

Post Point Heron Colony

2012 Monitoring - Annual Report

prepared for:

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EXECUTIVE SUMMARY

The Post Point Great Blue Heron Colony is the only known heron nesting site in the City of Bellingham. The colony was first documented in 2000, at its present location in south Bellingham's Fairhaven district, on the nearshore bluff southwest of the Post Point Waste Water Treatment Facility. The colony is located on City owned property situated between the waste water plant and privately owned undeveloped land. Due to the sensitivity of the heronry and its uniqueness within the city, Bellingham Public Works requested a management plan (2003) followed by a scientific baseline study of the colony in 2005 to document breeding chronology, nesting activities, colony status and habitat use. Following these efforts, annual monitoring of the colony has been employed as a conservation measure due to the colony's local significance as a critical habitat area and unique natural feature within the urban area.

Habitats used by the Post Point herons include upland forest, grassland field, freshwater, estuarine and nearshore marine areas. All of these essential habitats are located in close proximity to the Post Point colony, and form a habitat mosaic supporting staging, nesting, roosting and foraging. The heron nesting area is situated on a nearshore bluff in mixed forest. The herons utilize this habitat for both nesting and roosting and are present seasonally in large concentrations to nest, and in smaller year-round roosting aggregations in the same contiguous forest as the colony. The Post Point herons are also unique in their use of upland human structures for staging at the Post Point wastewater treatment facility. Herons forage along the intertidal shoreline of Post Point, Marine Park, Post Point lagoon and Padden Creek estuary as well as shoreline areas of Bellingham Bay, Chuckanut Bay and Portage Bay.

The results of the 2012 Post Point Great Blue Heron Colony Annual Monitoring are detailed in this annual update. The colony breeding season spanned 6 months, from February through July 2012. A total of 61 site visits were made to the colony and nearby foraging area, including post-season colony checks and nest counts. The breeding season monitoring schedule was intensified over previous years due to the planned expansion of the Post Point Wastewater Treatment Plant, which includes the construction of a new clarifier within 100 feet of the colony. The construction was planned to start in June, but was delayed until July 2012. The project will continue through 2014, with restrictions on construction near the heron colony during the breeding season February 1-August 1 annually.

The Post Point nesting season includes staging, colony reoccupation, nest building and breeding, egg laying, incubation, hatching, rearing and fledging. As in previous years, the 2012 herons returned to the site in February. Cool, unstable weather delayed the onset of nesting to March and prolonged brooding of young and may have contributed to slightly lower productivity. Unlike previous years, little Bald Eagle disturbance occurred and so most nests fledged young by mid-July, with the final fledging by the first of August.

A total of 17 nests were active in 2012, an increase of 1 nest from 2011. In the past, from 2000 to 2007, the heron colony had grown and expanded annually at a rate of approximately 35%. In 2007 the colony declined approximately 27% from 2006 – this was attributed to higher than normal winter mortality. In 2008 and 2009 the decline in returning adult heron continued, and the herons failed to fledge any young, due to Bald Eagle depredation followed by colony abandonment. Bald eagle incursions continued in 2010 and 2011, however the colony continued to nest and successfully fledge young. Other potential contributing factors to the colony decline included human disturbance at feeding areas, reduction in food supply, disease and/or systemic changes within the regional ecosystem. Eagle depredation did not occur in 2012 allowing the colony to nest through the season normally.



Photo by Mike Hamilton

INTRODUCTION

The Post Point Great Blue Heron Colony Annual Report details the 2012 heron colony monitoring results and provides a comparison with previous years. The Post Point heronry is located near Fairhaven in south Bellingham, Washington (T37N/R2E/Section 2). This heronry is the only known heron nesting site in the City of Bellingham and is considered a sensitive breeding and habitat area. The colony is small, yet unique and has been strategically important to the area's heron population.

The Great Blue Heron (*Ardea herodias*) is a year-round resident in Western Washington, and recognized as a Priority Species by Washington Department of Fish and Wildlife (WDFW). Heron colony sites are also considered Priority Habitats by WDFW and as Critical Areas in many jurisdictions requiring the protection of both the herons and their habitat. Heron colonies are sensitive to human disturbance, requiring special management to maintain their stability and productivity, see WDFW 2012 update: <http://wdfw.wa.gov/publications/01371/wdfw01371.pdf>

Due to the sensitivity of the Post Point Great Blue Heron Colony Heron Colony and its uniqueness, the City of Bellingham Public Works has supported the conservation of the site by developing a management plan (2003), establishing a scientific baseline (2005) and sustaining professional monitoring of the colony, which has been ongoing since 2005.

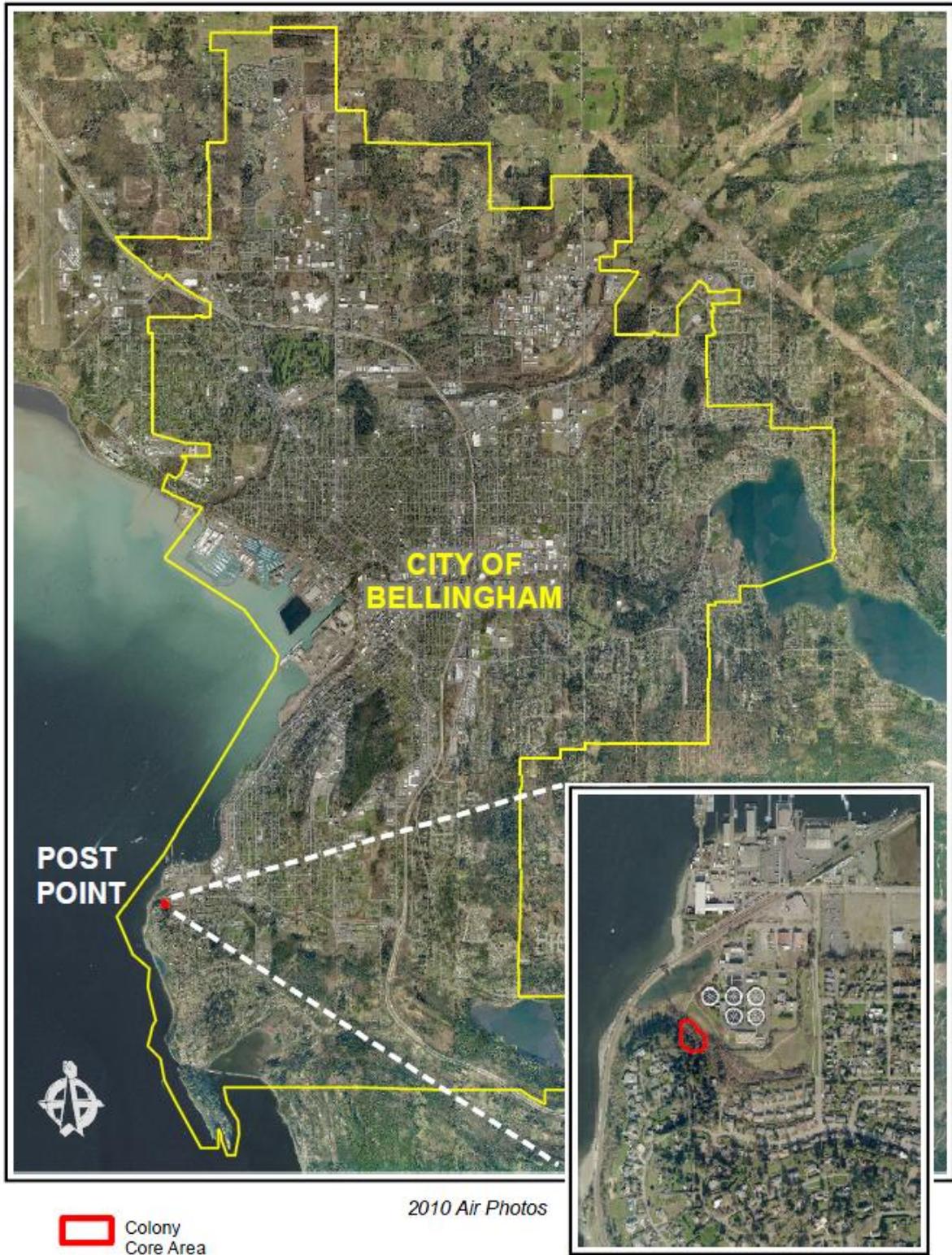
Monitoring of the Post Point heron colony includes three primary components: general monitoring, focusing on colony activity, breeding chronology, predation and disturbance; productivity, which focuses on nestling numbers and fledgling success; and nest survey updating the number of nests and nest trees utilized during the breeding season. Heron foraging observations are also made to document foraging activity. Monitoring usually spans six months, but may vary. In addition, Bald Eagles are also monitored if active in the vicinity of the heron colony. In 2012 monitoring was intensified due to the expansion of the Post Point Wastewater Treatment Plant and planned construction to commence in July 2012.

Implementation of monitoring, including on-site field observation and data collection was conducted by Kathleen Barello and Ann Eissinger of Nahkeeta Northwest Wildlife Services based in Bow, Washington. Ms Eissinger has over twenty years experience monitoring Great Blue Herons and is expert in heron ecology, behavior, colony dynamics and stewardship. Her publication provides the most up-to-date synopsis of heron life history and status as a valued ecosystem component in Puget Sound - Great Blue Herons in Puget Sound: Technical Report 2006-2007 prepared for the Puget Sound Nearshore Partnership is available online at: http://pugetsoundnearshore.org/technical_reports.htm This technical report, serves as the general reference for heron life history and breeding information used in this annual update.

Ann is also the author of the 2003 Post Point Heron Colony Management Plan and 2005 Post Point Heron Colony Baseline Study prepared for the City of Bellingham, Public Works Department. In addition, the Biologist has assisted in the development of interpretive displays and public education materials for Post Point and has provided public educational programs featuring the herons of Post Point.

