

SUMMARY OF RECOMMENDATIONS

A summary of recommendations for the Post Point heron colony are as follows:

- **HABITAT PROTECTION**

- The Post Point heron colony requires full protection of the nesting core area. The core area is entirely located on city property and would be off limits to non-authorized personnel year-round. During the breeding season the core would be restricted from any entry, with the exception of the designated biologist. The core area will require additional buffering and timing restrictions in order to provide the current habitat function and value.
- Public ownership would be the ultimate protection strategy
- Under the WDFW Management Recommendations, the identification of alternate nesting habitat is suggested. A minimum of 10 acres is recommended. A brief examination of habitats was made. Given the necessary habitat suitability, isolation, protection from prevailing winds and proximity to foraging areas to support nesting great blue herons, four general areas were identified as possible alternate habitat within the City Limits. Alternate areas identified include Clark's Point, 100 Acre Woods (also referred to as Chuckanut Ridge), Hoag's Pond and the northern toe of Chuckanut Mountain (Figure 5). A more thorough examination of available habitats would be helpful.
- It is recommended to examine the flight patterns and potential aerial disturbances to determine if the Post Point colony will require a flyway or aerial buffer.
- The staging site for the Post Point colony has yet to be verified. Once identified however, the area will require evaluation and recommendations for protection. The recommendations would be timing restriction for minimizing disturbance and general protection to maintain function of the site and use by herons.
- The roosting area for the Post Point heron colony has been tentatively identified as the forest in which the colony is located. The area of historical use encompasses the maturing forest of the bluff and it is likely that the designation of a heron reserve (Figure 7) encompassing the bluff forest would in effect protect this habitat. However, given that this colony has not received systematic monitoring by a professional, the habits and associated habitats of the Post Point herons have not yet been fully documented. Once identified however, the area will require evaluation and recommendations for protection.
- Foraging areas need protection. Further observation and documentation is recommended, to determine foraging areas frequented by the Post Point

herons. Once foraging areas are identified, they need to be mapped and evaluated for protection options. Protection may include disturbance reduction, maintenance or enhancement of habitat quality and function. The fewer the foraging options, the more important each identified foraging site becomes.

● BUFFERS

- Define a permanent no-entry/no activity buffer of 100' that includes the immediate habitat (but is not enough to sustain the colony over time). This includes both public and private lands and a restoration area.
- Create a permanent non-disturbance buffer of 250'.* This encompasses a relatively un-built area (with the exception of one road, one trail, a portion of a residence and a section of the waste water plant). The area would be subject to restricted use, limiting primary activities to passive recreation. Seasonal timing restrictions would further limit any other activities between March 1 and August 31. Motorized maintenance would be allowed in designated areas only. It is recommended, to limit further human development if possible, inside the 250' buffer.
- Designate the area delineated in Figure 7, as a permanent heron/wildlife reserve, including roost area, wind break, area for nest material recruitment, further screening, area for colony expansion. This area is recommended for permanent protection as a publicly owned wildlife/natural area in perpetuity. Given the use of this area by bald eagles (*Haliaeetus leucocephalus*), band-tailed pigeon (*Columba fasciata*), pileated woodpecker (*Dryocopus pileatus*) and other potentially sensitive species, protection of the site as important wildlife habitat is easily justified. Because this area contains private land, it is recommended that the City purchase the property.
- Restrict the application of pesticides (herbicides and insecticides) within 500 feet of the colony (Figure 6).
- Further refine buffers based on systematic monitoring, multi-year heron behavioral patterns and productivity, in addition to site specific habitat considerations.

● RESTORATION AND ENHANCEMENT

- Restoration of the Post Point wetlands is another element that could provide enhanced habitat for a number of species. A restoration plan would be needed; however, the recommendation in general is to restore the stream/wetland corridor to the Post Point lagoon and restore/enhance the lagoon edge with native vegetation.
- It is therefore recommended that the 100 foot forest buffer around the heronry be fully restored and enhanced. A perimeter planting of thorny native shrubs would assist in creating habitat diversity and deter access to the colony.

Enhancement of stream/wetland corridor and lagoon edge would benefit a number of species including herons. Retention of fallow meadow area is vital for heron foraging.

