors carry out habitat conservation and enhancement efforts in designated natural areas and parks such as Minto-Brown Island Park. The City's park system currently includes 93 parks properties and 2,265 acres of total park land.
- Maintenance of landscaped areas is conducted by all of the City divisions listed above. This includes, but is not limited to, mowing street rights-of-way and stormwater management facilities, mowing and vegetation pruning in developed park properties, mowing and vegetation pruning on and adjacent to City infrastructure (e.g., City-maintained historic properties), mowing and vegetation pruning at City water and wastewater treatment facilities, mowing at undeveloped City properties, and vegetation maintenance required per Federal Aviation Administration (FAA) requirements at the Salem Airport. As noted earlier, the Salem Airport operates its wildlife management program through an existing cooperative agreement with AHPIS that is based on existing bird depredation permits issued by the U.S. Fish and Wildlife Service (USFWS).
- Nuisance vegetation management is conducted by all of the divisions listed above and involves removal of undesired vegetation in and around public infrastructure. An example of nuisance vegetation removal includes invasive species (e.g., Himalayan blackberry) removal in parks, stormwater facilities, City-owned riparian areas, drainage ditches, mitigation sites, and in other City-maintained landscaped and natural areas, including the City's water treatment facility at Geren Island and Franzen Reservoir located outside the City limits. Nuisance vegetation removal also involves removal of trees that pose a safety or property risk. Removal of hazardous trees is conducted by Public Works Urban Forestry staff.
- Vegetation clearing and grubbing for construction projects within the project's limits often results in the removal of native and non-native herbaceous, shrub, and trees species. This work is often done for the City by contractors.

### ***Hardscape Construction and Maintenance***

Hardscape construction and maintenance activities that could result in potential take of migratory birds involve alteration of existing developed infrastructure or new hardscape infrastructure construction, such as buildings, bridges, and culverts, where migratory birds are nesting and have an active nest (i.e., eggs or juveniles present). A variety of construction activities are carried out or administrated by City divisions. As discussed previously, the City's CIP is the primary tool for planning and resourcing construction projects, and there are a variety of construction projects associated with transportation, utility, building, and other infrastructure needs. Ongoing maintenance of hardscape infrastructure is required to ensure the infrastructure functions safely and properly.

For the most part, migratory birds avoid nesting and rearing juveniles on hardscape infrastructure. However, certain species of native migratory birds utilize hardscape infrastructure for nesting and rearing activities and minimizing take on migratory birds utilizing these areas is necessary. Hardscape construction conflicts with migratory birds occur when nesting occurs prior to construction activities and the construction activities subsequently destroy or harm the ability of birds to nest or rear their young. An example of this is the demolition of a culvert with nesting migratory birds prior to juvenile fledging. Hardscape maintenance activities that could result in impacts on migratory birds include, but are not limited to, power-washing of building exteriors, debris removal, and exterior painting/coating.

#### **IV. Best Management Practices for Vegetation Management, Construction, and Maintenance**

The City is committed to natural resource stewardship and implementing the conservation intent of the MBTA while carrying out City programs and projects. Consequently, City staff, contractors, and volunteers must implement practicable measures to safeguard migratory birds while carrying out various activities that support the City's charter. The Best Management Practices (BMPs) identified in this section represent a menu of possible migratory bird conservation measures for use on a project-by-project basis and for incorporation into City maintenance activities where feasible. Not all measures will be applicable to every project or maintenance situation; therefore, flexibility in application of the BMPs and proactive project planning is critical for effective migratory bird conservation. The general bird nesting season for species in the Salem area is March 1 through August 31; however, the City is mindful that nesting can occur slightly outside of this timing window.

As previously note, Appendix A of this document includes a list of migratory bird species known to occur in the Salem area. Appendix B includes a general bird nesting and vegetation maintenance calendar that the City uses to assist staff and contractors with planning projects to avoid or minimize bird nesting conflicts. Appendix C includes a decision flow chart that provides a process guide for City staff, contractors, and volunteers when an active nest is encountered that could be harmed by City projects. Appendix D includes visual examples of bird nesting habitats in the City and species that typically use them. Appendix E includes a list of acronyms used in this document. The information included in the appendices is intended to provide additional guidance to City staff, contractors, and volunteers regarding bird conservation.

Each project or activity will be assessed by the City's project manager for the best and most feasible BMP options to fit the specific project. The typical dry-weather construction season and Oregon Department of Fish and Wildlife (ODFW)-designated In Water Work Window overlaps with the nesting season. While avoidance is the best option it may not be feasible for many projects that must occur during construction season. Therefore, each project manager will choose the best options from the following BMPs to meet both project schedule and budget while protecting migratory birds.