Weekly monitoring updates were circulated and more detailed progress reports submitted to the City of Bellingham documenting the heron's nesting activity and any observed disturbances. The point of contact for this project includes the City of Bellingham Department of Public Works Post Point Waste Water Treatment Plant Operations Supervisor, Larry Bateman, and Post Point Waste Water Treatment Plant Expansion Project Manager, Freeman Anthony, P.E.

Figure 1
Post Point Heron Colony Location



HERON HABITAT and UTILIZATION

The habitats utilized by the herons of Post Point include upland mixed forest, nearshore bluff, marine estuary, shoreline, intertidal and human structures. The upland mixed forest is situated along the nearshore bluff at Post Point and provides the structural substrate for seasonal nesting and year-round roosting. Within close proximity of the colony are marine shoreline, protected lagoon, estuary and intertidal area with eelgrass meadows.

Post Point Heron Habitat: field, forest, fenced buffer and lagoon.

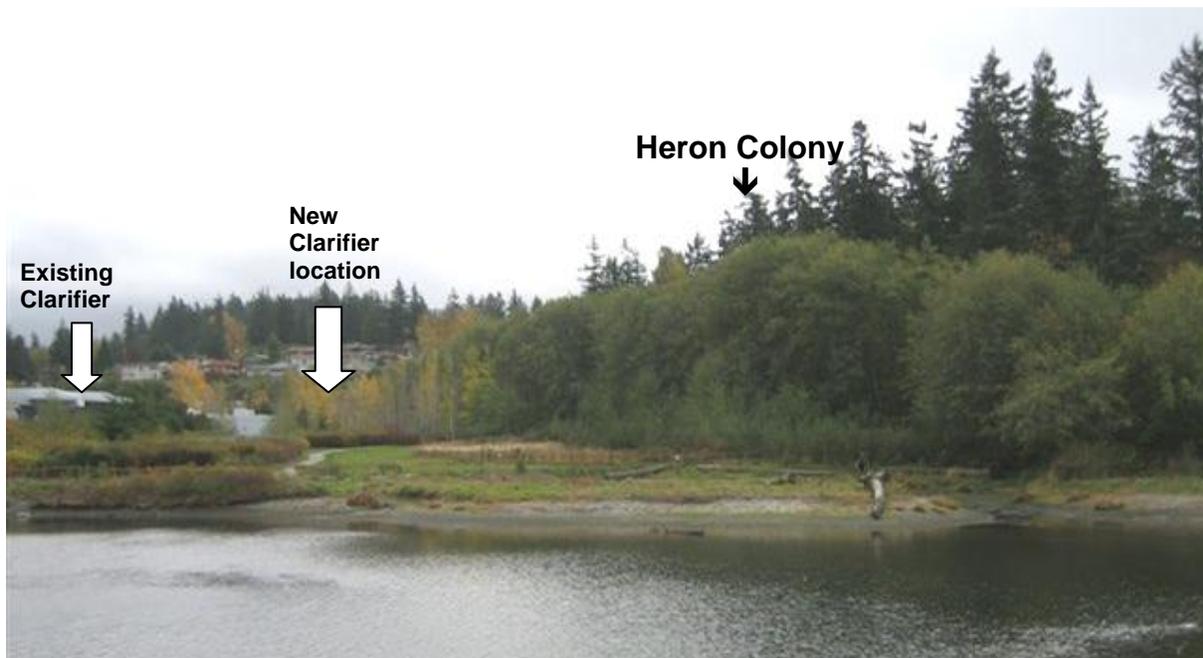


Photo by A. Eissinger 2009

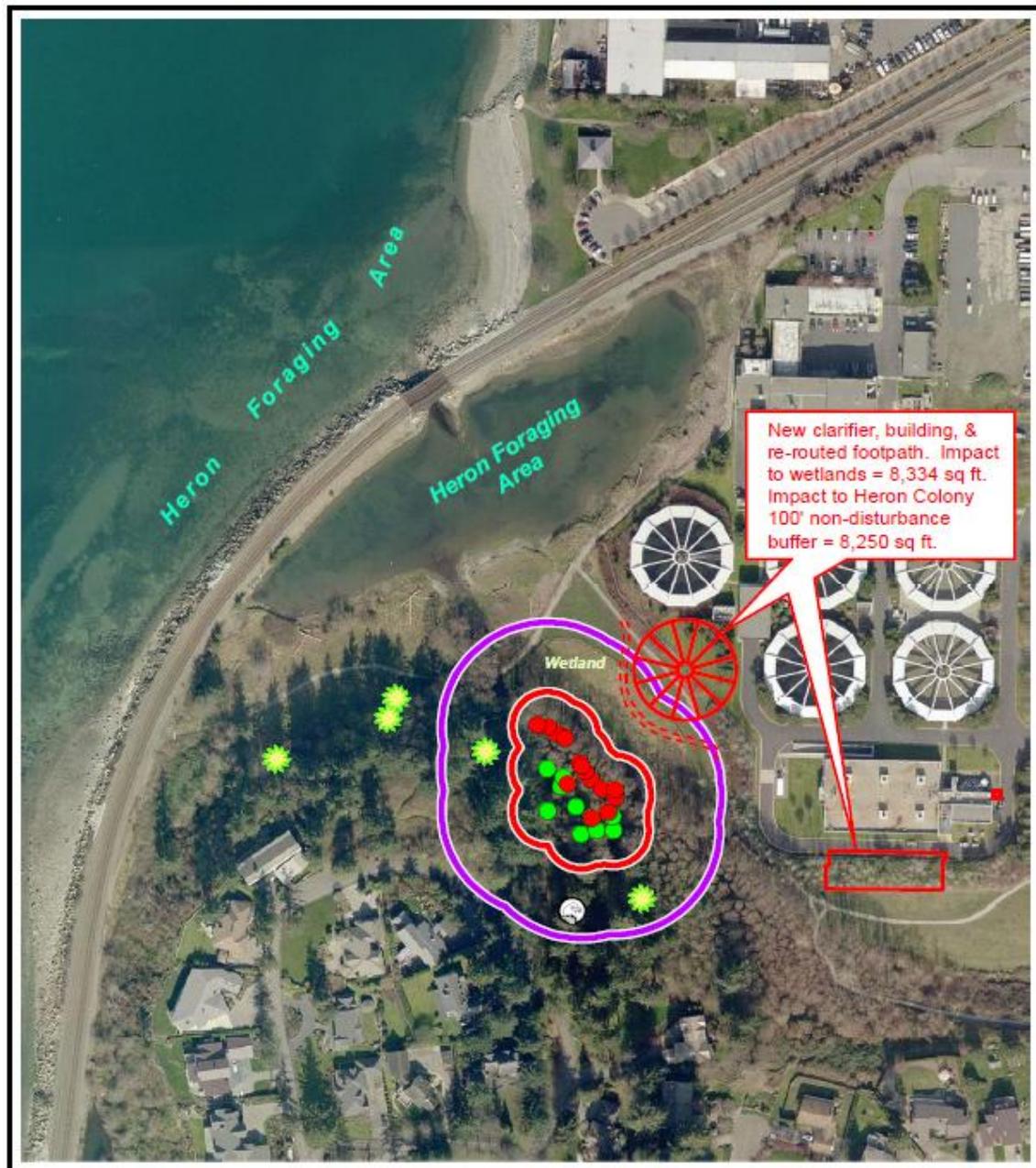
The upland forest where the nest colony is located is situated along a historic shoreline bluff. The bluff line allows the herons separation and elevation above the shoreline park and nearby municipal facilities. The forest is mixed second growth containing mature conifer and deciduous trees. The tree species utilized by the herons for nesting have in the past included Pacific paper birch (*Betula papyrifera*), big-leaf maple (*Acer macrophyllum*) and red alder (*Alnus rubra*). The nest stand is dominated by alder and Douglas fir (*Pseudotsuga menziesii*). Many of the old nest trees are mature and have died or blown over during the past ten years. As a result, the current nesting only occurs in alder. Douglas fir define the bluff and provide a critical overstory and wind break for the colony; they also serve as the primary roost trees for herons and Bald Eagles.

Fallow field habitat, present adjacent to the heron colony at Post Point, is an important habitat for upland heron prey, particularly voles, which serve as an vital food source during winter and early in the nesting season. In addition to the field, the Post Point Lagoon and salt marsh edges also serve as loafing and occasional foraging habitat. The lagoon has also served as a fledging site for young heron leaving the colony. Although these habitats have been identified as important to the herons, the expansion of the Post Point Wastewater Treatment Plant and construction of a new clarifier will remove approximately 8,300 square feet of wetland habitat and part of that is existing wet meadow (Figure 2). Mitigation for lost wetland and habitat is described in the Post Point Waste Water Treatment Plant Expansion Mitigation Plan:

<http://www.cob.org/documents/pw/utilities/ppwwtp/pp-wwtp-mitigation-plan-june-2011.pdf>

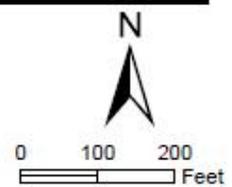
Figure 2: Colony Map 2012 Update

POST POINT HERON COLONY 2012



- KEY:**
- 2012 Active Nest Trees
 - Previous Nest Trees
 - ★ Roost Area
 - ☉ Bald Eagle's Nest Observed in Fir Tree (Last occupied in 2009)

- ▭ Colony Core Area
- ▭ 100ft Non-Disturbance Buffer



2010 Pictometry Air Photo
City of Bellingham
December 2012

In previous years, the heron's use of the Post Point Waste Water Treatment Facility has been unique. Herons have utilized the top of the clarifiers during staging and occasionally during the breeding season, fledging and winter roosting. Herons standing on the clarifier structures provide separation from the colony, but not without the risk of human disturbance. It is also a sunny, protected and potentially warmer area than the north-facing forest where they normally roost. Unlike past nesting seasons, no heron utilized the clarifiers in 2012.



