

**1. Belant, J. L. 1997. Gulls in urban environments: landscape-level management to reduce conflict. *Landscape and Urban Planning* 38:245-258. *Abstract*:**

Populations of several species of gulls (*Larus* spp.) have increased dramatically throughout coastal areas of North America and Europe during the past several decades.

These increases have been attributed to protection from human disturbance, reduction in environmental contaminants, availability of anthropogenic food, and the ability of gulls

to adapt to human-altered environments. Gull abundance in urban areas has resulted

in numerous conflicts with people including hazards to aircraft, damage to buildings

from nesting material and defecation, and general nuisance. Various architectural and

habitat management approaches are available to reduce gull/human conflicts.

For

example, gull use of landfills may be reduced by covering refuse, diverting anthropogenic food to covered compost facilities, erecting wire grids over exposed

refuse, and manipulation of turf height in loafing areas. Nesting on roofs can be alleviated through modifications of roofing substrate and placement of overhead wires.

Also, attractiveness of airports to gulls can be reduced through drainage of temporary

water and by decreasing the availability of prey and loafing sites through habitat management. Although control activities can be effective at the site where the gull

problem occurs, uncoordinated management efforts may cause relocation of problems

to surrounding areas. Also, site-specific management will rarely solve the problem

across a larger scale (e.g., city-wide). A working group comprised of the respective city

or county planning commission, affected businesses, private citizens, and wildlife professionals can provide overall direction for gull management. This working group

should define the extent and nature of the problem, develop an appropriate management strategy incorporating ecology of the nuisance species, and conduct

periodic assessments of program efficacy. An integrated, landscape-level management

approach is necessary to ensure an overall reduction in conflict between gulls and

people in urban environments.