## **General Best Management Practices to Avoid and Minimize Take and Mitigate Impacts**

### **1. Avoidance Practices**

#### ***a) Project Scoping and Maintenance Planning***

- 1) Pre-project scoping and planning should occur, if possible, at least one year prior to project implementation to assess migratory bird use of the project/maintenance area and to explore strategies to avoid or minimize take.
- 2) Pre-project scoping and planning should also occur well in advance of the nesting season to allow proper time to plan and implement take avoidance measures if habitat-disturbing activities are required during the nesting season.
- 3) Determine if vegetation and tree snags can be avoided or pruned, rather than removed.
- 4) Determine limits of disturbance to avoid high value habitat if possible.

#### ***b) Project Timing***

- 1) If practicable, activities that have potential to impact active nests will be conducted outside of the nesting period (e.g., vegetation removal).
- 2) If practicable, active nests that are encountered will not be disturbed until young have fledged. Fledged birds are juvenile birds that have left their nests and are capable of supporting themselves without parental support.
- 3) Prune and remove vegetation and tree snags, and conduct hardscape exterior maintenance activities and demolition outside of the nesting season.
- 4) Inspect structures repeatedly for active nests (i.e., nests with eggs or dependent young) prior to initiating work that may be disruptive to nesting birds.
- 5) Inspect vegetation and snags for active nests prior to clearing and removal.
- 6) Mow street right-of-way grasses on a regular, reoccurring basis to preclude nesting and minimize impacts to ground nesting birds.
- 7) Inspect mowing areas for active nests that are not mowed on a regular basis and/or occur in areas that can support ground nesting birds prior to mowing during the nesting season.
- 8) Pressure wash and paint structures outside of the migratory bird nesting season or when active nests are not present as determined by an inspection.

#### ***c) Nesting Prevention***

- 1) Conduct maintenance activities on a regular basis that discourages nesting (e.g. road or path-side mowing).
- 2) Employ exclusionary devices and dispersal methods installed by authorized personnel to prevent migratory birds from nesting in vegetation that will be disturbed or removed during the nesting season.
- 3) Employ exclusionary devices and dispersal methods installed by authorized personnel to prevent migratory birds from nesting on structures that will be repaired or demolished during the nesting season.

**Exclusionary Devices** – Any method that physically excludes a bird from a potential nest site. For example:

- Curtains of vinyl strips;

- Slick surface coatings (e.g., slick paint);
- Ledge protectors (e.g., coils, pin and wire, points, shock wire, sticky repellents); and
- Hole blockers (e.g., foam, steel wool).
- NOTE: netting is not recommended due to potential for bird entanglement.

**Dispersal Methods** – Any method that deters a bird from producing an active nest but does not physically exclude a bird from a potential nest site. For example:

- Nest removal prior to egg laying (through use of poles, paintballs, etc.);
- Visual deterrents (e.g., predator models, flags, reflective tape, etc.);
- Auditory deterrents (e.g., noise-generating devices, percussive activities); and
- Sensory deterrents (e.g., chemical repellents).

- 4) Remove nests that do not contain eggs or dependent young and nests under construction to preclude their use outside of or during the nesting season.
- 5) In consultation with Public Works Department Natural Resource staff or their agents, undertake other actions not listed above that will prevent migratory birds from nesting in vegetation or on structures that will be impacted by a project or maintenance activities.
- 6) Include migratory bird nesting prevention measures in contract specifications for City projects.
- 7) Inspect construction access routes, staging areas, and vegetation maintenance areas for active nests of ground-nesting birds. If an active nest of a ground-nesting bird is encountered, flag near the nest and determine project approach to avoid or minimize disturbing activities around the nest, if practicable.
- 8) If an active nest is encountered that must be removed prior to juvenile birds fledging, contact Public Works Department Natural Resource staff to arrange for authorized individuals to take juvenile migratory birds or eggs to a licensed local wildlife rehabilitation center.

## **2. Minimization Practices**

### ***a) Take Minimization Measures***

- 1) Modify Vegetation Management Plans to minimize bird impacts.
- 2) If possible, avoid use of prison inmate work crews for vegetation maintenance work in sensitive habitats such as wetlands, riparian areas, and other areas deemed by Public Works Department Natural Resource staff to be sensitive. If prison inmate crews must be used, provide training, supervision by qualified staff, and/or pre-maintenance inspection of work areas for nesting birds.
- 3) In consultation with Public Works Department Natural Resource staff or their agents, undertake other actions not listed above that seek to minimize impacting active nests of migratory birds.
- 4) Include migratory bird take minimization measures in contract specifications for City projects.
- 5) Remove dead animals from roads as quickly as practicable to avoid attracting birds such as crows or turkey vultures.

### **3. Habitat Preservation, Restoration, and Mitigation Measures**

#### ***a) Habitat Preservation***

- 1) Limit impacts to bird nesting habitat (i.e., trees, shrubs, ground, cavities, streambanks, and structures), particularly during the nesting season, to the minimum extent needed to complete the project.
- 2) Within the work area, avoid disturbing vegetation designated to remain following project completion; preservation of vegetation includes keeping equipment and materials off of the critical root zone.
- 3) Clearly delineate the project work area to minimize vegetation removal, retain snags, and avoid damage to vegetation outside the work area. A snag is a standing dead or dying tree that is a high value nesting site.
- 4) Develop and implement Vegetation Maintenance Plans to minimize removal of vegetation and snags during the nesting season.
- 5) In consultation with Public Works Department Natural Resource staff or their agents, undertake other actions not listed above that will preserve migratory bird habitat.