Post Point water treatment clarifiers with heron staging

Photo by Gary Gilfilen

FORAGING AREAS

Foraging habitats for herons include field, freshwater, estuaries and marine intertidal areas. The most productive foraging areas are frequented during the breeding season and provide the essential prey necessary to nourish both adults and young. The foraging areas for the Post Point herons in and around Bellingham Bay were surveyed and mapped in 2006 and are illustrated in previous annual reports. Foraging areas utilized by the Post Point herons include, Chuckanut Bay, Padden Creek estuary, Portage Bay, Lummi Shore Drive shoreline, Nooksack River delta and suitable locations along the Bellingham Bay shoreline. Due to changes in habitat quality, prey availability and human use, these areas may also have shifted and need to be resurveyed for heron use, both seasonality and frequency.

The most productive foraging areas for heron are shallow Intertidal with abundant native eelgrass (*Zostera marina*) where prey species reproduce and concentrate. Eelgrass is abundant, but patchy, along the Post Point shoreline and heron use of the area is essential for successful feeding of young and maximum fledging.

Basic foraging surveys are conducted by the monitoring biologist during each nesting season. Documentation of heron numbers at foraging grounds and feeding habits are recorded. Prey species if observed is also documented. Foraging area preferences vary and are likely based on tides and favorable habitat access, seasonal prey availability and other conditions including wave action and disturbance factors.

Herons foraging in eelgrass near Marine Park

Photos by Alan Fritzberg 2010



The Post Point/Marine Park shoreline are used daily by the Post Point herons and served as the primary foraging area in 2012. The heron's use of the eelgrass area was limited only by seasonal growth, tide and competition with recreating humans. Adult herons also are regularly observed flying across Bellingham Bay to access Portage Bay and the Nooksack River estuary. However, during the peak rearing period (June/July) heron concentrations at Post Point increase during favorable tides. Young heron also utilize the nearby shoreline feeding and also the Post Point Lagoon for loafing.

In an effort to limit encounters between heron and human, the City of Bellingham posted signs to alert shoreline users at Marine Park to the sensitivity of the eelgrass and lagoon areas and requested that people not disturb herons. Based on observations, the current signs are not adequate in educating the public and informing behavior, given the number of citizens and in some cases educational groups walking toward herons in the intertidal area, and subsequently flushing the heron from its feeding area. However, many kayakers seemed to be contentious and provided a wide berth around herons if present. It is recommended that new signage be designed and strategically placed in order to be effective for all users of the beach and shoreline areas.

GENERAL MONITORING

General monitoring includes on-site visits and observations made from various locations in close proximity to the colony. Monitoring includes early season, breeding/nesting and foraging. Post-season monitoring takes place following the fledging of young from nests and may include foraging observations, colony checks, nest counts and map updates. Due to the location and associated vegetation around the nesting area, views of certain nests may be obscured following tree leaf-out. All visible nests are therefore utilized for observation throughout the season.

The 2012 monitoring of the Post Point heron colony commenced the first week of February, and extended to early August, during which time the colony was occupied. Due to the planned construction, the monitoring schedule was intensified and the number of site visits was increased. A total of 60 site visits were made in 2012, including both colony and foraging observation. This number was significantly higher than the 2011 total of 38 monitoring visits.

Monitoring of the colony included four primary objectives: 1) documentation of the nesting cycle or breeding chronology and related behavior; 2) observe and record disturbance including natural predators, human disturbance and other natural or unnatural disturbances; 3) document nest success and productivity; 4) record and map habitat utilization. Assemble results for the season in an annual report.

In addition to monitoring Great Blue Heron, Bald Eagles (*Haliaeetus leucocephalus*) were monitored for their potential nesting activity and predation on herons. Also, all vertebrate species identified in the vicinity of the colony are recorded, although no new species were identified in 2012.

Early Season Assessment

A second La Niña event in the winter of 2011-2012, was reported by the Office of the Washington State Climatologist. This resulted in temperatures, on average, 2-3°F cooler in Western Washington, however precipitation was less than normal October – December and wetter than normal January-March. No major storm events were reported and no storm damage was observed in the Post Point heron colony nest stand, resulting in most nests and nest trees remaining intact from 2011.



As of February 3, 2012, 13 nest structures remained in the colony, and single heron were observed at 3 nests in the colony. With mild weather conditions the herons reoccupied the colony early, and by the end of February, 7 nests were occupied, with additional heron perching and roosting in trees nearby. As March approached, conditions changed to cold winter-like weather, with snow, sleet and increased rain. Although the herons did not temporarily abandon the site - as they did in 2011 - numbers did reduce and activity at the colony slowed. During this early season period no heron were observed utilizing the Post Point Water Treatment Plant for staging, which was unusual.



Colony Reoccupation February-March

Although heron were present in the colony since early February, full occupation of the colony and nests was slow until late-March. By March 8, 12 nests were occupied and 3 were occupied by pairs, but this number dropped with another bout of winter weather, including snow, mid month. The third week of March increased heron activity in the colony with nest building, courtship and inter-nest skirmishes. By the end of March, daytime temperatures warmed and the colony nesting season was underway.

Early Season Breeding and Nesting March-April

The 2012 nesting season required 2 months for the heron to settle into the colony, select nests, pair up and court. Similar to 2011, egg laying or early incubation was recorded as of March 24. Herons in a horizontal posture on the nest is the indicator. Gathering of fir twigs by heron was observed and were visible around the perimeter of some nests. This gathering and placing of fir to line nests continued through March and April and is used to help insulate the nests during the colder unstable weather. Egg laying and Incubation of eggs continued through the end of March and into April.

Along with the poor weather in March and April, heron were observed in fields feeding on voles. These rodents serve as an important food source during the early nesting season, due in part to the lack of shoreline prey which is less abundant in cooler water. At Post Point, one heron was actually observed delivering a vole to its mate sitting on its nest. This is the first record of this type of food exchange between herons in this region. Heron foraging along the Post Point shoreline was rare to date, however heron were regularly observed foraging at the Padden Creek lagoon.

April brought typical spring storms, with occasional heavy rain and hail. With the weather gradually warming, by mid-April the colony had settled. A total of 16 nests were occupied and all were incubating eggs except 2 nests. The colony was relatively quiet during incubation.

With early incubation starting March 24, first hatching was expected the week of April 22. No young were heard. This year the heron continue to sit on their nests as rainy unsettled weather continued through April. By the end of April activity in the colony remained much the same, with heron incubating on nests without sounds of hatching, yet the heron were likely brooding young and staying close to the nest due to the cool, wet weather.



Mid-Season Monitoring May-June

The mid-season period at the Post Point heron colony began with cool wet weather from early spring and continued into June. The high rainfall and cool temperatures resulted in lush leaf growth on the nest trees, obscuring visibility of the nests during most of this period. This condition, and impediment to viewing nests, was reported at other colonies in Puget Sound. However, 8-10 active nests were visible and additional nests also remained active with young.

The heron adults at the nests exhibited behavioral signs of young hatching in late April and by early May young were confirmed. The hatching and brooding of young continued uneventfully and the rearing of young continued through June. By June 19, the first early fledgling was observed. This fledging date corresponds with the onset of hatching in late April and early May.

As of June 30, the rearing of young reached its conclusion and the majority of young began to fledge from the colony. Rearing requires an eight week period and this is followed by 1-2 weeks in which the young may linger near the colony, to feed, roost and orient prior to dispersal.

Late-Season Monitoring July-August

The late-season period at the Post Point heron colony enjoyed fair weather and warmer temperatures. At least ten active nests were visible with young at different stages of preparation for fledging. The young were very active at this stage and provided only brief glimpses in the obscured nests.

With most heron young hatching early May, fledging was expected to begin by late June and continue into July. The first fledged young was observed the third week of June, with the majority fledging in July. Between July 1-14 the peak of fledging occurred, with young leaving nests, but remaining close to the colony both feeding along the shoreline and roosting in or next to the colony. On July 14, six nests with 1 to as many as 3 young per nest remained in the colony. By July 31, all the heron had fledged from the colony except one nest that remained active with 2 young. By this time most young and adults had dispersed from the colony. The remaining late nest was fledged by August 7, and at this time 5 adults and 1 juvenal remained roosting near the colony, in the primary heron roost tree. The final fledging concluded the nesting season for the Post Point heron colony.



Post Point Heron Nesting Chronology Summary 2012

- **February:** Early staging in colony and reoccupancy.
- **Early March:** Reoccupation of the colony, nest repair and building.
- **Mid-Late March:** Courtship, onset of nesting, egg laying and early incubation
- **April:** Incubation, late arrivals to colony.
- **Late April:** poor weather
- **May:** Incubation, hatching, brooding of young.
- **June:** Brooding and rearing of young.
- **July:** Rearing and fledging of young – adults and fledglings roosting and foraging near colony.
- **Early August:** Last remaining young fledged.
- **Mid August:** Construction at PPWTP expands to field below heron colony.

In addition to the seasonal chronology, a historic chronology was developed for this colony. The historic chronology outlines the annual colony activity, nest count results and other pertinent occurrences for each consecutive year. The historic chronology is included as an addendum to this report.

DISTURBANCE

Disturbances to heron colonies may range from predators, human intrusion to low-flying air craft and bad weather. Any natural or unnatural cause of distress, flushing, reduced food intake or other causes resulting in reproductive loss or reduced productivity is considered a disturbance. As part of the monitoring effort, all potential disturbances, observed or reported are recorded and followed. Any loss of heron, young or eggs, or repeated disturbance to the colony or feeding area is taken very seriously, and remedies to counter the disturbance are explored.

