

STAFF REPORT

DATE: October 25, 2016

TO: City Council

FROM: John McNerney, Wildlife Resource Specialist
Richard Tsai, Environmental Resources Manager
Robert A. Clarke, Public Works Director

SUBJECT: Wild Turkey Population Management Plan

Recommendation

1. Approve the attached resolution (Attachment 1) adopting a Wild Turkey Population Management Plan (Attachment 2); and
2. Authorize staff to implement recommended wild turkey management strategies; and
3. Approve the budget adjustment (Attachment 3) to fund the Wild Turkey Management Plan from unallocated General Funds.

Fiscal Impact

First year implementation of the Wild Turkey Population Management Plan is expected to cost \$20,500 for equipment, materials, staff and trapping consultant contract time. The bulk of this initial expense is associated with the acquisition of trapping equipment. In subsequent trapping years (every 5-10 years dependent on population level), the management program will cost \$11,500, while non-trapping management years will cost \$5,500. Staff costs (\$8,500) for both trap and non-trap management years are included in the current budget under program 7720 (Habitat Management). However, the remaining \$9,000 equipment acquisition and \$3,000 contract trapping costs are currently unfunded. Staff requests that funding for the \$9,000 initial equipment acquisition and \$3,000 contract trapping services be appropriated from unallocated General Funds.

Council Goal(s)

The Wild Turkey Population Management Plan does not address specific Council Goals. However, implementing the recommended strategies within the plan would reduce the overall impact turkeys have on residential and commercial property, traffic, and pedestrian safety.

Background and Analysis

In the last 10 years, the City of Davis has experienced a significant increase in the number of resident wild turkeys (*Meleagris gallopavo*) living within the urban planning area. The largest numbers of turkeys are localized to 3 neighborhoods in North, East, and South Davis, with a smaller but growing group in West Davis. The growing wild turkey population has generated increasing community concern regarding aesthetic impacts (i.e. feces, vehicle and landscape damage), traffic safety issues, and aggressive encounters. Public perception of the local wild turkeys has been mixed with both positive and negative interests in the turkeys.

In the Fall/Winter of 2007-08, the California Department of Fish and Wildlife contracted with the National Wild Turkey Federation (NWTf) to attempt a turkey trap and relocation effort in Davis. Initial trapping resulted in the removal of 18 birds. A subsequent trapping effort was less successful due to trap shyness (learned avoidance from previous experience) and lack of interest in the bait food due to an abundance of near-by supplemental feeding. The NWTf suggested they would not be able to conduct any further trapping until the supplemental feeding had ceased.

In 2008, City of Davis' Wildlife Resources Specialist drafted a Wild Turkey Management Plan to address the growing turkey population, associated community impacts, and supplemental feeding. The plan was presented to the community thru the Open Space and Habitat Commission. Multiple management options were identified and analyzed in the plan including public education and outreach, additional relocation, and lethal removal/relocation of overly aggressive individuals. The recommended action from the plan was to implement education and outreach about supplemental feeding and co-existence and to monitor turkey behavior and remove overly aggressive individuals.

Since 2008, the City has implemented wide scale outreach and education including the distribution of printed "Do not feed" literature at community events, community discussions, newspaper articles, social media posts, and residential calls and visits. While it's difficult to measure the success of the outreach in changing supplemental feeding behavior, some amount of known direct and indirect (i.e. birdfeeders) feeding continues. To date, no turkeys have been removed based on overly aggressive behavior and their population continues to grow. A census in the fall of 2015 suggested that the local turkey population was at a peak level of approximately 80 individuals.

The Wild Turkey Population Management Plan (Attachment 2) serves to update the original plan based on lessons learned, community feedback, and in response to the continued growth of the local turkey population and resulting community impacts. It represents an elevated level of management in both effort and cost.

Several factors were involved in selecting the appropriate method(s) of population management for turkeys in Davis. Animal welfare (target and non-target species), state wildlife regulation, passive recreation preservation, conflict reduction, cost effectiveness, and public acceptance were constraints for analyzing appropriate management strategies to include in the Plan.

On May 4, 2016, City staff with the assistance of the Yolo Conflict Resolution Center held a community forum on wild turkey management in Davis at the Senior Center. The forum was held in a "World Café" format involving several small round table discussions on topics ranging from personal interest in local wild turkeys to management strategy preference. Table moderators summarized the dialogue at each table and presented it to a graphic recorder. The graphic recorder recorded the information on several large posters at the front of the room (Attachments 4 and 5). Participants had the chance to ensure their input was recorded and then rank preference in management strategy. Results from this ranking are included in the management plan and were used to guide a turkey management strategy. Participants were also

given comment/ question cards to facilitate additional/ direct communication with staff. Sixty community members participated in the discussion.

Four management strategies were initially identified by Staff as possible solutions to mitigate the impacts associated with the turkeys. These strategies include:

1. Public outreach and education/ co-existence,
2. Mass capture and relocation (80 individual management threshold),
3. Mass capture and sterilization, and
4. Selective lethal removal.