#### ***b) On Site Habitat Restoration***

- 1) Prevent mixing topsoil with subsoil or other materials detrimental to plant growth.
- 2) Following construction, restore the natural surface area to a condition suitable for seeding and planting.
- 3) Use native vegetation for revegetation efforts unless non-native vegetation is required to meet project objectives (e.g., street trees, landscaped areas).
- 4) Reseed or replant to restore native vegetation appropriate for the habitat impacted as soon as possible after impacts occur.
- 5) Eliminate weeds in advance of planting and seeding.
- 6) Use certified weed-free seed and other materials.
- 7) Consult with Public Works Urban Forester regarding BMPs for planting trees.
- 8) Foster multi-layered vegetative communities in revegetation activities.
- 9) Enhance desirable habitat elements for migratory birds listed as *Strategy Species* in the *Oregon Conservation Strategy* (ODFW 2016).
- 10) When suitable, provide structural elements for nesting in suitable areas (e.g., nest boxes in mitigation sites).
- 11) In consultation with Public Works Department Natural Resource staff or their agents, undertake other actions not listed above that will restore migratory bird habitat.

#### ***c) Off Site Habitat Mitigation***

- Enhance bird habitat off-site when on-site vegetation preservation, restoration, or enhancement opportunities are limited. Off-site areas include mitigation banks and enhancing bird habitat on other City properties.
- Incorporate migratory bird habitat elements into City parks and other City-maintained properties as appropriate.
- Create tree snags in appropriate areas that do not pose a safety issue, such as designated natural areas.



- In consultation with Public Works Department Natural Resource staff or their agents, undertake other actions not listed above that will mitigate impacts to migratory bird habitat.

## V. Potential Take

The City routinely conducts activities that require removal or disturbance of vegetation and disturbance of hardscape features and structures, all of which can provide habitat for migratory birds. These maintenance and construction activities are critical for maintaining safe, livable, and economically viable communities. These activities can also result in incidental take of migratory birds through accidental take (e.g., tree removal when an unknown active nest is present and is harmed), or through deliberate take (e.g., bird hazing at the Salem Airport).

While the City is committed to conducting activities that could adversely impact migratory bird nesting outside of the nesting window, several activities that could impact nesting habitat must occur during spring and summer months to meet overall City objectives and other regulatory requirements. Such activities include, for example, routine roadside mowing to maintain safe traffic sight distances, earthwork, paving or construction during in-water work windows to minimize impacts to aquatic resources. The BMPs identified in this document will be utilized by the City and its contractors and volunteers to the greatest extent practicable to avoid and minimize take, while meeting these other requirements.

The potential for migratory bird take caused by City activities each depends on the number and types of projects and maintenance activities, when the activities are scheduled, and how the activities are conducted. Additionally, short-notice and emergency actions can also result in take due to insufficient time to implement BMPs. The following annual take estimate is based on feedback from City staff regarding the number and species of migratory birds that routinely have nested in or near project areas or areas that require maintenance during the nesting window. The estimate is also based on historic bird take information from staff at Salem Airport and Parks Operations Division of Public Works. The estimates do not include a take estimate for wildlife management activities at the Salem Airport because take reporting at the airport is conducted under separate depredation permits issued by USFWS under specific conditions required by FAA. City-wide estimated potential annual take, excluding take from airport wildlife management activities, is summarized in Table 1. The quantities listed in section below and in Table 1 include active nests, regardless of the contents.

**Swallows**- This group includes barn swallow (*Hirundo rustica*), cliff swallow (*Petrochelidon pyrrhonota*), northern rough-winged swallow (*Stelgidopteryx serripennis*), violet-green swallow (*Tachycineta thalassina*), and tree swallow (*Tachycineta bicolor*). Barn and cliff swallows build mud nests and are routinely found nesting on manmade structures. Northern rough-winged and violet-green swallows nest in natural or manmade crevices. Tree swallows are cavity nesters and can be found nesting in dead or decaying trees or a variety of structures in the urban environment. **Annual non-lethal or lethal take of 40 active nests.**

**Canada goose (*Branta canadensis*)** – Canada geese nest in a variety of habitats including low lying vegetation, on the ground, and on manmade structures. This species will nest in urban areas with consistent human disturbance. **Annual non-lethal or lethal take of 15 active nests.**

**Killdeer (*Charadrius vociferous*)** – Killdeer are ground nesters that typically build their nests on exposed bare ground or gravel in altered landscapes close to human activities. **Annual non-lethal or lethal take of 10 active nests.**

