Post Point Heron Colony

2007 Monitoring - Annual Report

prepared for:

The City of Bellingham
Department of Public Works
2221 Pacific Street
Bellingham, WA 98226

prepared by:

Ann Eissinger
NAHKEETA NORTHWEST WILDLIFE SERVICES
PO Box 176
Bow, WA 98232
(360) 766-6008

Post Point Heron Colony

2007 Monitoring - Annual Report

prepared for:

The City of Bellingham
Department of Public Works
2221 Pacific Street
Bellingham, WA 98226

prepared by:

Ann Eissinger
NAHKEETA NORTHWEST WILDLIFE SERVICES
PO Box 176
Bow, WA 98232
(360) 766-6008
nahkeeta@fidalgo.net

Table of Contents

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 on the nearshore bluff southwest of the Post Point Waste Water Treatment Facility. The colony is situated on City property, but is adjacent to private property proposed for residential development. Due to the sensitivity of the heronry and its uniqueness within the city, Bellingham Public Works requested a management plan (2004) followed by a scientific baseline study of the colony in 2005 to document breeding chronology, nesting activities, colony status and recent changes. Continued annual monitoring of the colony is necessary due to its sensitivity as a colonial nesting site and local significance as a critical area and unique location in an urban environment.

Habitat used by the Post Point herons include upland forest, grassland field, freshwater, estuarine and marine areas. All of these essential habitats are located in close proximity of the Post Point colony and form a habitat matrix supporting staging, nesting, roosting and foraging. The heronry 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 congregations in the same contiguous forest occupied by the colony. The Post Point herons are unique in their use of upland human structures for staging at the Post Point wastewater treatment facility for staging. Herons forage along the intertidal shoreline of Post Point, the lagoon and Padden Creek estuary as well as shoreline areas of Bellingham Bay, Chuckanut Bay and Portage Bay.

The results of the 2007 Post Point Great Blue Heron Colony Annual Monitoring are detailed in this report. The heron colony continues to be active and productive; however 2007 marked the first nesting decline in its history. In 2007, 27 nests were active, this is down from 37 nests in 2006. This represents a decline of 27% and is likely associated with winter mortality since no other new colonies were reported in the area. The Post Point heronry was first colonized in 2000 with 6 nests in 5 nest trees. Over 6 years the colony has grown nearly 36% per year through 2006 and the core area doubled in size to the current nesting area of approximately 1 acre. Since 2000, the colony has expanded annually with the exception of the 2007 breeding season.

The Post Point Heron Colony was monitored between February and July 2007 accounting for a total of 18 site visits by a professional wildlife biologist who recorded observations, conducted nest counts and mapped the colony. The nesting season usually spans six to seven months from February or March to August. The herons stage in and near the colony in February or later prior to breeding and nesting. Nesting proceeds with nest building and enhancement and breeding in March. Egg laying and incubation start in late March and continue through April. Hatching of young in late April carry on through May, followed by rearing through June and fledging in July and August. By late August, most heron adults and juvenals have dispersed from Post Point. The 2007 nesting season was notably different from previous years, with colony occupancy in mid-February and full fledging by the end of July. The breeding chronology of this colony has condensed significantly over the past 2 years and nesting has declined. Based on occupancy and productivity data it is estimated that the colony fledged 70 young in 2007.

Disturbance in and around the heron colony appeared to be minimal in 2007. Bald Eagles were on site less than previous years. The bald eagle nest near the heron colony (located approximately 62 feet from the colony core) was not occupied. However, a juvenal Bald Eagle was observed west of the colony. Eagles are natural predators of herons and some disturbance and/or mortality in the colony related to eagles is expected. No direct eagle predation of heron was observed or reported at Post Point.

Human related disturbance of foraging and fledging herons was observed along the outer shoreline. Closure of Post Point Lagoon to public access, reduced disturbance along the lagoon and may have increased disturbance along the nearshore. A permanent fence and associated vegetation situated around the base of the colony provides a protective buffer to the north and proved effective in limiting human and dog access to the nesting area.

Recommendations to the City of Bellingham for conservation of the Post Point Heron Colony include:

1. Update the 2003 Post Point Heron Management Plan.
2. Fully protect associated upland habitat around the colony – purchase adjacent undeveloped land.
3. Protect the Port Point nearshore foraging habitat from human and dogs.
4. Continue annual monitoring of the colony and tracking of foraging areas.
5. Determine location of active Bald Eagle nest.
6. Support a public education component in consultation with the Biologist.
7. Provide neighborhood education outreach in the Shorewood/Edgemoor area.

The Post Point Heron Colony continues to be active and productive. Due to the colony's unique occurrence within the City of Bellingham, protection of the nesting area and associated habitats are imperative to the heronry's continued health and longevity. The Great Blue Herons of Post Point represent one of the City's greatest natural features and most sensitive wildlife areas.

INTRODUCTION

The Post Point Great Blue Heron Colony Annual Report is presented as a summary of the 2007 heron colony monitoring. 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, productive and strategically important to the area's heron population.

The Great Blue Heron *(Ardea herodias)* is a resident or year-round species in this region and recognized as a Priority Species by Washington Department of Fish and Wildlife. Heron colony sites are also considered critical areas resulting in the protection of both the herons and their nesting habitat. Heron colonies are sensitive to disturbance and in most cases require special protective management to maintain their stability and productivity.