Bald Eagles and Other Predators

Bald Eagles pose one of the greatest threats to the success of heron reproduction by disturbing colonies, preying on young heron and eating unhatched eggs. During each monitoring visit to and in the vicinity of the heronry, observations are made of potential predators, such as Bald Eagles, Red-tailed Hawks, Crows and Ravens. Only Bald Eagles have been known to directly disturb or prey on the Post Point herons. However, Crows have been known to enter the colony following Bald Eagle incursions, presumably to scavenge on the spoils. A mature pair of Bald Eagles, particularly the male, is commonly observed in the vicinity of the heron colony and regularly perches nearby, it is only when eagles prey on heron that the nesting is disrupted and herons are flushed from and could potentially abandon their nests. The nearly daily presence of the male eagle or the occasional presence of other eagles or raptors is of little consequence to the herons, unless the predator enters the colony.

In 2012, the Post Point heron colony experienced only one possible eagle incursion, as reported by a neighbor. The report was in late April and included a carcass being dropped in their yard, that of a possible heron (unconfirmed). No observations of heron disturbance or Bald Eagle entry to the colony was reported by the Biologist, field assistant or other casual observers. As a result, the 2012 nesting season proceeded on schedule, with the exception of weather related setbacks for a few nests.

Adult Bald Eagle attacking Great Blue Heron nest in Stanley Park, Vancouver B.C.



Bald Eagle incursions in the heron colony, particularly during hatching and soon after, have become predictable over the past several years. In 2008 and 2009 the herons experienced severe depredation by Bald Eagles, to the point of abandoning the colony at mid-season. A pair of Bald Eagles nesting near the colony may have contributed to the depredation of the herons in order to feed their young, however immature eagles were observed at the same time. Remarkably, the colony rebounded in 2010 and experienced no eagle incursions, but the colony size had been greatly reduced. Last year, 2011, Bald Eagle depredation of the Post Point heron colony recurred, repeatedly over a few days with the loss eggs and young. Although the eagles took a toll on the heron, the colony did not abandon, but instead relayed eggs for a second nesting attempt, which was successful and unfettered by eagles.

The issue with eagles raiding heron nests is not isolated to Post Point, it is known to occur throughout the Salish Sea. As Bald Eagle populations have recovered since their low numbers in the 1960's and 70's, their primary prey species have declined, including coastal salmon, herring and seabird/seaduck populations. As a result, eagles have resorted to preying on heron and other large bird colonies.

Due to the success of the Bald Eagle, it was delisted from the Federal Endangered Species Act in 2007, followed by down listing to "Sensitive" in Washington State in 2008. However, Bald Eagles remain protected under the Bald and Golden Eagle Protection Act (federal) and under the Washington State Bald Eagle Protection Rules (WAC 232-12-292) and local Critical Area guidelines.

A Bald Eagle nest located near the Post Point heron colony was recorded by the Washington Department of Fish and Wildlife's Region 6 Bald Eagle Specialist Julie Stofel in 2006 and has been monitored. This nest however, has not been active since 2009. In 2010, 2011 and 2012 the area near the heron colony and shoreline has been searched for Bald Eagle nesting and none was found. The existing eagle nest tree was also inspected and no visible nest structure remains as of 2012.

Other Disturbance

Other possible disturbances in and around the Post Point heron colony up to July 2012, center around human recreation. Following July 2012, the primary disturbance is the construction and related activities for the Post Point Wastewater Treatment Plant expansion, described on page 21 of this report.

A pedestrian trail and off-lease dog area at located blow the heron colony, outside the fenced area and buffered by field. Pedestrian access to the colony forest, immediate field, and lagoon area is restricted by fencing. The off-lease area is separated from the colony by forest and field and is far enough away not to be a disturbance in anyway. Occasionally a dog will be seen inside the fenced area or near the lagoon, but this is rare and is quickly corrected. As a result no conflicts have been observed between people, their dogs and the herons.

However, a persistent pedestrian trail, illegally constructed in 2009 from the Shorewood neighborhood, was actively used in 2011 and again in 2012. The informal trail was slightly rerouted away from the heron colony, but remains too close for regular use, and may have contributed to the lost of nesting in the trees nearest to the trail. The trail was created to service immediate neighbors and despite signage and fencing the trail continues to be used.

In addition to the small trail, golf balls (below) have been found in the heron colony, under nest trees. This is also a persistent problem, if the golf balls are used during the breeding season, which could cause injury or flush heron from nests.



Every Memorial Day weekend, the Ski to Sea Race is a international competitive event, with the finish line located at Marine Park and associated festivities in Fairhaven. As a result, the Post Point, Marine park areas are inundated with people, temporary structures and equipment on race day.

For the previous two years, 2010 and 2011 a biologist has made site visits during the weekend to document the heron's response to race activities. Site visits were made prior to, during and after the event festivities and included the colony and foraging area. The results of these observations were negative for disturbance to the colony, but indicated that the event had disturbed and displaced a few foraging herons in 2010, but in 2011 high tide prevented any conflict. In 2012, no observations were made during race day, however visits to the colony prior to and following Ski to Sea resulted in no obvious change.



Ski to Sea Race Finish Line at Marine Park
Note: intertidal eelgrass where kayaks are beaching – this is prime heron foraging area

PRODUCTIVITY

The productivity of the visible nests within the heron colony is monitored annually and is measured during on-site visits in June prior to fledging. Productivity within the colony is an important indicator of the health of the colony, and is particularly important this year given that the colony is still recovering from complete failure in 2008 and 2009.

The Post Point herons successfully produced young in 2012. The colony's success in 2012 is based, in part, on the lack of predatory incursions and no other significant disturbances. With construction at the nearby wastewater plant delayed until July, the herons had a relatively normal breeding season. Herons lay four to five eggs per nest and may fledge a maximum of five young, but normally fledge one to three per nest.

In 2012, young were successfully fledged. Based on a sample of 10 nests (58% of the total active nests), in 2012, between 2 and 3 young were observed, with one nest of 4 young. The average for 2012 was 2.4 young per nest. Visibility obscured certain nests and those were not included. In both 2010 and 2011 an average of 3 young per nest was documented. Although the 2012 the number of young is lower, these results are within the regional norm and reflect good health and success on the part of the herons and locally viable food sources.



Post Point heron nest with 4 young – 5 weeks old
Photo by Alan Fritzberg

NEST SURVEY & MAPPING UPDATE

The annual nest count is the standard method for determining the number of nests within the heronry and indicates the number of nests, concentration and active breeding heron pairs utilizing the site during that year. Autumn allows maximum viewing of the whole heronry following leaf drop, and is the most accurate count of the year for large colonies. However, in colonies that were not fully utilized, a count of nests at the end of a breeding season can misrepresent actual numbers of active nests, so colony monitoring during the breeding season is essential.

A record of nest tree locations and nest numbers is also made or updated in the autumn of each year. New nest trees and nests are added to an index of nest trees, all of which are tagged and identified. A map illustrating the nest trees and locations in the heronry is updated year to year (Figure 3).

For 2012 the autumn nest count was conducted in November. Results from this count are a total of 13 nest trees with 18 nests present and at least one nest was not active, and two others were marginal based on size and condition. However, during nesting, a total of 17 nests were observed to be active at some point during the nesting season. From this count, there were two new nest trees identified with a total of 3 new nests. All of the active nest trees were alder, the birch have died, blown-down or are no longer structurally sound to hold nests, and the big-leaf maple, once a major nesting tree, is not active.

During the annual nest count, each nest tree is tagged or existing tags are read, and tree condition is noted. New nest trees were recorded and tagged. The number and size of nests are recorded as well as the presence of egg shell, remains or blown down nests. A database of nests and nest trees is maintained and updated annually.

In review of previous years (Table 1), 19 nests were active in 2004, two of which may not have supported young. In October 2005, the annual nest count was conducted resulting in a total of 31 nests counted in 10 nest trees. Of the nests counted in 2005, 13 were new for that year. In 2006 a new high of 37 nests were recorded. For 2007 the nest count totaled 27 nests in 12 trees, and one new nest tree. The 2007 season marked the first decline in breeding numbers since the colony established in 2000. The total nest count for 2007 was a 10 nest decline from 2006 and dropped below the 2005 total of 31 nests. Storm damage accounted for the loss of five nest trees and at least seven nests. In 2008, a total of 17 nests in 9 nest trees were

recoded as active, and 2009, 11 nests were confirmed active and 2 were not visible, but assumed active. However all nests in 2008 and 2009 failed. In 2010, the colony rebounded with 13 active nests, all of which fledged young. In 2011, a total of 16 nests were active.



A colony map update was completed in December 2012, by Chris Behee of the City of Bellingham. The colony maps (Figures 2-3) illustrate the colony, its location on the landscape, the core area, nest tree location and number of nests per tree. In addition, the Post Point Waste Water Plant expansion overlay was included (Figure 2).

The colony core area, as indicated on the maps, constitutes the actual nesting area and is calculated 50 feet laterally from the base of the outermost nest trees. This allows for variance in tree canopy and actual nest location. GPS readings of each tree are taken at its base. The core area is about 1 acre in size. A 100 foot

buffer is illustrated as the non-disturbance area around the colony. This buffer was created as the minimum no-entry/ no disturbance area during the breeding season (2003 Post Point Heron Colony Management Plan). This also represents an area in which the colony could move over time. Due to the infringement of the Waste Water Plant and placement of a new clarifier which will infringe on this buffer, it is recommended that trees be planted between the new clarifier and colony for screening as soon as possible.

The 2012 maps for the colony illustrate the two new trees (560 and 561) plus a change or number for 96 to 562. The new trees did not change the configuration of the existing colony core area.

The following is a summary of nests and nest trees since 2000.