**Western scrub jay (*Aphelocoma californica*)** – Scrub jays are opportunistic generalists that typically nest in shrubs and trees 5 to 30 feet above the ground in urban areas. **Annual non-lethal or lethal take of 10 active nests.**

**American crow (*Corvus brachyrhynchos*)** - Crows are one of the most intelligent and adaptable migratory birds in North America. Crows typically nest in large shrubs or trees 10 to 70 feet above the ground and rarely nest on the ground or on building ledges. **Annual non-lethal or lethal take of 10 active nests.**

**American robin (*Turdus migratorius*)** – The American robin is a widespread generalist that uses a variety of habitats. Robins nest in shrubs or trees usually 5 to 25 feet above the ground. They also nest on building ledges and other structures. **Annual non-lethal or lethal take of 15 active nests.**

**American dipper (*Cinclus mexicanus*)** – The American dipper nests near streams in cut banks and voids in riparian areas. They often nest in and around bridge support structures at stream crossings. **Annual non-lethal or lethal take of 10 active nests.**

**Table 1. Summary of annual lethal and non-lethal migratory bird take estimated for City-wide activities excluding Salem Airport wildlife control activities.**

Common Name	Scientific Name	Take Estimate
Barn swallow	<i>Hirundo rustica</i>	40 active nests
Cliff swallow	<i>Petrochelidon pyrrhonota</i>	
Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>	
Violet-green swallow	<i>Tachycineta thalassina</i>	
Tree swallow	<i>Tachycineta bicolor</i>	
Canada goose	<i>Branta canadensis</i>	15 active nests
Killdeer	<i>Charadrius vociferous</i>	10 active nests
Western scrub jay	<i>Aphelocoma californica</i>	10 active nests
American crow	<i>Corvus brachyrhynchos</i>	10 active nests
American robin	<i>Turdus migratorius</i>	15 active nests
American dipper	<i>Cinclus mexicanus</i>	10 active nests
Any additional species not listed above*		30 active nests **

\*Except bald eagles (*Haliaeetus leucocephalus*), streaked-horned lark (*Eremophila alpestris strigata*), and other state and federal threatened and endangered birds.

\*\*Not to exceed eight individuals of any single species.

## **VI. Migratory Bird Management, Coordination, and Training**

### **Migratory Bird Management, Staffing, and Reporting**

City-wide migratory bird conservation management, coordination, and training are conducted by Natural Resource staff within the Planning and Development section of the Public Works Department. The City's Natural Resource Specialist is the principal contact for migratory bird management and is the primary liaison with APHIS regarding bird take avoidance and minimization for City-wide activities addressed in this BCS. Specifically, the Natural Resource Specialist is the point of contact for City-wide migratory bird conservation information and training, for tracking and coordinating City-wide bird take avoidance and minimization activities, and for migratory bird conservation public outreach and involvement.

Individuals authorized to oversee project-level bird conservation and management activities under the City's MBTA permit include the Natural Resource Specialist, APHIS personnel, City personnel with a biology and/or natural resource background (e.g., Urban Foresters), and natural resource consultants with biology and/or natural resource backgrounds. The City will coordinate with APHIS to establish a City-wide cooperative agreement so that APHIS can provide City-wide bird management support prior to, and during the 2017 nesting season. It is expected that APHIS will provide bird management support beyond 2017.

Each year, the APHIS liaison for the City will coordinate with the City's Natural Resource Specialist to review projects identified as having potential bird nesting conflicts prior to the nesting season. The APHIS liaison will track migratory bird take conducted by APHIS staff and will maintain communications with the Natural Resource Specialist to ensure compliance with MBTA permit terms and conditions. If authorized individuals other than APHIS manage migratory bird avoidance on City projects, the authorized individual is responsible for tracking migratory bird take on the project they oversee and for maintaining frequent dialogue with the Natural Resource Specialist to ensure compliance with MBTA permit conditions and to remain within permitted take. The Natural Resource Specialist is responsible for tracking City-wide migratory take as outlined above and for reporting annual take to the USFWS Migratory Bird Office in Portland, Oregon. Annual reporting will be completed using the Special Purpose – Miscellaneous annual reporting form from USFWS.

### **Training and Public Outreach**

The Natural Resource Specialist will circulate the bird conservation information and take avoidance and minimization BMPs included in this BCS (including the bird conservation tools provided in the appendix section) to all City staff that are involved in activities that could affect migratory birds or their habitat. This effort will occur periodically to ensure a City-wide cohesive approach to bird conservation, with outreach focused in fall and winter months to encourage staff to allow sufficient time to plan needed bird take avoidance measures prior to the next nesting season. Also, as noted earlier in this document, the City will incorporate migratory bird avoidance and take minimization measures in contract specifications for City projects so that bird conservation measures are addressed early in the project development process.