These management strategies were presented to community members at a public scoping meeting held on May 4, 2016. An additional four management strategies were suggested by participants of the public scoping meeting including:

1. Nest/egg removal,
2. Mass harvest for donation to local food banks,
3. Promoting natural predators of turkeys, and
4. Doing nothing.

The objective of this management plan is to reduce turkey related public safety hazards and impacts to residential and commercial property, while preserving multi-species wildlife viewing opportunities for Davis residents, by employing cost effective and humane management methods. To meet this objective, the plan recommends a four-pronged approach including:

1. Continued outreach and education,
2. Mass capture and relocation to maintain the local population below a management threshold of 80 individuals,
3. Promoting natural predators, and
4. Selective lethal removal of overly aggressive individuals.

Attachments

1. Resolution
2. Wild Turkey Population Management Plan
3. Budget Adjustment
4. Turkey Management Workshop Graphic Record – Management Option Poll
5. Turkey Management Workshop Graphic Record – Turkey Impacts and Values

RESOLUTION NO. 16-____, SERIES 2016

**RESOLUTION OF THE CITY COUNCIL OF THE CITY OF DAVIS ADOPTING THE
WILD TURKEY POPULATION MANAGEMENT PLAN**

WHEREAS, wild turkeys are a state designated harvest species introduced to California by the California Department of Fish and Wildlife in the early 1900's; and

WHEREAS, wild turkeys are a non-native and increasingly invasive species in the State of California, increasing in both population and range; and

WHEREAS, since 2006, a breeding population of wild turkeys has established within the City of Davis; and

WHEREAS, in 2016, wild turkey population survey results indicate an average of 80 individuals occurring in nearly all areas within the City including the core business area; and

WHEREAS, wild turkeys within the urban environment present a unique wildlife viewing opportunity for Davis residents and may help to control invertebrate pests; and

WHEREAS, the foraging and social behavior of local, wild turkeys create community impacts via physical damage to private residential and commercial property, and public safety threats to pedestrians, bicyclist, and motorists; and

WHEREAS, direct or indirect supplemental feeding of wild turkeys increases such impacts by artificially sustaining population growth and focusing the turkeys daily foraging activity within specific neighborhoods; and

WHEREAS, the City of Davis is committed to the protection of public health and biological resources, and wishes to adopt a management plan that reduces wild turkey related public safety hazards and impacts to public and private property, while preserving multi-species wildlife viewing opportunities for Davis residents, by employing cost effective and humane management method(s); and

WHEREAS, the Wild Turkey Population Management Plan was drafted using the best available science, wildlife management methodology, and input from community stakeholders.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Davis that the Wild Turkey Population Management Plan is adopted and authorizes City staff to implement recommended management actions identified within the plan, and

BE IT FURTHER RESOLVED that the City Council of the City of Davis urges Davis residents, property managers and business owners not to feed, or cause to feed, wild turkeys and/or other wildlife.

PASSED AND ADOPTED by the City Council of the City of Davis this 25th day of October, 2016, by the following vote:

AYES:

NOES:

Robb Davis
Mayor

ATTEST:

Zoe S. Mirabile, CMC
City Clerk

Wild Turkey Population Management Plan

City of Davis



September 27, 2016

INTRODUCTION

Background and Goal

In the last 10 years, the City of Davis has experienced a significant increase in the number of resident wild turkeys (*Meleagris gallopavo*) living within the urban planning area. The largest numbers of turkeys are localized to 3 neighborhoods in north, east, and south Davis, with a smaller but growing group in west Davis.

The first documented occurrence of wild turkey in Davis was made in May of 2006, when a group of 9 birds were observed using the Davis Cemetery (2 adults and 7 sub-adults). Anecdotal information suggests earlier occurrence in the city. The origin of these wild turkeys is unclear. It is possible that these birds were transient immigrants from established populations around the city or semi-domestic transplants/escapees. The initial group of wild turkeys habituated to the Davis Cemetery site (820 Pole Line Road) and established a breeding population. By the end of 2007, the local population had climbed to 30 individuals at the Davis Cemetery indicating the recruitment of individuals into the population via immigration from outside populations and local reproduction. In 2009, two separate small rafters established in north Davis in the vicinity of the vacant parcel on Grande Ave. and in south Davis near the Cal Fire facility at 5800 Chiles Road.

With the newly establish urban turkey population came community complaints regarding aesthetic impacts (ex. feces, vehicle and landscape damage), traffic safety issues, and aggressive encounters. Public perception of the local wild turkeys has been mixed with both positive and negative interests in the turkeys.