Due to the sensitivity of the Post Point Great Blue Heron Colony Heron Colony and its uniqueness, the City of Bellingham Public Works has developed a management plan (2003), a scientific baseline study (2005) and continued monitoring of the site to follow through in appropriate management and conservation of the site. Continued monitoring of the colony has been recommended on an annual basis due to its sensitivity as a colonial nesting site and local significance as a critical area and location in an urban environment

The 2007 Post Point Great Blue Heron monitoring included 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 providing an update on the number of nests and nest trees utilized during 2007. Foraging observations will also be made to document foraging activity. Monitoring spanned six months during the breeding season, plus post breeding documentation. Periodic progress reports were submitted documenting the heron's nesting activity in 2007.

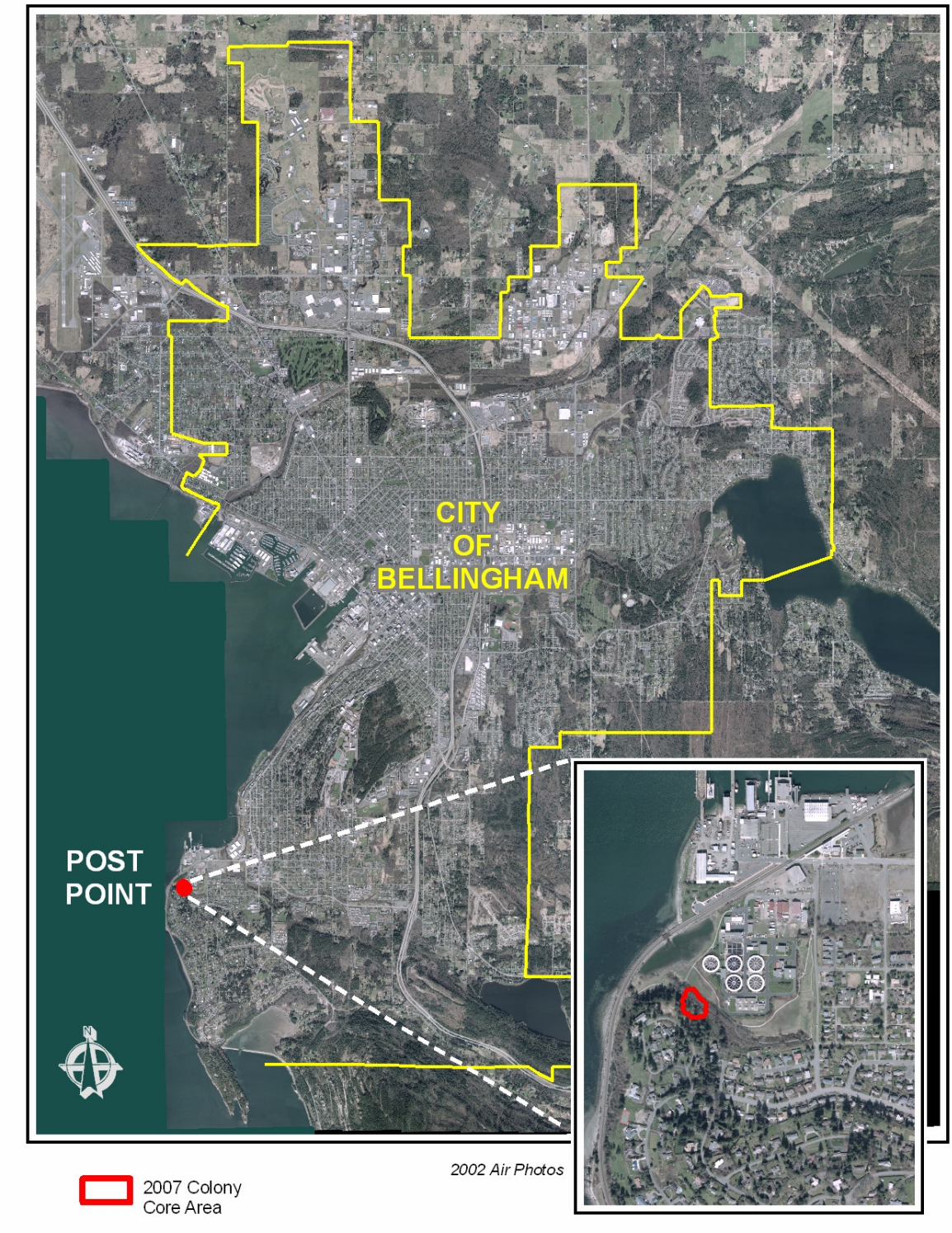
Implementation of monitoring, including on-site field observation and data collection was conducted by Ann Eissinger of Nahkeeta Northwest Wildlife Services based in Bow, Washington. Ms Eissinger has over fifteen years experience monitoring Great Blue Herons and is expert in heron ecology, behavior, colony dynamics and stewardship. Her recent 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

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, Department of Public Works. The Biologist is also assisted in the development of interpretive displays and public education materials for Post Point.

The point of contact for this project at the City of Bellingham Department of Public Works was Larry Bateman, Post Point Operations Supervisor.

Figure 1

Post Point Heron Colony Location



GENERAL MONITORING

General monitoring included on-site visits and observations made from various locations in close proximity to the colony. Due to the location and associated vegetation around the nesting area, views of certain nests were obscured following leaf-out. A representative sample group of visible nests was therefore utilized for observation.

General monitoring of the colony commenced early in the season beginning in February and extended through July 2007. The breeding season was documented from February 18 to July 26 at total of 21 weeks, two weeks less than 2006 and seven weeks less than 2005. Monitoring was conducted on-site on a biweekly basis. In 2007, a total of 15 on-site monitoring visits were made during the breeding/nesting season plus one storm assessment and two colony nest count/mapping visits in the autumn during the non-nesting period.