The City supports and engages in multiple natural resource conservation efforts that are conducted by citizen volunteers. Groups such as Friends of Trees, Salem No Ivy Coalition, Park Partner

Program, and the Audubon Society of Salem play an active and important role in assisting the City with maintaining and enhancing natural areas that support migratory birds. The City will provide bird conservation guidance to volunteer groups involved in natural resource management activities and coordinate with these groups as partners in migratory bird conservation.

## **VII. Bird Salvage, Disposal, Deposition**

When feasible and practicable, the City will work with USFWS in order to salvage dead birds in good condition. Non-salvageable dead birds resulting from the City's bird management activities or road kill on City roads will be disposed of at the Coffin Butte sanitary landfill, the Salem Airport wildlife disposal site, a roadkill composting facility, or a permitted landfill. Disposal of bird remains incurred by APHIS on behalf of the City will follow APHIS disposal protocols.

Viable eggs and young that must be removed from projects or maintenance activities must be brought to local wildlife rehabilitation providers licensed to accept migratory birds. Table 2 lists licensed bird rehabilitation providers in the Salem area.

**Table 2. Licensed bird rehabilitation providers in the Salem area.**

<b>Rehabilitator Name</b>	<b>City</b>	<b>Telephone Number</b>
Turtle Ridge Wildlife Center	Salem	503-540-8664
Tari Edmonds	Salem	503-362-1982
Karen Costa	Salem	503-749-1053
American Wildlife Foundation	Molalla	971-227-4036
Chintimini Wildlife Center	Corvallis	541-745-5324

## **Appendix A**

### **Salem Migratory Bird Conservation Strategy**

#### **Migratory Bird Species Known to Occur in the Salem Area**

## BIRDS OF THE SALEM AREA

This checklist covers the birds found within an approximate 20-mile radius of downtown Salem, including Ankeny and Baskett Slough National Wildlife Refuges and Minto-Brown Island City Park. See Salem Audubon Society's website for a complete list of suggested birding spots in and around Salem ([www.salemaudubon.org](http://www.salemaudubon.org)).

KEY

Seasons:

Sp - Spring: March-May

Su - Summer: June-August

Fa - Fall: September-November

Wi - Winter: December-February

Frequency:

A - Abundant (very numerous in suitable habitat)

C - Common (a few can be easily found in suitable habitat)

U - Uncommon (present but not always seen)

O - Occasional (seen only a few times per season)

R - Rare (only observed 1-2 times every 1-5+ years)

\* indicates breeding in area

Note: This checklist covers a variety of habitat (e.g. riparian, agricultural fields, mixed forest and urban). Birds abundant or common in one habitat might be uncommon or even absent in another.

SPECIES	Sp	Su	Fa	Wi
Greater White-fronted Goose	U	R	U	O
Snow Goose	O		O	O
Cackling Goose	A		A	A
Canada Goose (Western)*	A	C	A	A
Canada Goose (Dusky)				A
Trumpeter Swan	R		R	O
Tundra Swan	U		U	C
Wood Duck*	U	U	O	U
Gadwall*	U	U	U	U
Eurasian Wigeon	U		O	O
American Wigeon	A	R	A	A
Mallard*	A	A	A	A
Blue-winged Teal*	O	U	O	
Cinnamon Teal*	C	C	U	C
Northern Shoveler*	C	U	C	C
Northern Pintail	A	O	A	A
Green-winged Teal	A	O	A	A
Canvasback	O		O	O
Redhead	R	R	R	R
Ring-necked Duck*	C	O	U	C
Greater Scaup				R
Lesser Scaup	U	R	U	U
Bufflehead	C		C	C
Hooded Merganser*	U	U	U	U
Common Merganser*	U	U	U	U
Ruddy Duck*	C	U	U	C
California Quail*	U	U	U	U
Ring-necked Pheasant*	U	U	U	U
Common Loon	R		R	R
Pied-billed Grebe*	C	C	C	U
Horned Grebe	R		R	R
Eared Grebe	R		R	R
Western Grebe	O	R	O	O
Clark’s Grebe	R		R	R