- **REDUCTION OF DISTURBANCE**

- Limit access with a no-access buffer (Figure 6) which defines the protection of habitat 100 feet from the colony. This buffer is appropriate to limit access year-round. To define the boundary and to deter access on the ground, a combination of fencing and plantings are recommended. The planting of thorny native shrubs including wild rose (*Rosa nutkana*) and other species along the 100 foot boundary in the upper and lower areas of the bluff will act as a natural barrier. Outside the planting could be a simple wooden fence (split rail) as a visual boundary. The purpose of the natural barrier is to allow wildlife to move through freely, but limit easy access by humans and their dogs. In addition, the restoration of forest buffer, wetland and stream corridor at the base of the bluff will over time deter entry into the sensitive habitat area.
- No trails should be located within the 100 foot zone.
- Limit disturbance to the colony by creating a zone of non-disturbance, the herons are more likely to perpetuate their current nesting activities. The proposed non-disturbance buffer, recommended to be at least 250 feet from the colony or 300 feet from the base of the nearest nest tree, would provide habitat screening, deterred access and distance, resulting in a safety zone for the herons and their young (Figure 6).
- Timing restrictions are an effective tool to control disturbances from specific projects. If a project is proposed within the 250 meter (820 feet) zone (minimum WDFW buffer) (Figure 6) that may create significant noise, activity or other disturbance to the herons, it is recommended that timing restrictions be imposed on the project or portions of the project.
- Timing restrictions are imposed on activities within the designated buffer zone around the heronry prior to staging and the re-colonization of the herons in the nesting area and then extend through the nesting season until the last of the young have fledged. Because the chronology of the Post Point colony has not been established the commencement of timing restrictions using the WDFW management recommendations of February 15th is reasonable. The end of the nesting season is later than July 31st, so it is recommended that August 31st will provide maximum protection until the colony chronology is established, over a minimum of three years. Monitoring of the site will determine the nesting period over time.
- Security of the colony is needed. It is recommended that a Steward be hired or assigned and trained for the task of managing and overseeing the security of the Post Point Heron colony.

- **MONITORING RECOMMENDATIONS:**

- The monitoring scheme recommended for the Post Point Colony consists of a general monitoring plan to establish the baseline, with requisite productivity survey, nest count and mapping. The duration of monitoring is annually for a minimum of three years. At the end of three years the monitoring should be reviewed and adjusted or extended as needed. Landuse monitoring needs to be on-going by the City of Bellingham and effective for all projects within the 250 meter buffer. In the event of a proposed project in close proximity to the colony, intensive monitoring may be necessary.

- **HERONRY SITE MANAGEMENT**

- Heronry sites need oversight by a qualified biologist or trained personnel who would serve as the site's manager. The management of the site may also be enhanced with assistance from local volunteers. The manager is responsible for all aspects of site and heron stewardship and monitoring. He or she represents the stake holders, works with neighbors and community and oversees volunteer involvement and public education. Site management includes correspondence with the general public and media, general monitoring, security of the colony, fielding inquires about access, reviewing research proposals, coordinating volunteer stewards, managing data and reporting. (A land ownership profile and purchase plan for buffer properties may also be included). The manager or steward also provides public education and trains volunteers as docents for on site educational programs and tours.

- **PUBLIC EDUCATION**

- Public education at Post Point would be helpful both at a stationary viewing/interpretive site and by a steward or docent for visitors. There is also an opportunity for an in-school education program delivered by the steward.

REFERENCES

- Bean, M.J., 1983. *The Evolution of National Wildlife Law*, Environmental Defense Fund, Praeger Publications. 449 pp.
- Bowman, I. and J. Siderius. 1984. Management guidelines for the protection of heronries in the Columbia Basin, Oregon and Washington. *Murrelet* 61: 63-71.
- Buckley, P.A. and F.G. Buckley. 1976. Guidelines for the protection and management of colonially nesting waterbirds. National Park Service, Boston Mass.
- Butler, R.W. 1992. Great Blue Heron. *In* The Birds of North America, No. 25 (A. Poole, P. Stettenhiem and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia; The American Ornithologists' Union, Washington, D.C.
- Butler, R.W. 1997. The Great Blue Heron: a natural history and ecology of a seashore sentinel. UBC Press, Vancouver, British Columbia, Canada.
- Butler, R.W. 1995. The patient predator: foraging and population ecology of the Great Blue Heron (*Ardea herodias*) in British Columbia. Occasional Paper, Number 86, Canadian Wildlife Service, Pacific Wildlife Research Centre, Delta, British Columbia, Canada.
- Butler, R.W. 1996. Status of the subspecies of Great Blue Heron, *Ardea herodias fannini*, in Canada. Canadian Wildlife Service, Pacific Research Centre, Delta, British Columbia, Canada.
- Carlson, B.A., and E.B. McLean. 1996. Buffer zones and disturbance types as predictors of fledging success in Great Blue Herons, *Ardea herodias*. *Colonial Waterbirds*. 19(1):124-127.
- City of Bellingham. 2000. City Examiner Hearing.
- DesGranges, J.L. 1989. Biology of the Great Blue Heron and probable response of nesting birds to cottage development near their breeding colony on Boughton Island, Prince Edward Island. Canadian Wildlife Service, Environment Canada.
- Eissinger, A.M. 1995. City of Bellingham: Wildlife and Habitat Assessment: an inventory of existing conditions and background information. City of Bellingham, Department of Planning and Community Development.
- Eissinger, A.M. 1996. Herons of the Salish Sea: a model for the conservation and stewardship of coastal heron colonies. Bow, Washington.
- Eissinger, A.M. 2000. Post Point Great Blue Heron Colony Assessment.
- Eissinger, A.M. 2001. Great Blue Heron species account. In: T. Wahl, et.al., *Birds of Washington* (not yet published)
- Forbes, L.A. Prey manipulations in the Great Blue Heron. *Murrelet* 63(3): 89-90.