Monitoring of the colony included three primary objectives: 1) documentation of the nesting cycle or breeding chronology and related behaviour 2) observed disturbance including predation, human disturbance and other natural or unnatural disturbances 3) habitat utilization. The results of the monitoring observations are detailed below.

Breeding Chronology

Mid-February marked the early onset of heron staging and nesting in the colony. This is the first time that the heron reoccupied in the colony and began nesting in February. A total of nine heron were observed at nests on February 18. By March 4, 17 nests were occupied, 8 of which were paired and courtship had begun. At the end of March egg laying and incubation had commenced. By March 15, 13 nests were occupied. By March 23 all but three available nests were occupied with at least 6 incubating - nests were also being enhanced or built. By early April 23 visible nests were occupied with incubation at most nests. Leaf-out obscured visibility, so more nests were occupied than observed. One nest remained unoccupied until mid-April. First hatching of young was documented April 26. Incubation, hatching and brooding continued through May along with the rearing of young. Rearing of young continued through June and July with early fledging (young leaving the nest) noted beginning in the second half of June. Due to the asynchronicity of egg laying and hatching, young of the same nest fledge at different times. Due to the gradual reoccupation of nests in the colony, fledging was extended over one month duration unlike the rapid fledging in 2006. The colony's breeding season ended by July 26 at which time fledging and dispersal was complete. The 2007 breeding season was the shortest duration recorded totaling a mere 21 weeks.

Post Point Heron Nesting Chronology Summary 2007

- February: Reoccupation of the colony and onset of courtship
- March: Return of heron continue, nesting onset, egg laying and incubation
- April: Last nest reoccupied, incubation and first hatch of young
- May: Incubation, hatching, brooding and rearing of young
- June: Rearing of young, early fledging
- July: Rearing of young, final fledging and dispersal

.

In addition to the seasonal chronology, a historic chronology was also developed. The historic chronology outlines the annual colony activity, nest count results and other pertinent occurrences for that year related to the herons. The historic chronology is included in the appendix of this report.

Predation

During each field visit to and in the vicinity of the heron colony, observations were made of potential predators such as: Bald Eagles, Red-tailed Hawks, Crows and Ravens. Crows and eagles had been noted consistently in the vicinity of the heron colony throughout the breeding season, ravens and hawks occurring occasionally. No harassment or predation was observed at the heronry.

Bald Eagle activity in particular was carefully monitored. A Bald Eagle nest situated in a large Douglas fir tree, is located approximately 62 feet southeast of the heron colony. The eagle nest was monitored for activity, but appeared to be inactive. An active eagle nest is located somewhere in the vicinity as indicated by a juvenal eagle perched near the heron colony food begging from an adult in mid-July. Adult Bald Eagles persist near the heron colony, usually perched in large Douglas fir trees, feeding on the shoreline or flying over.

The Bald Eagle was delisted from the Federal Endangered Species Act in 2007, however they remain protected under the Bald Eagle Protection Act and Washington State Endangered Species Act. Nests are also protected under State regulations and will require a Bald Eagle site management plan. The location and map illustrating the Bald Eagle nest location was forwarded to Washington Department of Fish and Wildlife's Region 6 Bald Eagle Specialist Julie Stofel in 2006.

Disturbance

No direct disturbance to the herons in the heron colony was observed by the Biologist during the 2007 nesting season. Remains of young and eggs were examined in the colony following dispersal, however, no cause of death was ascertained. Young heron that fall out of the nest are not attended by the adults and die of injury, starvation or predation on the ground. The discovery of golf balls in the colony is of concern. The only logical origin of the golf balls is from the Shorewood development upslope from the colony. Public education of this neighborhood would help reduce further disturbance of the colony. Purchase of the Shorewood bufferlands would also help protect the colony site.

A public trail and off lease area for dogs is located directly north of the heron colony. Dogs and people utilize the off-leash area with great frequency. An area of the field below the heron colony has been permanently fenced off restricting dogs and their owners from entering the no disturbance zone, 100 feet from the colony perimeter. This area appears to provide adequate buffering from people and dogs, since the colony is set on a forested hillside and is screened from most of the activity below and protected from intrusion. Herons have shown no response at any point during the breeding season to people and dogs in the off leash area, including loud barking during the monitoring visits.

Activity in and around the Post Point Waste Water Treatment Facility appears to have little effect on the nesting herons. During the late winter herons were staging on the clarifiers at the water treatment plant and were occasionally flushed by plant personnel.

The City of Bellingham Public Works Department blocked off the Post Point Lagoon to the public for restoration in June 2007. Although the closure restricted people and their dogs from the inner lagoon, it may have contributed to increased use of the outer shoreline by people and pets. As a result, heron foraging along the shoreline were disturbed by curious observers and dogs. It is highly recommended that the city post signs to educate people about disturbing the herons and other wildlife along the shoreline.

Disturbance to the heron colony during the 2007 season was determined to be minimal with no obvious incursions into the colony observed. Human and dog activities in the off-leash park upland area appear to have little impact on the herons. However, human and dog presence in intertidal and shoreline areas do conflict with heron use of these areas.

Habitat 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 substrate for seasonal nesting and year-round roosting. Within close proximity of the colony is marine shoreline, protected lagoon, estuary and intertidal area.

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 include 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).* 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.

Although field habitat is present adjacent to the heron colony at Post Point and a vole population is available for foraging, heron use of the fields has been observed only once. However, vole casting were observed in the colony and vole tunnels were documented in the immediate field (see photos below). The new fence separating the heron colony from off-lease dogs may help create a safe place for heron to forage in the future. Herons in other locations both stage and feed in field habitats and occasionally roost in fields during the day. To date herons have not utilized fields with any regularity.