SPECIES	Sp	Su	Fa	Wi
Double-crested Cormorant	U	R	U	U
American White Pelican	R	O	O	
American Bittern*	U	C	U	R
Great Blue Heron*	C	C	C	C
Great Egret	C	U	C	C
Green Heron*	O	U	U	O
Turkey Vulture*	C	C	C	
Osprey*	C	C	C	
White-tailed Kite*	R	O	O	O
Bald Eagle*	C	C	C	C
Northern Harrier*	C	U	C	C
Sharp-shinned Hawk	U	O	U	U
Cooper's Hawk*	U	O	U	U
Red-Shouldered Hawk	R		O	O
Red-Tailed Hawk*	C	C	C	C
Rough-legged Hawk	O		O	O
American Kestrel*	C	U	C	C
Merlin	O		O	O
Gyr Falcon				R
Peregrine Falcon	U	U	U	U
Prairie Falcon			O	O
Virginia Rail*	U	U	U	O
Sora*	U	U	O	R
American Coot*	C	U	C	C
Sandhill Crane	R	R	R	R
Black-bellied Plover	O	O	R	
Semipalmated Plover	U	U	U	
Killdeer*	C	C	C	C
Black-necked Stilt*	O	O		
Spotted Sandpiper*	U	C	U	O
Solitary Sandpiper		R	R	
Greater Yellowlegs	C	C	C	O
Lesser Yellowlegs	U	U	C	
Western Sandpiper	U	U	U	
Least Sandpiper	U	U	U	O
Baird's Sandpiper		R		
Pectoral Sandpiper		R	O	
Dunlin	C	R	C	C
Short-billed Dowitcher		O	O	
Long-billed Dowitcher	U	U	U	U
Wilson's Snipe*	U	U	U	U
Wilson's Phalarope*	U	U		
Red-necked Phalarope	O	O	U	
Bonaparte's Gull	R		R	R
Mew Gull	O		U	C
Ring-billed Gull	O	R	O	U
Western Gull	O			U
California Gull	U	U	U	U
Herring Gull	R		O	O
Thayer's Gull	O		O	O
Glaucous-winged Gull	C		C	C

SPECIES	Sp	Su	Fa	Wi
Caspian Tern	R	R	R	
Black Tern	R	R		
Forster's Tern		R	R	
Rock Pigeon	A	A	A	A
Band-tailed Pigeon	O	O	O	
Eurasian Collared-Dove*	C	C	C	C
Mourning Dove*	C	C	C	C
Barn Owl*	C	C	C	C
Western Screech-Owl*	O	O	O	O
Great Horned Owl*	U	U	U	U
Snowy Owl			R	R
Burrowing Owl			R	R
Barred Owl	O	O	O	O
Short-eared Owl	R		R	U
Common Nighthawk		O	O	
Vaux's Swift	U	U	U	
Anna's Hummingbird*	C	C	C	C
Calliope Hummingbird	O			
Rufous Hummingbird*	U	U	U	
Belted Kingfisher*	C	C	C	C
Lewis's Woodpecker			U	U
Acorn Woodpecker*	C	C	C	C
Red-breasted Sapsucker*	U	U	U	U
Downy Woodpecker*	C	C	C	C
Hairy Woodpecker*	U	U	U	U
Northern Flicker*	C	C	C	C
Pileated Woodpecker*	U	U	U	U
Olive-sided Flycatcher*	O	O	O	
Western Wood-Pewee*	U	A	U	
Willow Flycatcher*	O	U	O	
Hammond's Flycatcher	O	O		
Dusky Flycatcher	R			
Pacific-slope Flycatcher*	U	U	O	
Black Phoebe*	O	O	O	O
Western Kingbird*	O	O	O	
Northern Shrike			O	O
Cassin's Vireo*	O	O		
Hutton's Vireo*	U	U	U	U
Warbling Vireo*	U	U	U	
Red-eyed Vireo		R		
Steller's Jay*	C	C	C	C
Western Scrub-Jay*	C	C	C	C
American Crow*	A	A	A	A
Common Raven	U	U	U	U
Horned Lark*	U	U	U	U
Purple Martin	R	R		
Tree Swallow*	A	A	A	O
Violet-green Swallow*	A	A	A	R
Northern Rough-winged Swallow*	U	U	O	
Cliff Swallow*	A	A	A	R
Barn Swallow*	A	A	A	O

SPECIES	Sp	Su	Fa	Wi
Black-capped Chickadee*	C	C	C	C
Chestnut-backed Chickadee*	U	U	U	U
Bushtit*	A	A	A	A
Red-breasted Nuthatch*	C	U	C	C
White-breasted Nuthatch*	C	U	C	C
Brown Creeper*	U	U	U	U
Bewick's Wren*	A	C	A	A
House Wren*	U	U	U	
Pacific Wren*	U	U	U	U
Marsh Wren*	C	C	U	U
Golden-crowned Kinglet*	C	U	C	C
Ruby-crowned Kinglet	C	R	C	C
Wrentit*	U	U	U	U
Western Bluebird*	U	O	U	U
Swainson's Thrush*	A	C	U	
Hermit Thrush	U	R	O	U
American Robin*	A	C	A	A
Varied Thrush	U	R	O	U
European Starling*	A	A	A	A
American Pipit	U		U	U
Cedar Waxwing*	C	A	C	O
Orange-crowned Warbler*	C	C	O	O
Nashville Warbler	O			
Yellow Warbler*	U	C	O	
Yellow-rumped Warbler	U	O	U	U
Black-throated Gray Warbler*	U	U	O	
Townsend's Warbler	U		U	U
Common Yellowthroat*	C	C	C	R
Wilson's Warbler*	C	C	C	
Yellow-breasted Chat*	U	U		
Spotted Towhee*	A	A	A	A
Chipping Sparrow*	U	U	O	O
Vesper Sparrow*	O	O	O	
Savannah Sparrow*	A	C	C	O
Fox Sparrow	C		U	C
Song Sparrow*	A	A	A	A
Lincoln's Sparrow	U	R	U	U
White-throated Sparrow	U		O	U
White-crowned Sparrow*	C	C	C	C
Golden-crowned Sparrow	A		C	A
Dark-eyed Junco*	A	O	A	A
Western Tanager*	C	U	O	
Black-headed Grosbeak*	C	A	U	
Lazuli Bunting*	U	C	O	