Table 1: Post Point Heron Colony Annual Nest Count

Year	Total number of nests	Total number of nest trees	Percentage change (# of nests)
2000	6	5	----
2001	8 estimated	6 estimated	+33%
2002	10	6	+25%
2003	14	8	+40%
2004	19	10	+36%
2005	31	10	+63%
2006	37	15	+19%
2007	27	12	-27%
2008	17 active	9	-37%
2009	11 active at onset 9 active nesting	8	-35%
2010	13 active	9	+44%
2011	16 active, 1 not active	12	+23%
2012	17 active, 1 not active	13	+6%

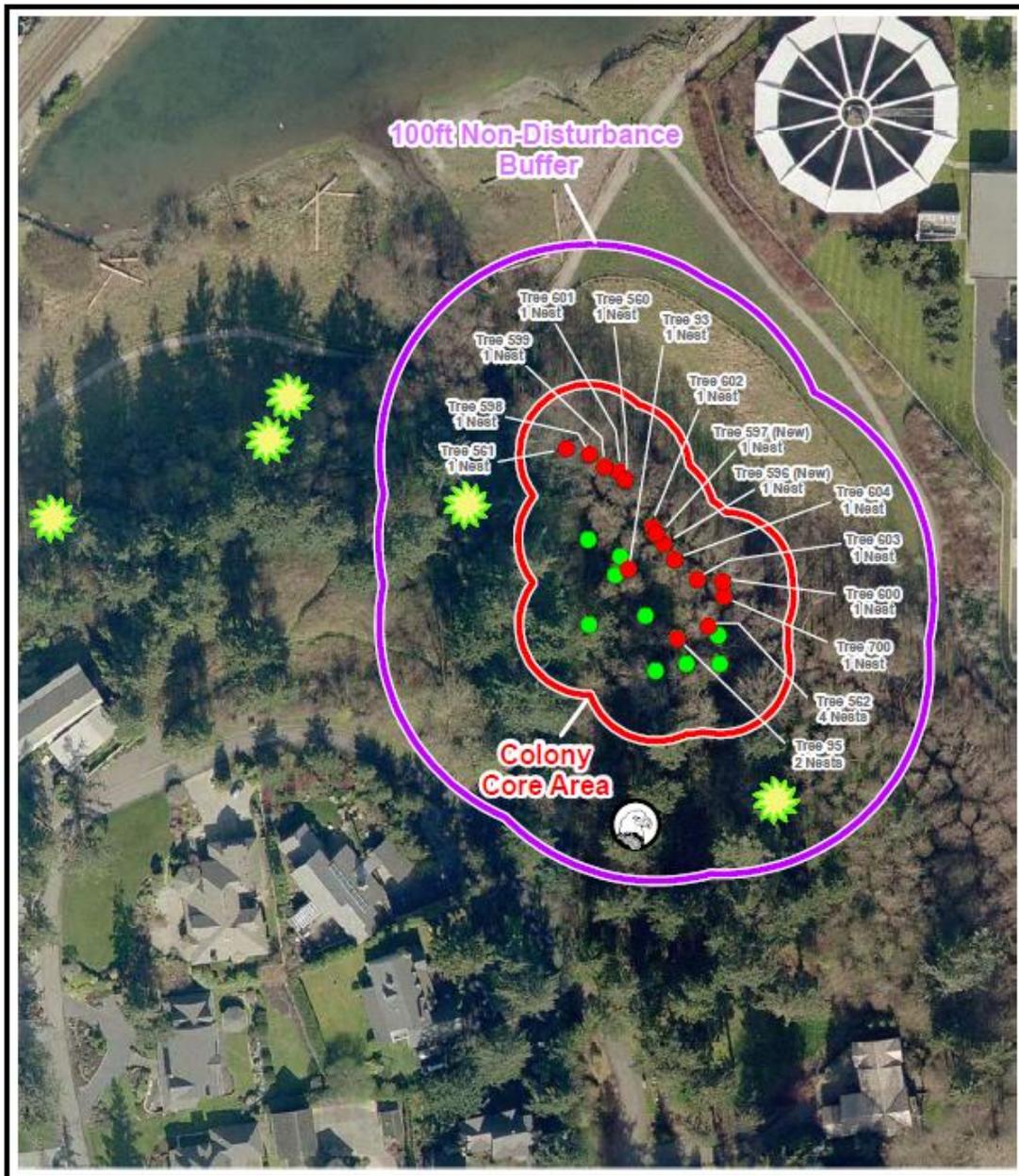


Post Point herons preparing nest 2012

Photo by Alan Fritzberg

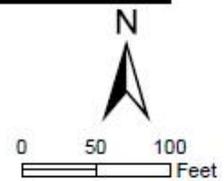
Figure 3: Colony Map 2011 Update

POST POINT HERON COLONY 2012



KEY:

- 2012 Active Nest Trees
- Previous Nest Trees
- Roost Tree
- Bald Eagle's Nest in Fir Tree (Last occupied in 2009)



Note: 2012 Active nest trees & counts labeled.
There were 2 new, & 15 total active nest trees in 2012.

2010 Pictometry Air Photo
City of Bellingham
December 2012

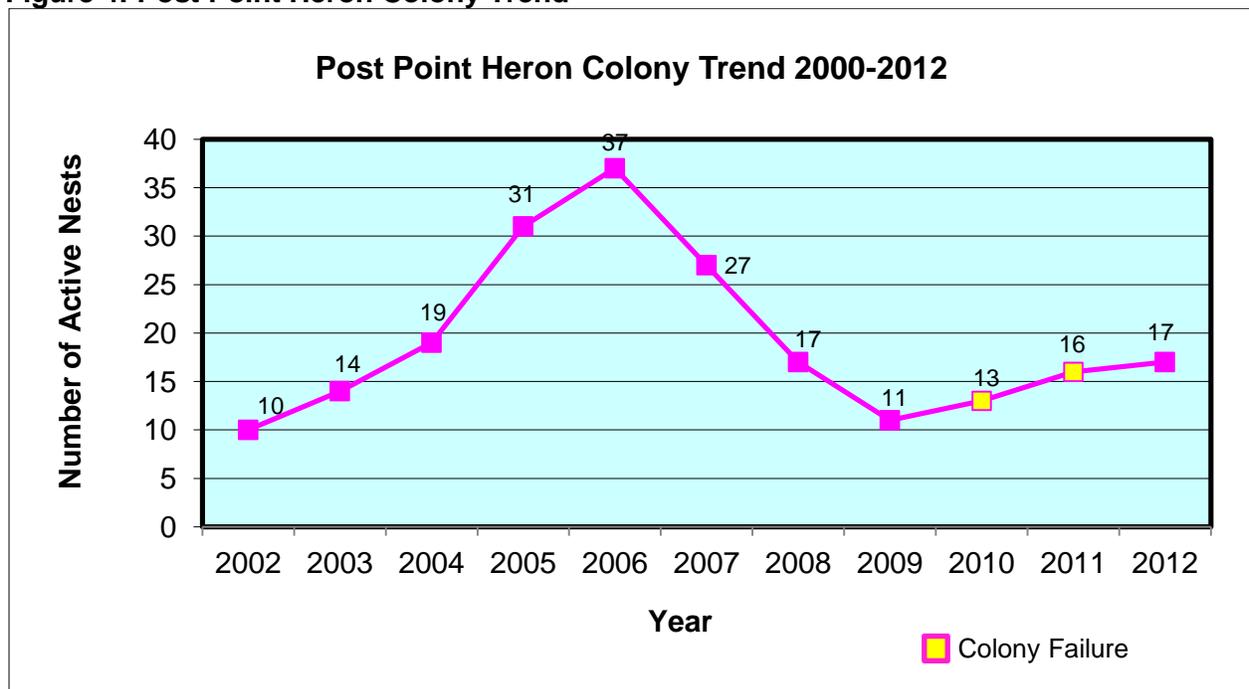
COLONY DYNAMICS

The Post Point Heron Colony experienced growth in its first six years, then for unknown reasons declined, failed and then rebounded in 2010. Between 2000 and 2006, the colony expanded from 6 to 37 nests. During this period the growth rate was approximately 36% annually. In 2007 the colony declined and that trend continued through 2009. Although the colony was active in 2008 and 2009, the colony failed to fledge young. In 2010, the colony rebounded and in 2011 the colony continued to be successful with incremental growth.

The early growth of the colony indicated the annual influx of new breeding adults and likely return of previous fledglings to breed once reaching maturity (2-3 years of age). Based on 2005 fledging numbers, the predicted return of 30 young breeders did not occur, instead approximately 20 heron failed to return to the colony to breed in 2007. In 2008, the return of adult heron to the colony was only half of the previous year and that repeated in 2009. The decline in breeding numbers in 2007 was likely related, in part, to high mortality resulting from harsh conditions and hurricane force winds experienced during 2006-2007 winter months, as well as other environmental stressors impacting heron fitness and survival. Declines in 2008-2009 were related in-part to depredation by Bald Eagles, but other factors were likely also involved, including weather, water temperature, prey availability, and adult heron health/fitness. Declines at other colonies in the Salish Sea were also reported in 2008 and reflect the need for region-wide reporting and tracking of colonies.

2010, 2011 and 2012 have marked a positive rebound for the Post Point heron colony. A minor increase in the number of nests and successful fledging of young proved to be an important turn around for the colony. The lack of Bald Eagle incursions during the 2010 season contributed to the nesting success. The mid-season loss of viable eggs and young from eagle depredation in 2011 was expected to be devastating to an already stressed colony, however, the colony rebounded with a second nesting attempt and successfully fledged young from all active nests. With no problems in 2012, the colony stabilized and produced young.