Post Point Heron Habitat: field, forest and fenced buffer

Fallow Coastal Meadow and Vole Tunnels: potential heron foraging habitat

Post Point Lagoon Adjacent to Heron Colony and Bellingham Bay

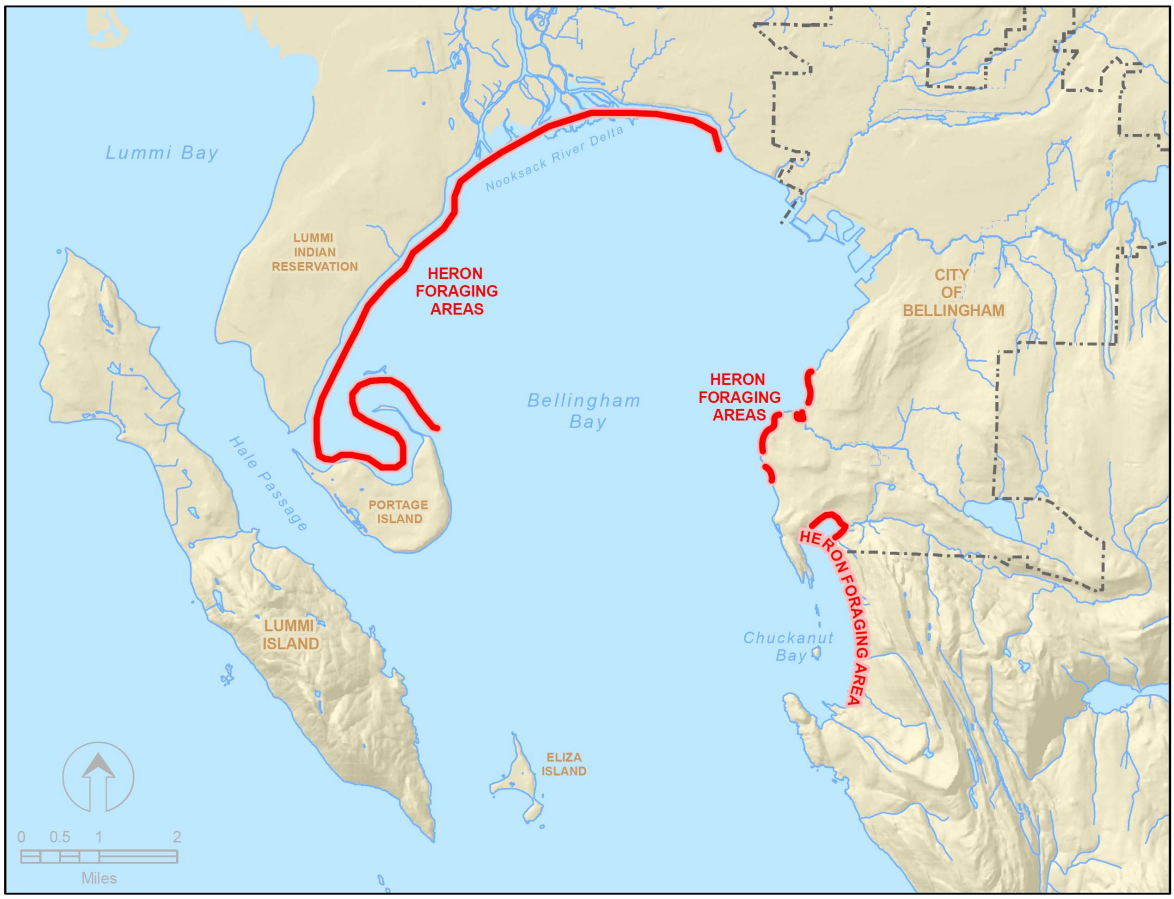
Post Point Water Treatment Clarifier – heron colony in background

The heron's use of the Post Point Waste Water Treatment Facility is unique. Herons utilize 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 without the risk of human or animal (dog) disturbance. It is also a sunny and potential warmer area that the north-facing forest where they normally roost.

FORAGING

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 prey necessary to nourish young over an eight week rearing period. The foraging areas for the Post Point herons in and around Bellingham Bay were surveyed and mapped in 2006. Follow up surveys were conducted by the Biologist during the nesting season in 2007. Immediate foraging utilized by the Post Point herons (juvenals and adults) included Post Point shoreline and intertidal areas. Use of the lagoon was minimal. Intertidal areas most frequented were areas of native eelgrass *(Zostera marina)*.

Figure 2
HERON FORAGING AREAS 2006



PRODUCTIVITY

The productivity of the heron colony was measured during visits in June. The method for productive survey in larger colonies is based on a sampling of representative nests during a single survey. This is done to reduce disturbance to the colony since access into or near the colony is necessary. For a smaller colony, such as Post Point where nests are easily viewed at a safe distance from the colony, nests were observed over a period of time and young recorded during each visit until fledging. This method provides numbers of young per nest, both pre and post fledging, plus fledging dates.

The productivity surveys were conducted during 4 monitoring visits in June and July. The results are as follows.

June 1: 9 active nests observed 6 nests with 16 young counted = 2.6 young/nest
June 16: 16 active nests observed 11 nests with 29 young counted = 2.6 young/nest
June 28: Fledging underway

The mean productivity 2.6 for 2007 is consistent with previous years, with 2006 and 2005 with 2.6 young per nest. If this is applied to the colony's estimated 27 active nests for 2007, the number of fledglings from the colony in 2007 is approximately 70, which is a reduction from 2006 = 91 young or -26%. Based on this fledging number there is a potential for young to return to the colony to nest as adults in two years. If fledgling survival is estimated at 40%, the colony could experience an additional 26 additional adults or 13 new nests in 2010 resulting from this year's progeny. Although the colony experienced a decline in breeding pairs, it maintained productivity, which indicates good health and fitness of the returning adults.