SPECIES	Sp	Su	Fa	Wi
Red-winged Blackbird*	A	C	A	A
Western Meadowlark*	U	U	U	U
Yellow-headed Blackbird*	U	U		
Brewer's Blackbird*	C	C	C	C
Brown-headed Cowbird*	U	C	U	O
Bullock's Oriole*	U	U	--	--
Purple Finch*	C	C	C	C
House Finch*	C	C	C	C
Red Crossbill	R	R	R	O
Pine Siskin	U	O	O	U
Lesser Goldfinch*	U	U	U	U
American Goldfinch*	U	C	C	O
Evening Grosbeak	U	O	O	O
House Sparrow*	C	C	C	C

#### Accidentals

(Birds out of normal range; historically only ever seen a few times in this area)

Emperor Goose  
Ross's Goose  
American Black Duck  
Long-tailed Duck  
Common Goldeneye  
Red-breasted Merganser  
Mountain Quail  
Sooty Grouse  
Pacific Loon  
Red-necked Grebe  
Black-crowned Night-Heron  
Northern Goshawk  
Ferruginous Hawk  
Golden Eagle  
Sandhill Crane  
Pacific Golden-Plover  
Whimbrel  
Long-billed Curlew  
Hudsonian Godwit  
Marbled Godwit  
Semipalmated Sandpiper  
Buff-breasted Sandpiper  
Ruff

Red Phalarope  
Glaucous Gull  
Common Tern  
Northern Pygmy-Owl  
Least Flycatcher  
Eastern Phoebe  
Say's Phoebe  
Vermillion Flycatcher  
Eastern Kingbird  
Gray Jay  
Bank Swallow  
Mountain Chickadee  
Rock Wren  
Sedge Wren  
Mountain Bluebird  
Palm Warbler  
Clay-colored Sparrow  
Brewer's Sparrow  
Black-throated Sparrow  
Lark Sparrow  
Grasshopper Sparrow  
Harris's Sparrow  
Swamp Sparrow  
Rose-breasted Grosbeak  
Indigo Bunting  
Cassin's Finch

Published by the Salem Audubon Society, an active chapter of National Audubon Society.

Chapter Night is the third Tuesday of each month, September through May, at 6:30 p.m., with the program starting at 7 p.m. in the Anderson Room in the Salem Public Library in downtown Salem. Various nature-related programs are presented.

Birder's Night includes a program on aspects of birding and an informal sharing of observations, photos, questions. It meets at 6:30 p.m. on the second Tuesday of each month, September through May, in the Carrier Room of the First United Methodist Church, 600 State St.

Salem Audubon conducts field trips throughout the year, and presents many nature-related programs in schools and the community.

For more information about Salem Audubon Society programs and membership, please visit our website ([www.salemaudubon.org](http://www.salemaudubon.org)) or call 503-588-7340.