Figure 4: Post Point Heron Colony Trend

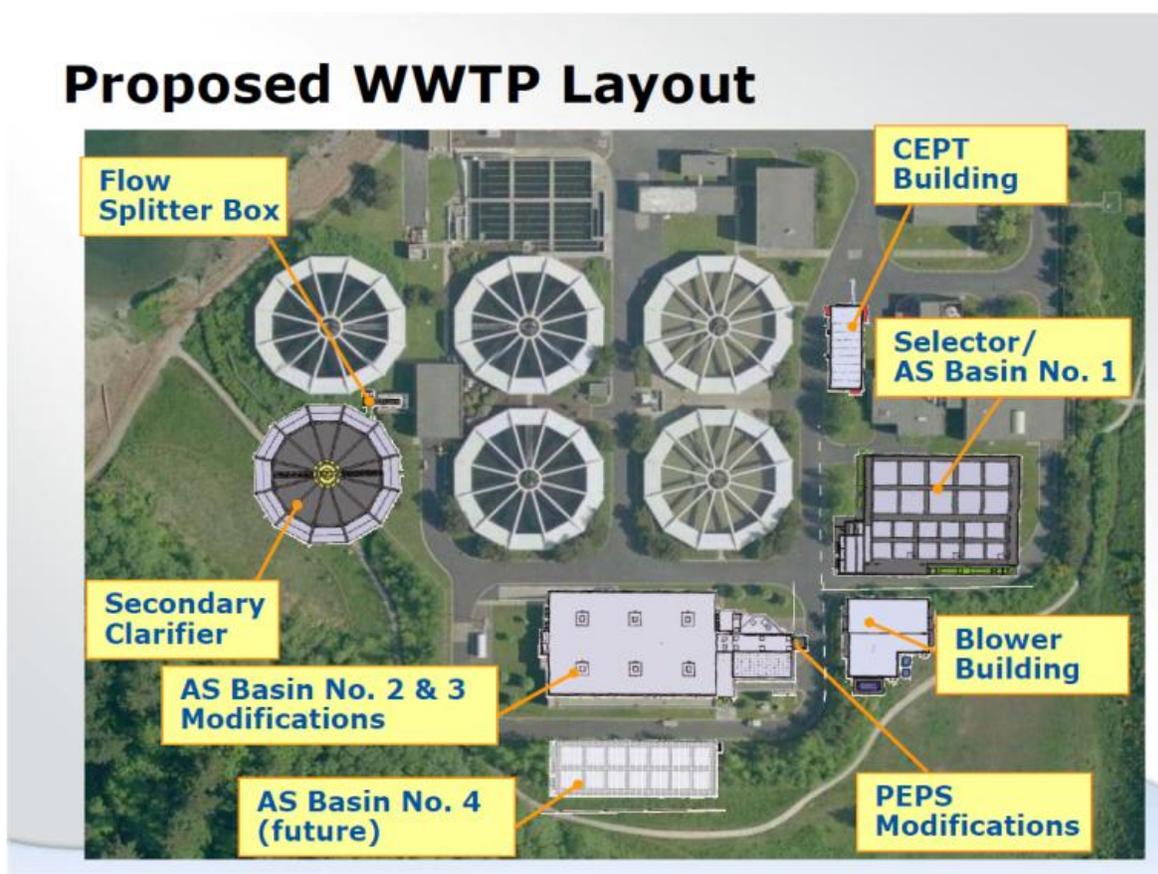


POST POINT WASTEWATER PLANT EXPANSION

The City of Bellingham Public Works Department is in the process of expanding the Post Point Waste Water Plant. The Post Point facility has provided secondary treatment of waste water since 1993 and processes up to 72 million gallons daily, with treated discharge piped directly to Bellingham Bay. Due to the city's population growth, the plant has reached its capacity and requires expansion to handle the increase in flow and load, and maintain treatment within federal and state standards. The expansion project is planned for a two year construction period. The project started in July 2012 and will continue to July 2014. Detailed project information is available online:

<http://www.cob.org/government/departments/pw/projects/wastewater-treatment-improvements.aspx>

Figure 5: Post Point Waste Water Plant Expansion



The expansion of the Post Point Waste Water Plant requires the addition of several new structures and enlargement of its existing footprint. Although most of the new construction is situated within the current facility boundary, three new structures will be built outside that defined space (Figure 5 Carollo Engineers). Two structures, including the Secondary Clarifier and AS Basin No. 4, as depicted in the August 2010 project layout, will be built within line of sight and close proximity of the Post Point heron colony.

This expansion project directly affects the Post Point Great Blue Heron Colony, due to its close location and structural scale. The project includes site prep, excavation and construction, using heavy equipment and associated lighting, cranes, and personnel, resulting in increased noise, traffic, lighting and human activity during the project and permanent physical changes to the landscape.

The close proximity of the heron colony to the project area and Secondary Clarifier in particular, within 100 feet of the active nests, will pose both temporary disturbance and potential permanent impact to the colony. Design changes to avoid potential impacts were not possible due to existing infrastructure and cost. In order to mitigate impacts the City of Bellingham, Public Works Department hired EAS Adfolson of Seattle to conduct a Biological Evaluation and provide a Wetland and Wildlife Mitigation Plan for the project. Both reports were completed in June 2011 and used in the permitting process:

<http://www.cob.org/government/departments/pw/projects/wwtp-permits.aspx>

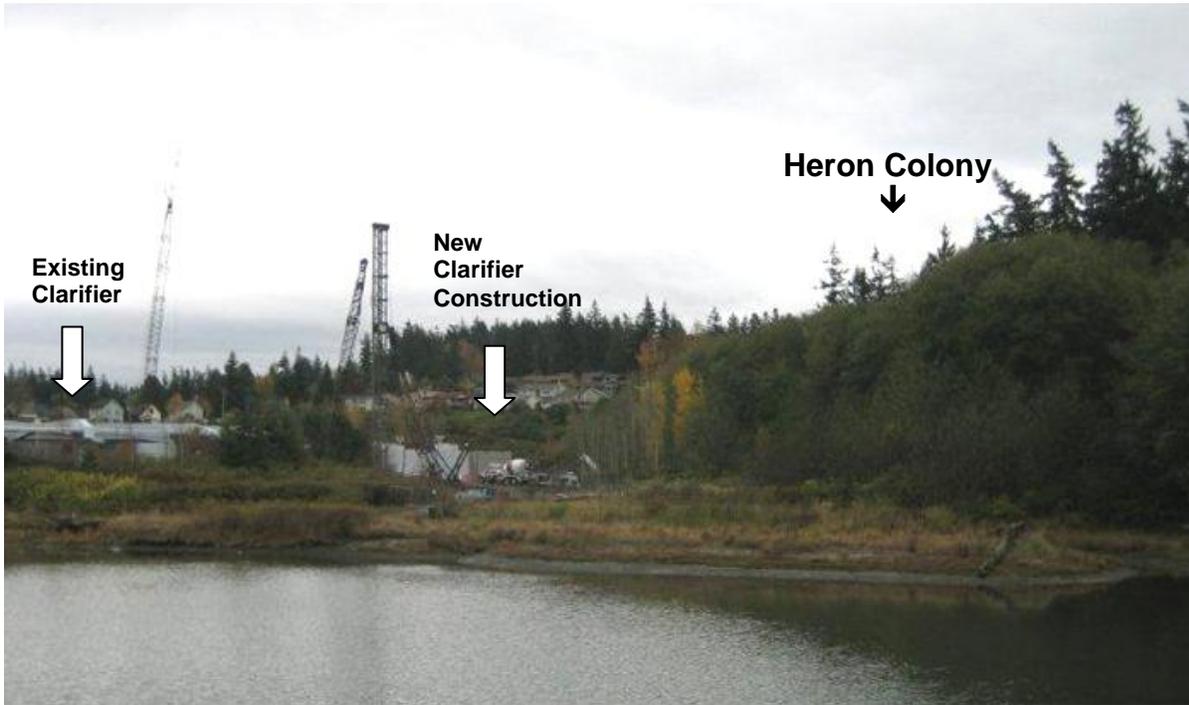
Due to the sensitivity of the herons and close proximity of the construction to the colony, a series of conditions were included in the City's Mitigated Determination of Non-Significance as a means of mitigating impacts to the heronry. The MDNS is included as an attachment to this document for greater detail. It is hoped that the conditions set forth in concert with the mitigation plan and consistent monitoring will provide the protective measures during construction and habitat enhancement necessary to retain a healthy, productive heron colony at Post Point.

The PPWTP expansion project is currently underway. During 2012, following the heron nesting season, grading and planting of mitigation areas along the lagoon was completed. Excavation for the secondary clarifier and other new structures was completed as construction proceeds. Progress of the project may be tracked online with photos and updates available at:

<http://www.cob.org/government/departments/pw/projects/wwtp-construction.aspx>



Post Point Wastewater Treatment Plant Expansion Construction October 2012



Secondary Clarifier Under Construction October 2012



**Completed Habitat Mitigation
at Post Point lagoon October 2012**
Photo by A. Eissinger





Heron Roost near Post Point Lagoon
Photo by Alan Fitzberg

MANAGEMENT AND STEWARDSHIP

The 2012 Post Point Great Blue Heron nesting season was completed without major incident or disturbance. During the 6 month nesting period, Nahkeeta Northwest monitored the colony and foraging area, recorded all observations and reported to the City of Bellingham. Due to the planned startup of construction at the Post Point Wastewater Treatment Plant, additional site visits were made and weekly reports issued to the Project Manager, Freeman Anthony. A total of 61 monitoring visits were made in 2012, 21 detailed weekly reports issued and 3 summary-progress reports were submitted. This Annual Report provides the final summary of the 2012 heron nesting season and results of all monitoring activities.

With onset of the Post Point Wastewater Treatment Plant Expansion beginning in July 2012, it is vital that monitoring of the heron colony begin early in 2013 and continue in an intensive manner throughout the nesting season. Terms of the mitigation plan should be carefully followed to protect and enhance habitat where possible and to ensure construction guidelines are adhered to. Monitoring of heron nesting while construction is underway in 2013 will provide important information for Project Management and activities on the ground.