AUTUMN NEST SURVEY & MAPPING UPDATE

The autumn nest count is the standard method for determining the number of nests within the heronry and indicates the number of active nesting 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. A record of nest locations is updated and new nests noted then transferred to a map which illustrates changes to the heronry year to year.

In review of pervious 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 a nest count was conducted October 12. The results for 2007 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 is 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.

A mapping update of the colony was completed in November 2007. The colony maps (Figure 3-4) illustrate the colony, its location on the landscape, the core area, nest tree location and number of nests per tree. In addition, heron roosting and foraging areas are

identified as well as the bald eagle nest near the colony. Property boundaries are also indicated on the map. Although the colony is situated on City property, many of the nests are bordering private property and with expansion of the colony, nesting could migrate onto proposed development land.

A new map (Figure 5) added this year, provides a temporal view of the colony. Changes within the colony, including nest numbers and nest tree use over three years is illustrated.

The colony core area, as indicated on the maps, constitutes the actual nesting area and is calculated 50 foot from the base of the nest trees in order to accommodate GPS variance and tree canopy. 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 is recommended as the minimum no-entry area during the breeding season and area in which will move over time, so no vegetation should be removed.

During the annual nest count, each nest tree is tagged or existing tags are read, and tree condition is noted. 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.

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

Table 1: Post Point Heron Colony Annual Nest Count

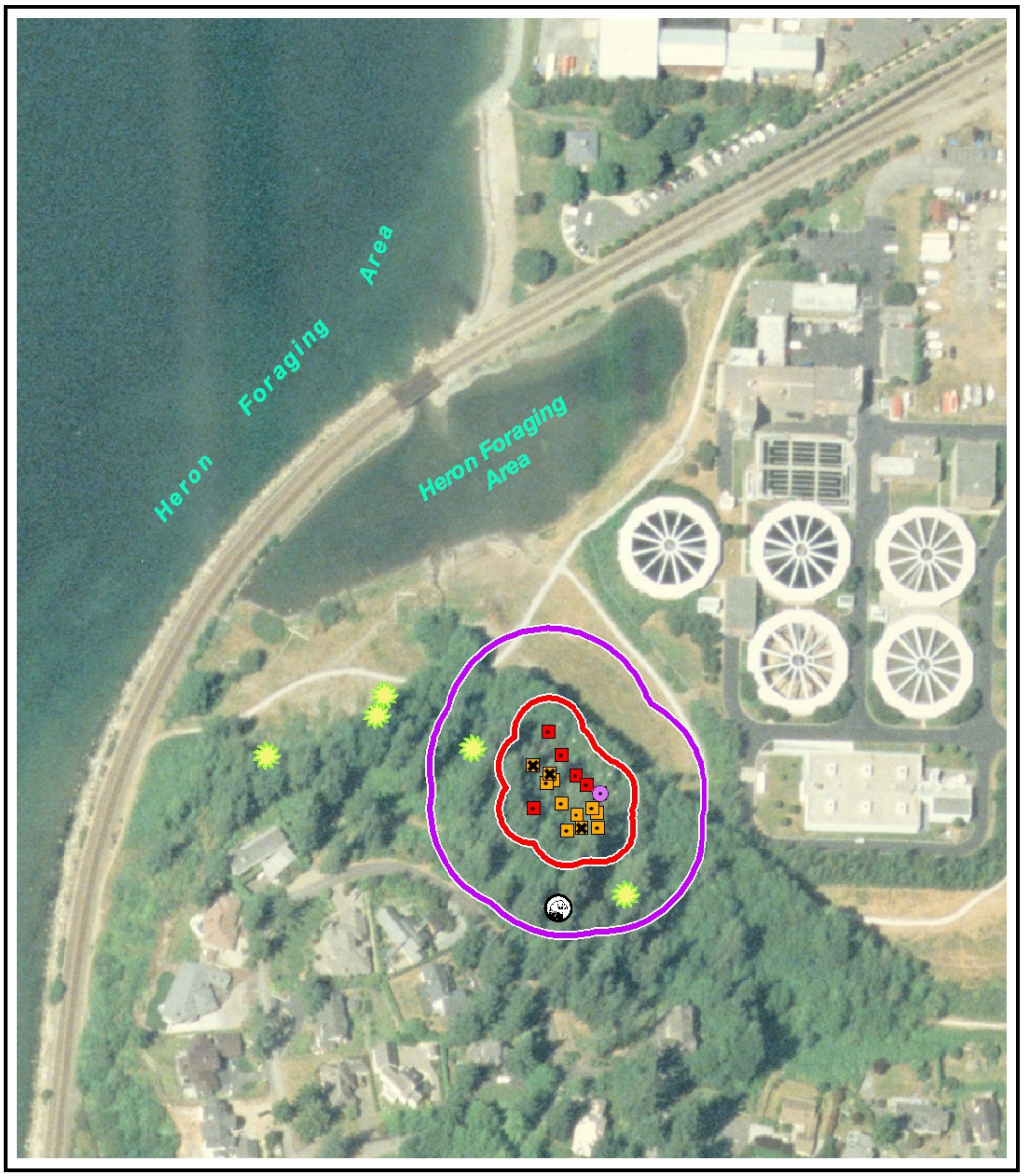
Year	Total number Number of nests	Total number Number of nest trees	Percentage change (# of nests)
2000	6	5	----
2001	8 estimated	6 estimated	+33%
2002	10	6	+25%
2003	14	8	+40%
2004	19	10	+36%
2005	31	10	+63%
2006	37	15	+19%
2007	27	12	-27%

