

Summary of Deer Task Force Data Reviewed by Bernadette Slawinski

Deer Density

When evaluating deer density per square mile, it is necessary to review several factors. These include the setting: forest, urban/suburban, rural/farmland; the purpose of the study: the proliferation of deer for hunting, deer restoration projects, urban management, management of the forest, management of farmland and overall suburban planning and land management. When determining the density, it is necessary to determine the biological and cultural numbers to support a herd.

Deer Over Abundance – this is not a scientific term and has no scientific definition. It is used to describe deer population to connote overpopulation in people's minds into believing that the deer population needs to be reduced. It has nothing to do with biological carrying capacity. Deer rarely exceed their biological carrying capacity. Deer like most wildlife self-regulate. If there is not sufficient food to support the population, the weaker ones die and the does will absorb embryos and fewer fawns will be born in the spring. Scientists use the term biological carrying capacity. (Doris Lin, New York)

Biological Carrying Capacity (BCC) is the number of deer that can be sustained in a given land area is a function of food resources and the availability of winter cover. This (BCC) is defined as the number of deer that a parcel can support over an extended period of time (Ellingwood and Caturano 1988) When the deer numbers approach BCC, habitat quality decreases and physical condition of the herd declines (Swihart et al, 1998) Home ranges and movement are considered in this information. The individual deer will require a range that allows them to have sufficient food, water, shelter and mating opportunities. Males have a greater range than does, which is larger during rut season. (Michael 1965; Nelson and Mech 1981, 1984) Does maintain and stay in a smaller range and do not leave especially in suburban areas with sufficient habitat diversity to meet their needs (Cornicelli, 1992, Bertrand et al.1996, Kilpatrick and Spohr 2000). Home ranges can vary considerably based on the variety and arrangement of habitat types and climate (Wrigley et al 1980, Williamson and Hirth 1985, Dusek et al 1988). For mid-latitudes (Ogden Dunes fits this category) spring time movements occurs in less than 30 percent of the does.

Cultural Carrying Capacity (CCC) is defined as the maximum number of deer that can coexist compatibly with local human populations. Cultural carrying capacity is a function of the sensitivity of the local human population to the presence of deer. Factors that influence

CCC include homeowner/gardener complaints and excessive deer/vehicle collisions. (Northeast Deer Technical Committee, New England Chapter of The Wildlife Society and the Northeast Technical Committee May 2009) There is no mention of Lyme Disease or other diseases in this report. (Burnsville, MN Study exclude Lyme Disease as a reason for Deer Management as the link between deer and Lyme disease is not there. Wisconsin Deer Management Program found that Deer may be a source for ticks to feed, but other mammals also supply the blood meal and deer management is not the solution to Lyme Disease)

Determining the capacity for a given area: Reports of BCC for an urban area range from a high of 100 in some urban areas of Wisconsin to a low range of 20-30 in Burnsville Minnesota. The studies indicate that it is very difficult and nearly impossible to maintain a herd at 20 or less. Wisconsin studies find that sandy soils with aspen, jack pine and oaks can sustain a density of 40-45 per square mile range with a maximum of 60 per square mile range. This is in the forest areas, and are similar to the areas that surround Ogden Dunes and include some of the park areas such as Surrenity and Bittersweet Forrest. The farmland regions can support as many as 100 per square mile range and even higher, which would be the areas south of U S. 12. There are many factors to consider in the stability of the deer population: the availability of food, the harshness of winters, the age and numbers of does (fertility rate) the number of fawns birthed and survival of fawns and doe/fawn ratios.

In order to determine if there is an overcapacity of deer in the area, you must examine the vegetation, the presence of other species(birds and butterflies) and deer/vehicle accidents as well as the range of the deer. Ogden Dunes is surrounded by National Lakeshore properties including Lake Michigan. The deer range includes the National Lakeshore properties as well as some of the farm areas to the south. Within Ogden Dunes itself, there are some wooded areas in the parks and empty residential lots. The majority of the vegetation within Ogden Dunes is ornamental landscaping.

The lupines which are the natural habitat for the Karner Blue Butterfly continue their presence in OD The milkweed is also present and is the habitat for the Monarch Butterfly. An observation of the varied butterflies in OD have shown an increase in their population, which is an indication of an abundance of habitat that can support the butterflies. The habitat continues to support many varieties of butterflies throughout the community.

The trees and vegetation within the community continue to support a bird population throughout the year. Species present are cardinals, blue jays, robins, sparrows, chickadees, nuthatches, juncos, tufted titmouse, morning doves, warblers, finches, crows, woodpeckers, Carolina wrens, purple martins, brown creepers, flickers, orioles, humming birds, grackles, and . The areas surrounding the OD include red-tailed hawks, owls, turkey buzzards, cranes,

kingfisher and sea gulls that fly over and the area. Migrating birds are observed in the spring and fall as they are attracted to the vegetation in the area. Scarlet tanagers are seen at the woods edge at times. Some of the migrating birds are the indigo bunting, tuesches, red-breasted grosbeak, which are attracted to the habitat that is present.

