Data Plan

Background:
In 2015 City Council directed staff to implement a deer management plan over the following four years. The first year was implemented in January-February 2016. In May 2016, City Council directed staff to provide a data collection plan. This document was prepared to respond to this request.

It's worth noting that when staff talked with deer experts, there is not a specific number of deer or number of deer/square mile that is appropriate as a community objective. The experts recommend the deer level be managed based on social tolerance and the impact of deer to natural areas in a particular community. The following data plan establishes measures that can be used to monitor and evaluate Ann Arbor's deer management program. Modifications to this plan may occur as more local experience is obtained.

This data plan was prepared to collect the data necessary to estimate the City's herd size and measure important outcomes from the annual deer management plans. It will take 3-5 years of collecting this data before the herd size estimates can be calibrated and the appropriate long-term objectives determined.

Measures to be gathered:

Safety

1. Number of firearm related injuries associated with the deer management program
   Method: Reports from police
   Frequency: Annual
   Lead: Police

Vegetation Impact

2. Public Land - baseline & on-going damage measure of natural plant communities
   Method: In field assessment of vegetative growth
   Frequency: Annual
   Lead: Ecologist (presently consultant)

3. Private Land – residential perceived impact of damage to natural plant communities and landscaping plants
   Method: Statistically valid citizen survey by Ward
   Frequency: Annual
   Lead: Communications Office

Deer/Human accidents

4. Total crash reports involving deer & percent of vehicle accidents involving deer within the City's legal boundaries
   Method: Police/MSP reports of deer involved crashes
   Frequency: Quarterly
   Lead: Police

Deer Nuisance (droppings, behavior, etc)

5. Deer Nuisance complaints (professional guidance required for wording of question)
   Method: Statistically valid citizen survey by Ward
   Frequency: Annual

Lead: Communications Office

Herd Size Trend (estimated) & Health

6. Carcass removal
   Method: Carcass removal requests performed by City vendor
   Frequency: Quarterly
   Lead: Police

7. Existing herd size trend
   Method: Over time, estimate herd size trend with helicopter survey (or other method) in combination with Herd Health statistics
   Frequency: Annual
   Lead: Safety Office

8. Number deer removed
   Method: Reports from contractors
   Frequency: Annual
   Lead: Safety Office

9. Mortality rate associated with non-lethal (sterilization)
   Method: Reports from contractors
   Frequency: Annual
   Lead: Safety Office

10. Assess physical condition of removed or darted deer (weight & age [based on teeth pattern])
    Method: Inspection by City contractor
    Frequency: Annual
    Lead: Safety Office

11. Herd composition – to help estimate herd growth rate by measuring adult sex ratio and doe vs fawn ratio.
    Method: Spotlighting
    Frequency: Annual
    Lead: Contractor

12. Test for Chronic Wasting Disease
    Method: Lab Test
    Frequency: On-going
    Lead: MDNR for any deer carcass removed

Community Acceptance

13. Implementation plan
    Method: Statistically valid citizen survey by Ward asking about acceptability of City's method of deer management (includes acceptable level of time parks are closed)
    Frequency: Annual
    Lead: Communications Office

14. Awareness of deer educational materials
    Method: Statistically valid citizen survey by Ward asking about awareness educational materials
    Frequency: Annual
    Lead: Communications Office

2017 Deer Management Plan – Objectives

PROBLEM:

- The number of deer is adversely impacting beyond the tolerance level of a portion of the City's residents, the bio-diversity and sustainability of plants/animals/insects in the City's natural areas.
- The number of deer is adversely impacting beyond the tolerance level of a portion of the City's residents, the residential and commercial gardens/ landscaping on private land.
- The number of deer/vehicle accidents has increased over the past 5 years.
- Chronic wasting disease in deer is getting closer to Ann Arbor.
- A segment of the City's residents has a higher tolerance for deer, views them in a positive light, and is advocating for a change in the deer management program that includes non-lethal methods or no action all.

MEASURES OF SUCCESS:

Overall Program for 2017:

- Number of firearm related injuries associated with the deer management program is 0.
- Number of deer in Ann Arbor with chronic wasting disease is 0.
- Total number of deer/vehicle crashes and percent of vehicle crashes involving deer reported in the legal boundaries of the City of Ann Arbor does not increase.
- MDNR approval of a permit to the City for a non-lethal deer management program in 2017.
- Establish a baseline for measuring the vegetative impact of deer in the City's natural areas and establish ecological goal.
- Implement an education program that increases the community awareness of the role of deer in the local ecology and offers residents options to manage potential deer impacts on their private property.
- Community acceptance of herd impact - when 75% of surveyed residents in a Ward respond that damage to their landscape or garden plants is at an acceptable level on private lands. Recognizing there will be variability of this measure over time, a trend towards 75% is desired.
- Community acceptance of deer management program - when 75% of surveyed residents in a Ward respond that the City's strategy of managing the deer population is acceptable. Recognizing there will be variability of this measure over time, a trend towards 75% is desired.
- Investigate where deer signage is appropriate and implement where possible.

Non-lethal (Sterilization) Program for 2017:

- MDNR approval of a permit to the City for a non-lethal deer management program in 2017.

- Number of firearm related injuries associated with non-lethal activities is 0.
- Number of deer sterilized is between 40 and 60. (goal obtained after discussion with proposed vendor.)
- Mortality rate associated with sterilization less than x%. (Rate based on discussion with vendor.)
- Coordinate with University of Michigan to increase the number of available locations for the deer management program.

Lethal Program for 2017:

- Number of firearm related injuries associated with cull activities is 0.
- Number of deer removed is 100. (goal established from conversation with proposed vendor.)
- Acceptable level of park closures – in survey (Citizen survey)
- Coordinate with University of Michigan to increase the number of available locations for the deer management program.

Educational Program & Public Right-of-Way Improvements:

- Review the City's "Fencing" ordinance for areas that could be modified to assist residents with deer management efforts.
- Develop an educational program for residents by March 15, 2017.
- Publicize educational program by April 30, 2017.
- Identify desired locations for deer signage in the right-of-way.

2017 Deer Management Project

	2017 Budget	2017 Combined Request	Memo: Lethal Only Request
Data Collection			
Aerial Deer Survey	$ -	$ 3,000	$ 3,000
Wildlife Monitoring (Vendor costs for tracking/processing data)		10,330	10,330
Citizen Survey		20,000	20,000
Vegetation Impact Study - Oak Seedlings		17,250	17,250
Vegetation Impact Study - Wildflowers		15,750	15,750
Subtotal Data Collection		**$ 66,330**	**$ 66,330**
Site Visit, Planning, Permitting (incl. travel)		**10,840**	**10,840**
Lethal			
Vendor Cost (Prep, sharpshooting, travel, processing)		55,720	55,720
City staff time charged - baiting/monitoring		28,000	28,000
Materials & Supplies:			
Bait		550	550
Signs		75	75
Pickup food donation for local Food Bank		280	280
Subtotal Lethal	**110,000**	**84,625**	**84,625**
Non-Lethal			
Vendor - Non-lethal (capture, sterilization, supplies, travel)		77,050	-
City staff time charged - baiting/monitoring		14,000	
City - Police staff riding with non-lethal		5,700	-
Subtotal Non-Lethal	**35,000**	**96,750**	**-**
Total	**$ 145,000**	**$ 258,545**	**$ 161,795**
Number of Deer Removed		100	100
Number of Deer Sterilized		40-60	-
Memo: Excludes Requests from UM:			
Coordination in use of UM property with cost share		TBD	TBD
Community Forum (funded by UM)		TBD	TBD
Ask a Scientist		TBD	TBD