Mean annual growth rate through 2006 = 36% per year
Mean annual growth rate through 2007 = 35% per year

Kate Newell, GIS Specialist
mapping new heron nest tree locations

Figure 3

POST POINT HERON COLONY 2007



KEY:

- New Nest Trees (2007)
- 2006 Nest Trees
- 2005 Nest Trees
- 2007 Nest Blow Down
- Roost Area
- Bald Eagle's Nest Observed in Fir Tree
- Colony Core Area
- 100ft Non-Disturbance Buffer

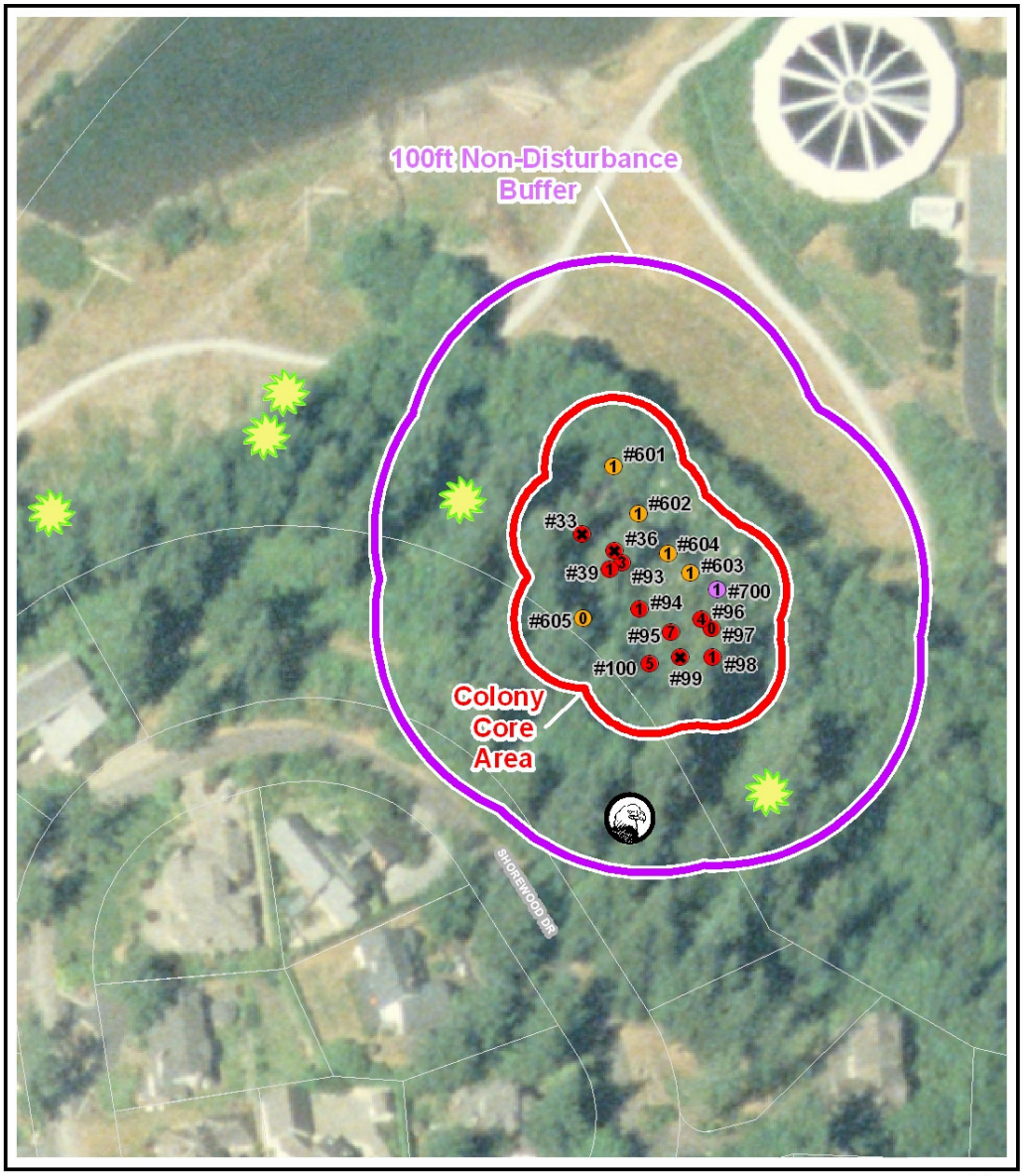
N

0 100 200 Feet

USDA 2006 Air Photo
City of Bellingham
November 2007

Figure 4

POST POINT HERON COLONY 2007



KEY:

- 2007 Nest Tree
- 2006 Nest Tree
- 2005 Nest Tree
- Nest Tree Blown Down
- Roost Tree
- Bald Eagle's Nest (Fir Tree)