Gibbs, J.P. 1991. Spatial relationships between nesting colonies and foraging areas of Great Blue Herons. *Auk* 108: 764-770.

Gibbs, J.P., S. Woodward, M.L. Hunter, A.E. Hutchinson. 1987. Determinants of Great Blue Heron colony distribution in coastal Maine. *Auk* 104: 38-47.

Henny, C.J. and J.E. Kurtz. 1978. Great Blue Herons respond to nesting habitat loss. *Wildl. Soc. Bull.* 6: 35-37.

Julin, K.R. 1986. Decline of second-growth Douglas fir in relation to Great Blue Heron nesting. *Northwest Science* 60: 201-205.

Kelsall, J.P. 1989. *The Great Blue Heron of Point Roberts: History, Biology and Management.* Point Roberts Heron Preservation Committee, Point Roberts, Washington.

Kushlan, J.A., M.J. Steinkamp, K.C. Parsons, J. Capp, M. A. Cruz, M. Coulter, I. Davidson, L. Dickson, N. Edelson, R. Elliot, R. M. Erwin, S. Hatch, S. Kress, R. Milko, S. Miller, K. Mills, R. Paul, R. Phillips, J. E. Saliva, B. Sydeman, J. Trapp, J. Wheeler and K. Wohl. 2002. *Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version 1.* Waterbird Conservation for the Americas, Washington D.C. U.S.A. 78 pp.

Larson, R.A. 1995. Balancing wildlife viewing with wildlife impacts: a case study, pp. 257-270 in *Wildlife and Recreationists* (R.L. Knight and K.J. Gutzwiller, eds.). Island Press.

Norman, D. 2002. *Proposed Development Timelines for Addressing Disturbance Concerns to Herons Nesting at The Point at Shorewood.* Shoreline, Washington.

Norman, D. and R. Holtz. Great Blue Heron as a management tool for growth management in Puget Sound: How many herons do we want?.

Parker, J. 1980. Great Blue Herons (*Ardea herodias*) in northwestern Montana: nesting habitat use and the effects of human disturbance. M.S. Thesis, Univ. Montana. Missoula. 82 pp.

Parnell, J.F. and D.G. Ainley, H. Blokpoel, B. Cain, T.W. Custer, J.L. Dusi, S. Kress, J.A. Kushlan, W.E. Southern, L.E. Stenzel and B.C. Thompson. 1988. Colonial Waterbird Management in North America. *Colonial Waterbirds* 11(2): 129-345.

Pullin, B.P. 1988. Letter to Ms. Linda George, Point Roberts Herons Preservation Committee. On file with Washington Dept. of Wildlife, Urban Wildlife Program, Mill Creek, WA.

Quebec, Gouvernement du. 1986. Modalities d'intervention en milieu forestier. Heronnières. Nombre de publication:3214. p. 50-51: *In* Kelsall, J. 1989. *The Great Blue Heron of Point Roberts: History, Biology and Management*

Short, H.L. and R.J. Cooper. 1985. Habitat suitability index models: Great Blue Heron. *U.S. Fish Wildl. Serv. Biol. Rep.* 82(10.99). 23 pp.

Simpson, K. 1984. Factors affecting reproduction in Great Blue Herons (*Ardea herodias*). M.S. Thesis, University of British Columbia, Vancouver, Canada.

Skagen, S.K and C.P. Melcher. 1996. Assessment of Chatfield State Park wildlife viewing area. Final report of research activities 1992-1996. National Biological Service, Midcontinent Ecological Service Center, Fort Collins, Colorado.

Vos, D. K., R.A. Ryder, W.D. Gaul. 1985. Response of breeding herons to human disturbance in Northcentral Colorado. Colonial Waterbirds 8(1): 13-22.

Washington Department of Fish and Wildlife 2000. Priority Habitat and Species Management Recommendations for Washington Priority Species. Great Blue Heron

Webb, R.S. and L.S. Forbes. 1982. Colony establishment in an urban site by Great Blue Herons. Murrelet 63(3): 91.