Recommendations for 2013 management and stewardship of the Post Point Great Blue Heron Colony are as follows:

1. Conduct monitoring according to standard guidelines with greater frequency, twice weekly or more as needed to track the activity and behavior of the heron in the colony and nearby foraging areas, while herons are present nesting.
2. Determine the return of the heron to the colony in early season and record their response to changes in landscape and construction activities.
3. Record any disturbance as evidenced by behavioral response by the heron to construction activities and report to Project Manager immediately.
4. Work with the PPWTP project manager and contractor during construction at to inform the process and reduce impacts to herons and other wildlife.
5. Limit disturbance of as much associated upland habitat around the colony as possible.

6. Create enhanced vegetated buffers and purchase adjacent undeveloped upland if possible.
7. Protect the Post Point nearshore foraging habitat from human recreational disturbance by posting educational signage at Marine Park during nesting season - including the lagoon and outer shoreline intertidal and eelgrass area.
8. Collaborate with other agencies or institutions to survey foraging sites around Bellingham Bay and document heron prey species and concentrations in foraging areas.
9. Conduct outreach and education to the user groups of the Post Point and Marine Park shoreline including: kayakers, kiteboarders, shellfish gatherers, Bellingham Parks and Ski to Sea organizers.
10. Monitor Bald Eagle activity and determine location and status of any nearby eagle nest.
11. Support active public education and volunteer involvement in consultation with the Biologist.
12. Provide neighborhood education outreach in the Shorewood/Edgemoor area.
13. Install and maintain a webcam in the colony for education and monitoring.

In 2003, the Post Point Heron Colony Management Plan was prepared for the City of Bellingham. The plan provided background information, regulatory overview, status of the colony and recommendations. Given the 2012-2014 construction and changes to the heron habitat, this management plan requires updating, assuming the heron remain nesting at their current location. It is recommended that an update be completed in 2015.

An assessment of foraging areas and documentation of prey species and seasonal occurrence is needed to better understand their relationship with the heron colony. No survey of nearshore heron prey species in Puget Sound has been made and is needed to understand the heron/prey dynamic. Documentation of prey concentrations would also help direct conservation of foraging areas. Continued observation of foraging areas during the breeding season is also essential due to the dependence of the colony's success on these areas.

In addition, inclusion or support for regional heron colony monitoring would contribute significantly to the understanding, determination of trends and tracking of the heron population as a whole. With this additional information, individual heron colony fluctuations can be better explained.

The City of Bellingham's cooperation in efforts to education and inform the public particularly for neighbors, shoreline user groups and Sea to Ski organizers is needed to inform them of sensitive heron feeding areas and the role they can play to protect these areas for herons and other wildlife.

CONCLUSION

The Post Point Heron Colony was established in 2000. Herons have occupied and nested at this site for thirteen seasons. During that time, the heron colony has grown, declined, abandoned and rebounded and has produced young for eleven out of the thirteen years. In 2012 the Post Point Great Blue Heron Colony has again succeeded in producing young and contributing to the perpetuation of the species in the Salish Sea.

Monitoring of the colony during the 2012 nesting season was without incident. The herons returned in early February and nested through July. The only minor setbacks were poor weather in the spring and one possible eagle incursion, otherwise, the heron colony fared well and successfully produced and fledged young. The heron, in 2012, occupied 13 nest trees and

a total of 17 active nests. Active nests supported a average of 2.4 young per nest, within the normal range of this region. Heron young and adults dispersed from the colony following nesting/fledging and prior to the onset of major construction at the Post Point Wastewater Plant.

Although the Post Point Great Blue Heron Colony has proved resilient over the years, withstanding predatory eagle attacks, increased human use of their habitat and rebounding from nesting failures, the ultimate challenge for this colony is the major landscape change and two year construction project associated with the Post Point Wastewater Treatment Plant expansion beginning July 2012. With the construction of a new clarifier within 100 feet of the colony, associated disturbances and loss of buffer habitat, it is not known if the herons will return to, or persist in their current colony location in 2013 and beyond. Efforts are made to inform the construction process, to reduce impacts including limiting construction during heron nesting and project site mitigation. Through these measures, together with close monitoring, it is hoped that the heron colony will continue it reproductive success.

Nahkeeta Northwest would like to extend our gratitude to the City of Bellingham for supporting the conservation of the Post Point Great Blue Heron Colony and the individuals that have supported monitoring of the colony site including: Larry Bateman and the staff of the Post Point Waste Water Treatment Facility, and Freeman Anthony, P.E. PPWTP Project Engineer.

We would also like to express a special thank you to Chris Behee, GIS Specialist with the City of Bellingham, for providing nest locations, mapping and excellent updated maps for this report. We greatly appreciate photographs of the Post Point herons provided by Alan Fritzberg. Finally, we acknowledge the support of neighbors who shared useful information related to the herons and heronry.



ATTACHMENTS

- **Post Point Great Blue Heron Colony Annual Chronology**
- **City of Bellingham: Post Point Waste Water Treatment Plant Expansion - SEPA Mitigated Determination of Non-Significance**



Inside the Post Point Heronry

Photo by A. Eissinger

Post Point Great Blue Heron Colony

Colony Chronology (2012 update)

Pre 1999:

- Post Point bluff utilized by herons for roosting and possible nesting
- Post Point Lagoon and nearby shoreline utilized for foraging

1999

- Neighbors report heron nesting activity at Post Point (1-2 nests unconfirmed)
- Chuckanut heron colony abandon from Heron Estates
- Herons reported attempting to build nests in cottonwood north of Viewcrest, nesting attempt failed

2000

- Herons establish nesting colony in present location at Post Point
- Total 6 nests in 5 trees and successfully fledge young

2001

- Herons continue to nest at Post Point (no data available - 8 nests estimated)
- Pedestrian trail moved away from base of colony to 111 feet northeast

2002

- Herons continue to nest at Post Point increasing to 10 nests in 6 trees
- 66% growth from 2000 (estimated 25% annual growth from 2001)

2003

- Herons nesting at Post Point increase to 14 nests in 8 nest trees
- 133% growth from 2000 (40% annual growth from 2002)

2004

- Herons successfully nesting at Post Point for 5th year with 19 nests in 10 nest trees
- 216% growth from 2000 (36% annual growth from 2003)

2005

- Herons successfully nesting at Post Point for 6th year.
- 56-58 breeding adults.
- Staging reported February 11 with nesting commencing February 23.
- Hatching confirmed April 19
- Nesting/fledging completed August 26.
- 28 week breeding cycle.
- Productivity: mean 2.5 young per nest = estimated 77 young fledged
- Total of 31 nests in 10 nest trees (including 1 blown down nest)
- 416% growth from 2000 (63% annual growth from 2004)
- Average growth rate = 39.4% annually over 5 years.

2006

- Herons successfully nesting at Post Point for 7th year.
 - 72-74 breeding adults.
 - Staging reported March 1 with nesting commencing March 15.
 - Hatching confirmed May 3
 - Nesting/fledging completed August 11.
 - 23 week breeding cycle.
 - Productivity: mean 2.6 young per nest = estimated 91 young fledged
 - Total of 37 nests in 15 nest trees
 - 19% annual growth from 2005
 - Average growth rate = 36% annually over 6 years.
-

2007

- Winter storm damage: loss of 5 trees and 7 nests
- Herons successfully nesting at Post Point for 8th year.
- ~54 breeding adults.
- Colony reoccupied Feb. 18
- Incubation started March 12
- Hatching confirmed April 26
- Nesting/fledging completed July 26.
- 21 week breeding cycle.
- Productivity: mean 2.6 young per nest = estimated 70 young fledged
- Total of 27 nests in 12 nest trees
- 27% nesting decline from 2006
- Average growth rate = 35% annually over 7 years.

2008

- Herons return to nest at Post Point for 9th year.
- Colony reoccupied March 6
- ~34 breeding adults
- Incubation started March 15
- First hatching confirmed April 26
- Early nests failed late-May
- Second nesting attempt June
- Colony failure late-June
- Colony abandonment confirmed July 1 – no young fledged
- Total of 17 nests in 9 nest trees
- 37% nesting decline from 2007 – no productivity

2009

- Herons return to nest at Post Point for 10th year.
- Colony reoccupied March 6
- ~18 breeding adults - 11 nests active (2 unable to attract mates)
- Incubation started April 1
- First hatching confirmed May 3
- Bald Eagle depredation observed May 27
- 2-3 nests remain active May 29
- Colony abandonment confirmed June 12 – no young fledged
- Total of 9 nests utilized in 8 nest trees
- 35% nesting decline from 2008 – no productivity

2010

- Herons return to nest at Post Point for 11th year.
 - Staging Feb 5
 - Colony reoccupied March 6
 - 22 breeding adults – 13 nests active (max. 15 nests visible)
 - Incubation started March 19
 - First hatching confirmed April 27
 - Productivity ~3 young/nest
 - No Bald Eagle depredation observed or reported
 - Fledging late June – early July, fledging complete July 12
 - Total of 13 active nests utilized in 9 nest trees
 - 2 added nests, positive change from 2008-09 – 100% change in nest productivity!
-

2011

- Herons return to nest at Post Point for 12th year.
- Staging in colony February 10 – 5 nests occupied by single adult
- Winter storm and snow force heron out of colony February 25
- Staging on clarifiers March 3
- Colony reoccupied March 7 – 7 nests occupied
- Early Incubation started March 19
- Total 16 nests active (max. 17 nests visible) April 9
- Bald Eagle incursions April 26-27 eggs and young viability lost
- Re-nesting begins May1 – 16 nests remain occupied
- Egg laying/incubation underway May 5
- No Bald Eagle incursions observed or reported
- First hatching confirmed June 1
- Rearing June/July
- Productivity ~3 young/nest
- Fledging late July – early August, fledging complete August 14 (one month later than 2010)
- Total of 16 active nests utilized in 13 nest trees (2 new nest trees)
- 3 added nests, positive change from 2010 = +23%