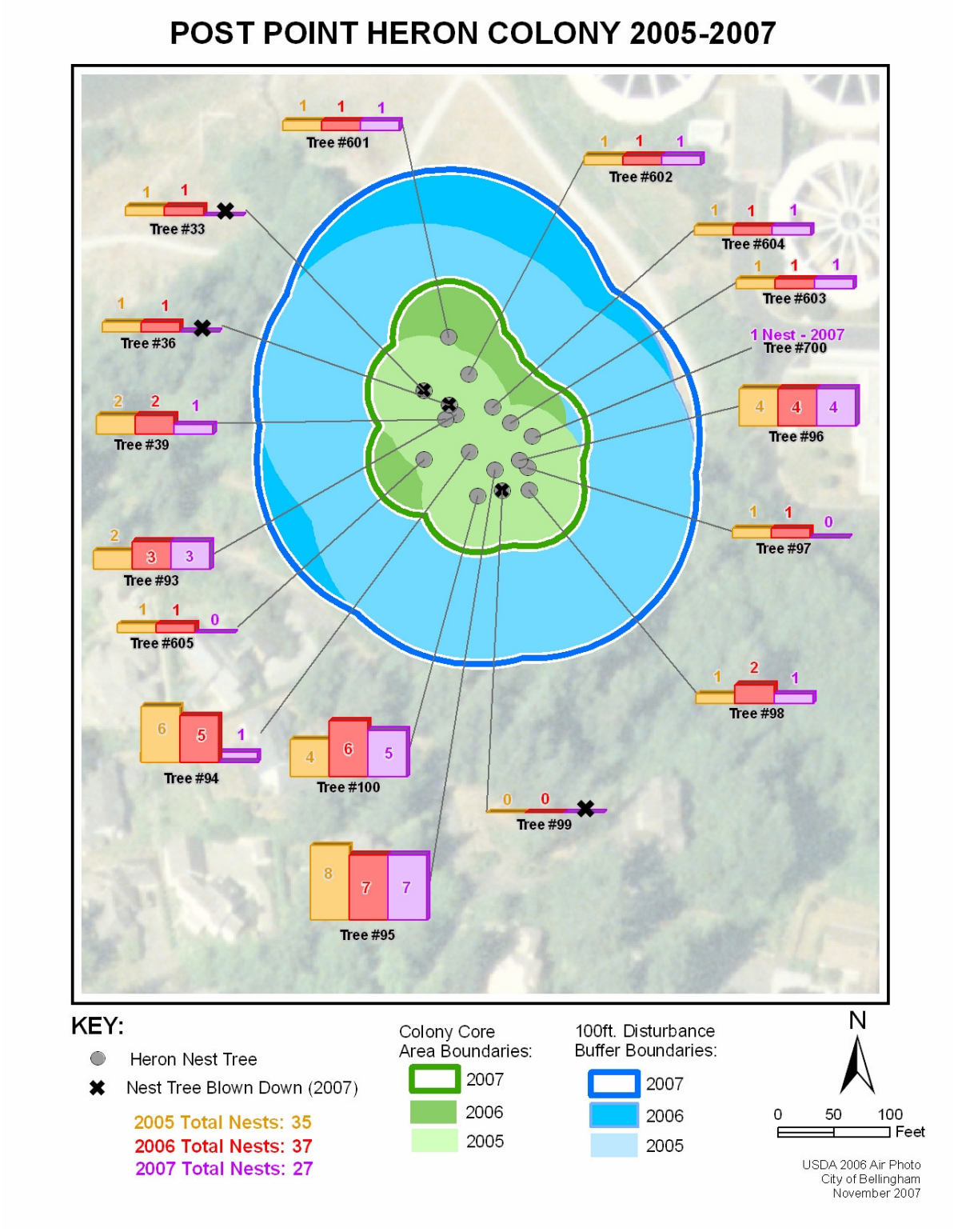
NOTE: Nest Counts shown within symbol (as observed in November 2007).

N

0 50 100 Feet

USDA 2006 Air Photo
City of Bellingham
November 2007

Figure 5


POST POINT HERON COLONY 2005-2007
Tree #601
Tree #602
Tree #33
Tree #604
Tree #603
Tree #36
1 Nest - 2007
Tree #700
Tree #39
Tree #96
Tree #97
Tree #93
Tree #605
Tree #98
Tree #94
Tree #100
Tree #99
Tree #95
KEY:
Heron Nest Tree
Nest Tree Blown Down (2007)
2005 Total Nests: 35
2006 Total Nests: 37
2007 Total Nests: 27
Colony Core Area Boundaries:
2007
2006
2005
100ft. Disturbance Buffer Boundaries:
2007
2006
2005
N
0 50 100
Feet
USDA 2006 Air Photo
City of Bellingham
November 2007