The data received from the flyover reports 58 deer within Ogden Dunes. It is difficult to confirm that number when reviewing the actual recording of the flyover. The seven deer found at a birdfeeder on East Shore Drive are easily identified. The diagram indicates another group of seven feeding near Indian Camp and another group near Tamarack. This accounts for 20 deer, which appear to be attracted to food sources such as bird feeders or other food. There were large numbers of deer identified south of 12 in the fields, which have large food supplies in the corn fields. Again, it was difficult to determine the number.

It can be estimated that there are between 40 and 60 deer within Ogden Dunes. Those numbers will vary by season and food supplies. There have not been as many reports of deer being seen or hostas and tulips being browsed by the deer. There will be deer sightings in some areas regardless of the numbers as we are surrounded by National Lakeshore. It is impossible to have zero sightings of deer within Ogden Dunes as some persons would like.

Based on the information I have reviewed regarding biological carrying capacity and the health of the deer, the lack of destruction of habitat that will support all wildlife in Ogden Dunes, and the lack of major damage to plants and the number of deer vehicle accidents, Ogden Dunes can support the current population.

Regarding Cultural capacity, we have an extreme in the tolerance level of the citizens to the population. There are those that believe one deer is too many, which is unrealistic and impossible to maintain in this environment. There are others who believe we can maintain as many as 100, which may be true for a very short period of time; but not realistic without supplementing the food supply to –prevent habitat damage. There will be always be some level of damage to vegetation by wildlife in Ogden Dunes, which include deer, rabbits, squirrels, and raccoons as we live in a wooded area with wild life.

While Ogden Dunes can support the current population, there is a need to implement steps to control the population so that it does not increase and may actually decrease by using methods that deter deer from Ogden Dunes.

There is misinformation regarding the rate of increase of the deer population, which is causing unnecessary alarm. An example would be if there were only 5 deer present in 1988 and they increased at a rate of 30 percent a year as one person reported, we would currently have 1690 deer today. If they only increased by 30 percent every three years, we would

have 496 deer by 2013. That is significantly lower than the current 40 to 60 deer we currently have. Even if you add the 18 that were culled the numbers do not equal the above rates. Without deer management, (which I am not suggesting) the rate of increase is low. Information to consider when determining the growth rate is that 30 percent of fawns born do not live past a few months and deer live between 10 and 12 years. Once a doe has had her new fawns, the yearlings are sent off to be on their own. They usually move into other territories. Many of the deer that we see are only here during the rut season. Many of the deer that are seen do not bed down in town.

Deer Management Plans

Wildlife Management by State Wildlife Agencies

Many people believe that wildlife management agencies are serving ecosystems, interfering minimally and mainly to preserve wildlife. These agencies do have programs to protect endangered species and to protect habitat in general. But instead of managing wildlife solely for the purpose of optimal health of the ecosystem, state wildlife agencies also manage for recreation and have a financial incentive. Deer is seen as a resource that is conserved and used wisely so that there is plenty of deer for future generations for hunting. Deer management systems are designed to keep the population high. Examples of this philosophy and deer management can be found in the Arizona Game and Fish Department. “To conserve, enhance, and restore Arizona’s diverse wildlife resources and habitats through aggressive protection and management programs and to provide wildlife resources.....for enjoyment appreciation and use by present and future generations.” Wisconsin Department of Natural Resources – “states in their annual reports “We rank first in the country for the highest single year deer harvest on record and are number one for deer harvest over the past decade. All of us work hard to keep it that way. “ New York, Pennsylvania, Michigan, Virginia and Illinois also include the hunter as one of the stakeholders in their plans and rely on the money received from the sale of hunting licenses. The states lease land from farmers to plant deer preferred crops and to keep plants standing so that deer remain healthy to increase fertility of the does. Some states also plant habitats with trees and shrub plantings, native grass seedling, specialty food crop production and succession control.

When reviewing the goal for deer management by state and federal agencies, it necessary to consider their goals as opposed to a deer management plans in urban settings.

Developing A Deer Management Plans

When planning a management system for a deer herd in a suburban or urban setting takes a great deal of long range planning and education. It is important to include **all** stakeholders when making long range plans.

Deer Management plans in urban settings have different goals and stakeholders than deer management to maintain deer for hunting, deer restoration projects, forest and farmland management. One has to view plans and studies from these areas with great caution as the purpose for the study and the goal for managing deer populations are far different. Studies from the National Forest Service reported in their Spring 2013 newsletter report that determining the carrying capacity for deer in a given area will vary substantially. The impact on the environment also varies with more or less deer. Some information can be gleaned from these studies to aid in planning, but it is difficult if not impossible to generalize from those studies and plans. I will concentrate on urban/suburban deer management studies and plans. Steps to be taken include:

Survey the stakeholders regarding the impact of deer in the community (Deer Management in the Greater Springfield Metropolitan area, September 2007)

Acceptable forms of deer management (Stakeholder opinions -Deer Management within suburban areas, Greg Creacy, Texas Parks and Wildlife Department , April 2006); (Stakeholder acceptant of urban deer management techniques, Terry Messmer, Louis Cornicelli, Daniel Decker, David Hewitt, research from Utah, Texas, Cornell . published Wildlife Society Bulletin, 1997) Deer Damage Management:

Counts of deer in the community

Education of the community (Developing Urban Deer Management Plans: The Need for Public Education , Deborah Green, College of William and Mary, Glen Askins and Phillip West, Virginia Department of Game and Inland Fisheries, Williamsburg, Va, Ph) Cooperative Deer Management, Cook County Ill)

Identify problems caused by deer in the community (Ames, Iowa –Deer Management, Connecticut Deer Management,

Reasons for Increased Deer Population , Hollywood Park, Texas; deNicola et al, 2000; McShea et al, 1997; Hansen and Beringer, 1997;

Deer Management Solutions (Deer Conflicts: Urban/Suburban Deer Management DNR, Michigan State University 2011)

A. Correctly Assess the damage , B. Identify the species responsible C. Assess the cost of damage vs cost of management D. Employ Management Options (Create a Tool Bag) Deer Management: Dealing with the Modern Day Bambi, Stan Geht, Wildlife Specialist, Mare Titchenell, Wildlife Program Specialist, The School of Environment and Natural Resources Ohio State University Extension

When is Deer Management needed? (A Citizens Guide to Management of White-tailed Deer in Urban and Suburban New York , New York State Department of Environmental Conservation 2007 rev.

Resources viewed in addition to the above (A Guide to Deer Management in Developed Areas of Pennsylvania, Pennsylvania Game Commissions Deer and Elk Section 2009) Ohio State Deer Management Plan for Urban Settings.

Adaptive Ecosystems Management

Adaptive ecosystems management is important because it addresses incomplete knowledge and uncertainty associated with ecosystem processes and has the potential to address the political and social components of management. Compared to traditional management systems, adaptive management is more responsive to changing conditions and demands on ecosystems. (The Role of the Public in Adaptive Ecosystem Management Kusek, University of California, ; Doak, Portland, Oregon, Susan Carpenter, Carpenter and Associates, Riverside, CA, Sturtevant, Southern Oregon State College) It is an integrative system that includes scientists, the public and managers. An adaptive management procedure includes the following components (Biggs and Rogers, 2003) 1. To develop a plan for managing a system or resource. 2. To create processes to monitor changes in the systems or resource as affected by the management plan. 3, To evaluate system trends using the monitoring data. 4. To modify the system or resource management plan as necessary, indicated by the evaluation process. Eco sustainability through Adaptive Management is the condition of overlap between what people want for themselves and for future generations and what is ecologically possible in the long run. The goal of the framework is complex and depends on considerable knowledge of societal values and ecological capacity , and their interactions through time. The goals of societal values and the ecosystem are simultaneously met Bormann, 1994. The National Forest Plan (ROD 1995) view of Adaptive Management is a process of feedback (monitoring and evaluation) and adjustment (plans and actions). Changes in policies under reactive, passive and active adaptive management strategies is when knowledge influences decision. The decision under passive approach is that more can be learned from an active system if

attention is paid to what actually happened. Learning is advanced when the question and anticipated outcomes are clearly defined and monitoring plans are written before management takes pace. When a commitment to monitoring wanes, the strategy reverts to a reactive one. This plan requires patience to allow for sufficient time for learning. The scientists and citizens may criticize, but they can also help frame questions, anticipate outcomes and help design and implement a monitoring plans. An active plan seeks to learn more rapidly than under reactive or passive strategies by designing suites of policies that can be directly compared in management experiments that can become the focus of monitoring and evaluation. Because an active approach compares different policies simultaneously learning is more rapid than a passive approach that compares different policies sequentially through time. (Ecosystem Sustainability through Adaptive Management and Research, Bernard Bormann, USDA Forest Service, Pacific Northwest Research Station, Corvallis, OR)

Considering this type of system allows for hypothesis for solutions which are monitored for results and modified and adapted rather than a system that is not flexible or responsive to the results. This system allows a group to deal with uncertain information, mobilize available data on partially know processes and assist with the formation of objectives that are less sensitive to the unexpected. You are able to determine what works and what does not over time. This method has been used in the U.S. and Canada for over 20 years.

Factors to consider when making an effective plan.

The plan must be developed based on the issues, ecology, environment, and population density of Ogden Dunes. Plans should consider relevant facts and actual problems that occur in Ogden Dunes and not hysteria, inflated problems, hearsay, myths and unproven theories or numbers. One must move cautiously when developing a plan based on other communities' plans or experiences. They can be reviewed, ultimately the uniqueness of Ogden Dune's eco-system, population, flora and fauna must be considered first and foremost. Ogden Dunes has a population density that is nearly 10 times that of Beverly Shores and nearly 20 times that of Dune Acres based on 2010 census information. Ogden Dunes may have some forested land surrounding it, but it is not a forest. It can best be described as a Dunes setting within an urban setting. The National Park Service Plans are for their lands and not ours. Our plan should be developed and implemented based on the factors within our boundaries. Parks and forests do not contend with the impact their plans have on the human population as they are visitors rather than residents. The stakeholders in an urban setting are distinctly different from those of publicly held lands. Attached are Deer Management and Tick Management suggestions.