2013

- Herons return to nest at Post Point for 13th season.
 - Staging in colony February 3-22, w/ 1-5 nests occupied by single adults
 - Winter storm and snow force most heron out of colony February 29
 - Colony reoccupied March 3 – 7 nests occupied, 15 nests visible
 - Pairing, courtship begin March 8
 - Incubation started March 23
 - Total 16 nests active (max. 11 nests visible) April
 - Possible Bald Eagle incursion April 25, no impact observed
 - Late April – very poor weather obscuring views and extending brooding
 - First hatching approximately May1
 - Rearing May-June
 - First fledglings observed June 26
 - Productivity ~2.4 young/nest
 - Total of 17 active nests utilized in 13 nest trees (2 new nest trees)
 - 3 added nests, positive change from 2011 = +6%
-



Heron Flyover
Photo by Mike Hamilton



PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT

210 Lottie Street, Bellingham, WA 98225
Telephone: (360) 778-8300 Fax: (360) 778-8302

SEP2011-00005

Mitigated Determination of Non-Significance

Description of Proposal: The proposed project will improve treatment capacity at the City's Post Point Wastewater Treatment Plant, a designated Essential Public Facility, by expanding the core secondary process to meet regulatory requirements and the projected population increase. The project includes construction of a fourth secondary clarifier, a chemical facility and a blower building; modifications to pump stations and flow splitting structures; a new anaerobic selector basin; additional activated sludge basins and associated mechanical facilities; retrofits to the existing activated sludge basins; and improvements to existing electrical and control systems. The project will result in 1 acre more of impervious surface within the 30-acre site and will obtain coverage under the existing General NPDES Permit to be granted by Dept. of Ecology. Critical areas at the construction site include wetlands, a stream, a great blue heron colony, and an eagle's nest. A portion of the proposed construction and wetland enhancement is within 100-foot of the heron colony. The construction will result in filling of approximately 8,642 square feet of wetland and impact wetland buffers. The existing trail near the south end of the Post Point Lagoon will be permanently closed to protect the heron colony and provide a buffer to the expanded lagoon. Additional mitigation proposed includes expansion of the lagoon to increase habitat and wetland function, limiting construction and wetland enhancement during the breeding season February 1st—August 31st (or when the project heron biologist indicates all heron juveniles have fledged), native plant installation in remaining wetland and buffers to increase function and provide protection to the heron colony and eagle's nest, and temporary or permanent closure of the pedestrian trail nearest the new clarifier (wetland impacts for a rebuilt trail accounted for). Monitoring the heron colony will occur during and after the project by the project heron biologist; the temporary trail closure will be re-evaluated after construction. For more details and site plans go to www.cob.org and type in the search bar "Post Point Wastewater Treatment Plant".

Proponent: City of Bellingham Public Works Dept. 210 Lottie St., Bellingham, WA 98225. Rory Routh contact, (360)778-7900.

Location of Proposal: 30-acre site 200 McKenzie Ave, Bellingham, WA 98225; Fairhaven Neighborhood Area 10, Parcel # 370211 403538, Zoned Public.

Lead Agency: City of Bellingham Planning and Community Development Department

Mitigating Conditions Required for this Proposal:

- 1) Impacts to wetlands, wetland buffers, the great blue heron colony and bald eagles shall be mitigated by full implementation of the "Post Point Wastewater

Treatment Plant Improvements Wetland and Wildlife Mitigation Plan” (ESA, June 2011) and by implementation of the conditions within this determination.

- 2) Prior to issuance of building, grading, clearing, or stormwater permits for the project, a complete and detailed wetland and wetland buffer mitigation plan shall be submitted to the Planning and Community Development Dept. (PCDD) for review and approval. The plan shall include: plant species (common and scientific name), density, size, and other specifications; site specific goals, objectives, and performance standards; a monitoring and maintenance plan for at least five years; a contingency plan; and an implementation schedule for all phases of the mitigation work.
- 3) Mitigation work shall commence within one year of the issuance of the Critical Areas Exemption and Shoreline Permits. The mitigation implementation schedule mentioned in #2 shall provide the timing of each mitigation action, including coordination of the lagoon excavation work within the regulatory “windows” allowing it and coordination with ingress and egress of equipment necessary to do the excavation, trail removal, planting, site preparation, and other necessary work. The timing of the excavation of the lagoon shall adhere to federal and state regulations for in-water work and shall also adhere to the construction-timing limits established from February 1st through August 31st, or when the project heron biologist indicates the heron juveniles have fledged (i.e. the heron nesting construction restriction period), for protection of the nesting great blue heron and bald eagles. The City of Bellingham Environmental Coordinator shall be consulted before final grades for excavation are established in order to concur with the final design.
- 4) No construction work shall occur on the secondary clarifier, or any other construction aspect of the project located within the 100-foot heron colony core buffer (shown on attached site plan), during the heron nesting construction restriction period, except for finishing work done within the interior of the clarifier or work done with non-mechanized hand-held tools.
- 5) Work between the 100-foot heron colony core no-disturbance buffer and the 300-foot heron-nests buffer shall be avoided to the greatest extent possible during the heron nesting construction restriction period. Work in this area during this period shall be limited to that within the existing built facility and within the existing vegetated screen separating the active facility from the rest of the property. To the greatest extent possible, background noise and light from construction activities should be of no greater duration or intensity.
- 6) Reports submitted from the project heron biologist to the applicant detailing the status of the heron colony during the nesting season and through the duration of construction shall be sent monthly to the PCDD and to the contractor at the same time they’re submitted to the Public Works Dept.
- 7) Prior to issuance of any building, grading, clearing, or stormwater permits for the project, the location of the 300-foot heron nests-buffer shall be clearly marked in the field, and on the construction plans, and remain in place for the duration of the project. The 300-foot buffer is defined as 300 feet from the active heron nest trees last mapped in the spring of 2010. In addition, the 100-foot heron colony core buffer and clearing limits shall be clearly marked in the field.

- 8) If soil conditions anywhere on the site prevent the use of auger-cast piles and instead require pile driving during the heron nesting construction restriction period, the project heron biologist and the PCDD shall be notified immediately and before pile driving commences. Pile driving shall be done in a way that minimizes audio and visual disturbances to the heron colony to the greatest extent possible.
- 9) Revised plans shall be developed to reconstruct the trail that is currently located between the heron colony and the clarifiers. The applicant shall work in concert with the project heron biologist to design and locate the trail, including fencing, mitigation planting, construction timing, and other measures that are aimed at reducing potential impacts to the heron colony and bald eagles based on current conditions. The trail plan shall be submitted to the PCDD for review and approval prior to issuance of any building permits for the entire project. The trail shall be constructed prior to final building inspection approval for the clarifier unless otherwise recommended by the project heron biologist and approved by the City SEPA Official.
- 10) Equipment and material storage, staging and fueling areas shall be outside the 100-foot heron colony core buffer and wetlands.
- 11) In order to mitigate for the permanent closure of the trail spur along the south portion of the lagoon, a permanent viewing platform and interpretive sign for the heron colony and the lagoon shall be installed near the public trail adjacent to the lagoon. The applicant shall work in concert with the project heron biologist to develop the design and location of the viewing platform and location of the interpretive sign to avoid impacts to the heron feeding areas and their line-of-sight to those feeding areas. The viewing platform shall be constructed prior to final building inspection approval of the clarifier unless otherwise recommended by the project heron biologist and approved by the City SEPA Official.
- 12) Construction stormwater impacts shall be mitigated to avoid water quality and quantity degradation to the stream, lagoon, and Bellingham Bay. All state and local stormwater requirements shall be met at the time of construction, not postponed to a future date.

Environmental Information Considered:

- 1) Permit application materials as revised through August 24, 2011
- 2) JARPA (June 23, 2011)
- 3) SEPA Checklist (March 4, 2011)
- 4) Biological Evaluation (June 2011)
- 5) Critical Areas Assessment Report: Wetland Delineation (Revised 2011)
- 6) Wetland and Wildlife Mitigation Plan (June 2011)
- 7) Memorandum RE: Post Point Great Blue Heron Colony (October 2009)
- 8) Post Point Heron Colony Annual Monitoring Reports
- 9) Post Point Heron Colony—2010 Monitoring Annual Report (January 28, 2011)
- 10) Post Point Heron Colony Management Plan (2003)
- 11) Bald Eagle Management Plan (February 2011)
- 12) Geotechnical Engineering Report (October 2010)
- 13) Archaeological Assessment (April 13, 2011).

- 14) Facilities Planning Report (February 2011)
- 15) Technical Memorandum No. 5 Alternatives Review Criteria Draft (February 2010)—Final included in Facilities Planning Report
- 16) Comprehensive Sewer Plan (June 2009)

The lead agency for this proposal has determined that the project does not have a probable adverse impact on the environment. An environmental impact statement is not required under RCW 43.21.C.030(2) c. This decision was made after review of a completed environmental checklist on file with the lead agency. This information is available to the public on request.

(X) This MDNS is issued under WAC 197-11-350; the lead agency will not act on this proposal for 14 days from the date below.

Comments must be submitted by 5 PM: September 21, 2011

Responsible Official: Jeffrey Thomas
Position: Planning and Community Development Director
Address: 210 Lottie Street, Bellingham, WA 98225

Signature

Date

Contact: Kim Weil, Planning and Community Development Department, (360) 778-8356 or email kweil@cob.org.

Appeal rights: Pursuant to BMC 16.20.210(D), there is no administrative appeal of this environmental determination.

The City of Bellingham seeks to comply with the American Disabilities Act. If you have special needs, please call (360) 778-8300 (voice) or (360) 676-6883 (TDD).