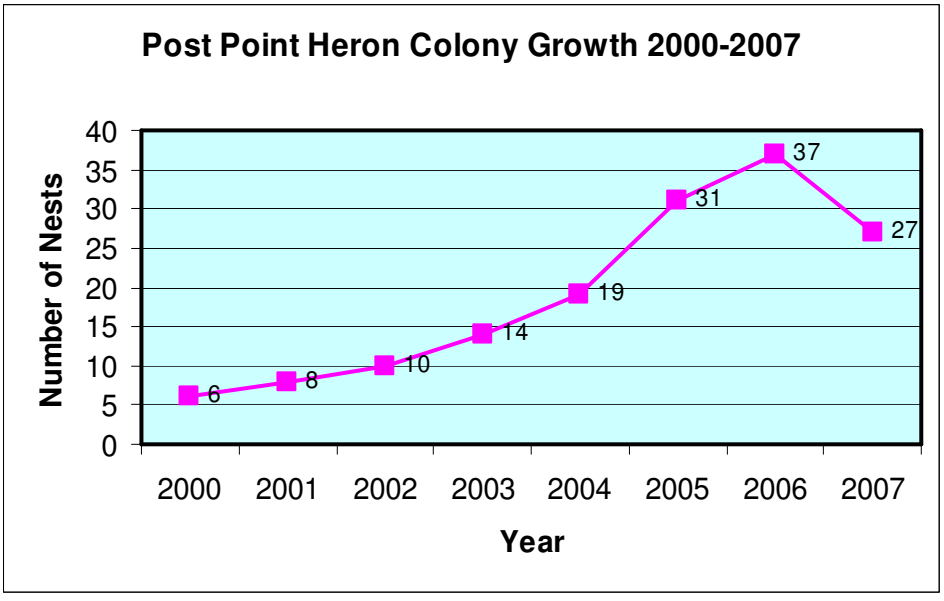
COLONY GROWTH

The Post Point Heron Colony has experienced significant growth since its establishment in 2000. Since 2000, the colony has expanded approximately 500%, from 6 to 37 nests peaking in 2006. Over six years, the growth rate has been 36% annually, until 2007 in which the growth trend reversed. The 2007 decline of the Post Point heronry is important and requires recognition.

The cause of the decline is not known. Previous growth of the colony indicated the annual influx of new breeding adults. 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. Three possibly causes were identified in this year's decline of returning adults: 1) relocation of nesting by a portion of the colony, 2) high winter mortality or 3) other stressors in the environment impacting heron fitness and survival. Given that no new heron colonies have been reported harsh winter conditions are likely to blame. The severely of winter conditions, particularly high sustained winds likely adversely affected both juvenal and adult survival. Other stressors have yet to be identified, but may be related to habitat lost, food depletion or disease.

The loss of trees and nests in the 2006-2007 winter wind storms accounted for the permanent loss of at least 5 trees, all birch, and a total of 7 nests. This loss however, does not fully account for the decline, since returning heron build new nests as needed.

Figure 6
Post Point Heron Colony Growth



Heron Nest Tree ID Tag

Heron Nest Tree

Golf ball found in heron colony

PUBLIC EDUCATION and INTERPRETATION

Public education and information is an important component of the Post Point heron monitoring project. The location of the heronry, adjacent to a high-use undeveloped park, makes for a perfect setting for education and interpretation. During 2005-2006 interpretive signs were designed for the area near the heron colony and lagoon. The signs were installed in 2007 with favorable comments from users of the trails. A nest display continued to educate users with a simple interpretive sign was designed by the Biologist.

Further education is encouraged for both general public and decision makers. Such educational options include walking tours, heron life history presentation and programming for local TV. Neighborhood outreach and education is also recommended for the Shorewood and Edgemoor areas.

Interpretive Display
located inside fenced buffer

Shoreline foraging habitat

MANAGEMENT AND STEWARDSHIP RECOMMENDATIONS

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. The recommendations in 2003 were based on a heron colony a fraction of the size it is today. Therefore, it is recommended that the Post Point Heron Colony Management Plan, be updated to reflect the current status of the colony and its sensitivity.

Annual monitoring of the colony is recommended to continue. Monitoring is important for this colony for several reasons: annual growth and large number of herons within an urban setting, sensitivity to disturbance, proximity to public use area and planned residential development and facility expansion. Continued observation of foraging areas during the breeding season is also essential due to the dependence of the colony's success on these areas.

The development of an eagle management plan for the nearby eagle nest would be recommended for inclusive stewardship of the area as a functioning habitat unit.

Finally, public acquisition of the adjacent undeveloped upland area upslope of the heronry and bald eagle habitat is highly recommended.

Roosting Herons

Heron Sunbathing

CONCLUSION

The Post Point Heron Colony was established in 2000 and has actively and successfully produced and fledged young for seven consecutive nesting season. The 2007 annual monitoring documented the full nesting season and fledging of young. In addition to monitoring of nesting, foraging areas were also observed. Public education also was included as an incidental component of 2007 season.

The Post Point Great Blue Heron Colony currently supports 27 nesting pairs, with an estimated fledging of 70 young during the 2007 nesting season. The 2007 nesting season started approximately two weeks early and was condensed for unknown reasons, with nesting beginning in February and completing in July, a total of 21 weeks, two weeks less than 2006 and seven weeks less than 2005. The growth trend of the colony has reversed with a decline of 10 nests in 2007. However the productivity of the active nests remains consistent with 2005 and 2006. 2006-2007 winter storms resulted in the loss of some trees and nests, and may also account for a higher than average heron mortality and fewer returning breeding birds.

Predation and disturbance at the colony has been minimal. Disturbances in the heronry during the 2007 nesting season were not observed. Human related disturbance of foraging adults and fledging young at Post Point marine shoreline were noted. Nesting related activities did not appear to have been disrupted nor was there direct disturbance observed from recreational activities in the off-leash park area. A new fence providing a barrier between the nest stand and off-lease area has greatly improved the security of the heronry and also provides a protected field are that could be utilized by foraging herons in the future.

As of 2007, the Post Point heron colony continues to be productive. However a decline in nesting numbers is of concern and causes for the decline are unknown. Due to the sensitivity of the colony, on-going monitoring of the colony and protection of habitat is highly recommended.

Finally, Nahkeeta Northwest would like to extend our gratitude to Larry Bateman and the staff of the Post Point Waste Water Treatment Facility for their assistance in this monitoring effort. We particularly appreciate their providing a protective fence around the colony to improve security of the colony, habitat improvement and protection, assisting with interpretive display and maintaining good communication during the season. We would also like to express a special thank you to Kate Newell, GIS Specialist with the City of Bellingham, for providing nest locations, mapping and excellent maps for this report.

ATTACHMENT

Post Point Great Blue Heron Colony Historic Chronology

Post Point Great Blue Heron Colony

Colony Chronology (2007 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.

Prepared by: Nahkeeta Northwest 11/27/07