**SALEM AUDUBON  
SOCIETY**

Updated August, 2014

**Appendix B**

**Salem Migratory Bird Conservation Strategy**

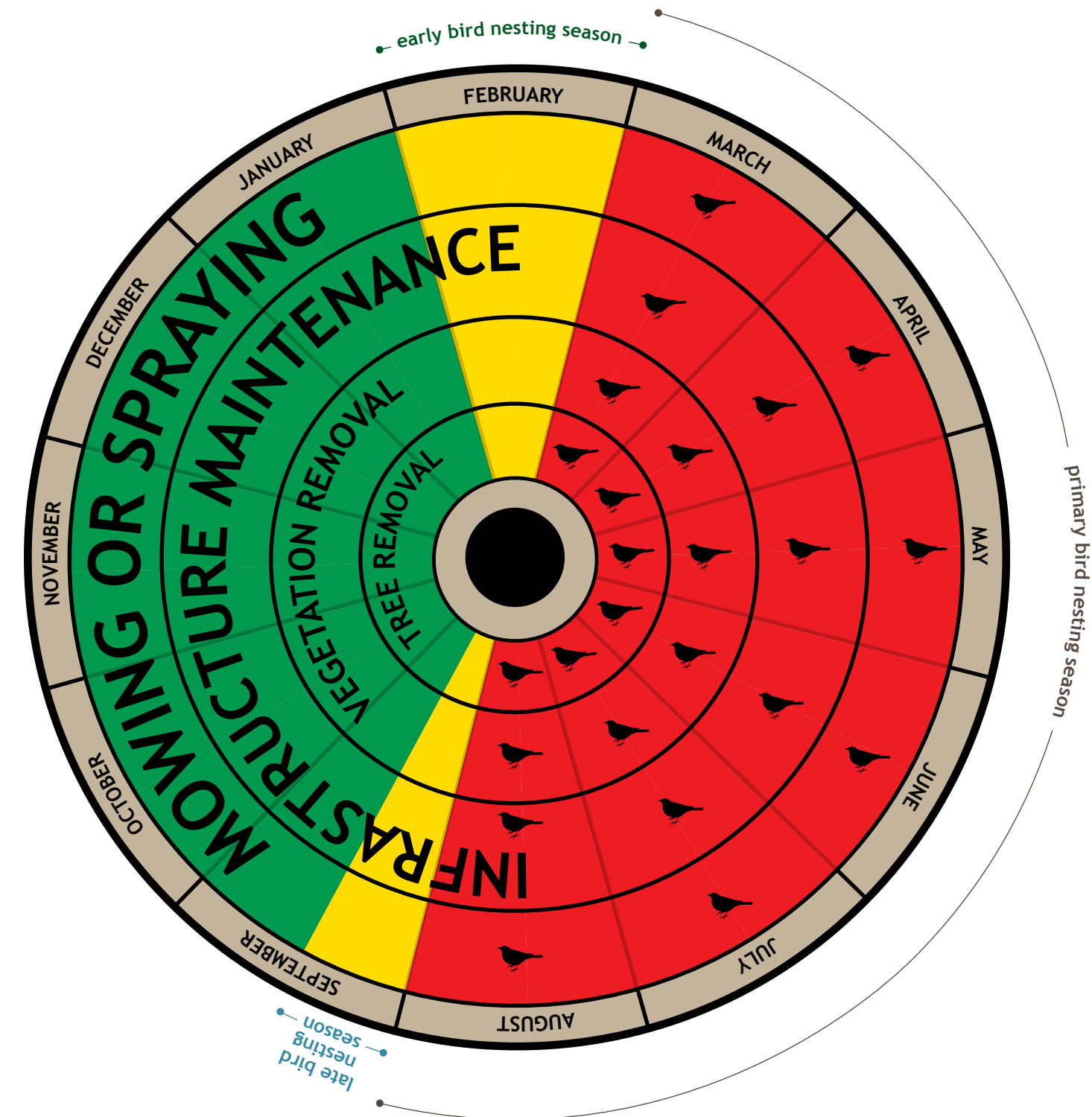
**City of Salem**

**General Bird Nesting and Vegetation Maintenance Calendar**



# Migratory Bird Conservation Strategy

## Annual Calendar



### Legend:

- High potential for nesting birds
- Medium potential for nesting birds
- Low potential for nesting birds

### Please Note:



If any activity must occur conduct pre-activity nest surveys.

## **Appendix C**

### **Salem Migratory Bird Conservation Strategy**

#### **Active Nest Management Flow Chart**

# City of Salem Active Nest Flow Chart

If you find an active\* nest on a project site during project implementation.



\* An active nest has eggs or young in it.

## **Appendix D**

### **Salem Migratory Bird Conservation Strategy**

#### **Migratory Bird Nesting Habitats and Associated Species**



# Bird Nests and Natural Structures

— AVOIDING IMPACTS ON NESTING BIRDS —

## Examples of bird species and where they can nest:

In Snags



Woodpeckers

In Logs, Stump Crevices  
and around Roots



Winter Wrens

In Tree Crevices



Chickadees, Brown Creepers

In Tree Branches



Jays, Crows, Herons

In Shrub Branches



Hummingbirds, Warblers,  
Sparrows

On Ground  
Under Shrubs



Spotted Towhees

On Gravel



Killdeer

In Streambanks



Kingfishers





# Bird Nests and Man-Made Structures

— AVOIDING IMPACTS ON NESTING BIRDS —

## Examples of bird species and where they can nest:

In Chimneys



Vaux Swifts

Under Eaves



Robins, House Finches,  
Swallows

In Bird Boxes



Many Species

On Bridges



Peregrine Falcons, Swallows

On Ledges



Red-Tailed Hawks,  
Mourning Doves,  
Crows

On Utility & Light Poles



Ospreys, Canada Geese

On & Gravel Roads  
and Shoulders



Killdeer, Spotted Sandpiper

In Culverts/on Walls



Swallows

**Appendix E**  
**Salem Migratory Bird Conservation Strategy**  
**List of Acronyms and Abbreviations**

APHIS .....	U.S. Department of Agriculture Animal and Plant Health Inspection Service
BCS .....	Bird Conservation Strategy
BGEPA .....	Bald and Golden Eagle Protection Act
BMP .....	Best Management Practice
CIP .....	Capital Improvement Plan
ESA .....	Endangered Species Act
FAA .....	Federal Aviation Administration
MBTA .....	Migratory Bird Treaty Act
ODFW .....	Oregon Department of Fish and Wildlife
USFWS .....	U.S. Fish and Wildlife Service