With requests from cemetery staff and residents, the Davis Police Department began investigating solutions to remove the turkeys. Both the Yolo County Sheriff's Animal Control Services and California Department of Fish and Wildlife (CDFW) were contacted. Yolo County was not able to assist and the CDFW offered to assist in a trap and relocation effort. In the fall/ winter of 2007-08, CDFW contracted with the National Wild Turkey Federation (NWTf) to attempt a trap and relocation effort. Initial trapping resulted in the removal of 18 birds. A subsequent trapping effort was less successful due to trap shyness (learned avoidance from previous experience) and lack of interest in the bait food due to an abundance of near-by supplemental feeding. The NWTf suggested they would not be able to conduct any further trapping until the supplemental feeding had ceased.

In 2008, City of Davis' Wildlife Resources Specialist drafted a Wild Turkey Management Plan to address the growing turkey population, associated community impacts, and supplemental feeding. The plan was presented to the community thru the Open Space and Habitat Commission. Multiple management options were identified and analyzed in the plan including public education and outreach, additional relocation, and lethal removal/ relocation of overly aggressive individuals. The recommended action from the plan was to implement education and outreach about supplemental feeding and coexistence and to monitor turkey behavior and remove overly aggressive individuals.

Since 2008, the City has implemented wide scale outreach and education including the distribution of printed “Do not feed” literature at community events, community discussions, newspaper articles, social media posts, and residential calls and visits. While it’s difficult to measure the success of the outreach in changing supplemental feeding behavior, some amount of known direct and indirect (ex. birdfeeders) feeding continues. To date, no turkeys have been removed based on overly aggressive behavior. A census in the fall of 2015 indicated that the local turkey population was at a peak level of approximately 80 individuals.

This document serves to update the original Wild Turkey Management Plan based on lessons learned and in response to the continued growth of the local turkey population and resulting community impacts. The updated plan was guided by input received from a community outreach event held on May 4, 2016.

The objective of this management plan is to reduce public safety hazards and aesthetic impacts to landscaping and gardens, while preserving multi-species wildlife viewing opportunities for Davis residents, by employing cost effective and humane management method(s).

Wild Turkey Distribution

Wild Turkeys are a non-migratory species that occur throughout North America. There are five subspecies of wild turkey including Eastern (*M. g. silvestris*), Merriam’s (*M. g. merriami*), Rio Grand (*M. g. intermedia*), Gould’s (*M. g. mexicana*), and Florida (*M. g. osceola*). A sixth subspecies, the Mexican turkey (*M. g. gallopavo*), is believed to be extinct. Although not indigenous to California, efforts by recreational hunters and the CDFW successfully established the Merriam’s and Rio Grand subspecies in the state. Well established populations occur primarily along the coast, transverse, Southern California mountain ranges and a few areas in the Sierra Nevada. Their range is expanding to include urban and agricultural areas. The wild turkeys occurring in Davis are the Rio Grande subspecies. There is no prior history of wild turkey existing within the City of Davis. Statewide, human conflict with urbanized wild turkeys has been on the increase.

In Davis, the turkeys occur in four distinct locations including the area centered around the large vacant parcel on Grande Ave (north Davis), Davis Cemetery (east Davis), CalFire Work Yard on Chiles (south Davis), and the Stonegate stormwater overflow basin (west Davis). They spend a significant amount of their daily foraging activity within the adjacent neighborhoods.

Life History

Identification

One of the largest North American birds, the unmistakable wild turkey is large with a heavy, darkly colored body, thin neck, small head and long legs. They are a highly social species forming large flocks for much of the winter, isolating into sexually segregated flocks in the spring and summer months. There is a clear “pecking” order with alpha male and female individuals. Males are larger than females, ranging from 15 to 17 lbs and

often have a “beard” of hair-like modified feathers, hanging from the breast. Young turkey (poults) reach adult size and plumage at 12 to 16 weeks of age.

Nesting, Roosting and Foraging

Wild turkeys are sexually mature the year after hatch. They are polygamous, breeding in early spring. Male turkeys display and call to attract mates. Hens select the male for copulation. Nests are made on the ground within dense brushy cover. Locally, turkey nests have been verified to occur in residential landscaping. Hens become solitary as they begin nesting. Once a full clutch of 10 -12 eggs is laid, the hen incubates 25-29 days. Poults are precocial (able to move about and forage after hatching) and are capable of short flights after two weeks. Poults remain with the hen until the following spring.

Turkeys use nocturnal roost sites (typically trees but sometimes roof tops). Habitual use of a roost site is common but the sites can vary during the year.

Wild turkeys are opportunistic omnivores, feeding on a variety of plant and animal matter depending on what is available. General food items include green herbaceous material and grasses, hard and soft mast, seeds, roots and tubers, and invertebrates. The most common methods of taking food items are by scratching the ground for seeds, hard mast and invertebrates, or picking leaves and soft mast from plants and shrubs. Foraging is nomadic but centers around a core use area. The size of the core use area is correlated to resource availability. A smaller area is used when resources are abundant.

Population dynamics

Few studies document longevity of wild turkey in urban settings. However, wild turkeys in more natural habitats are a moderately-lived species (Rio Grande subspecies have been recorded up to 14 years of age) if they survive the first year of life. Poult mortality is generally assumed to be high in the wild (around 70%). In urban settings poult mortality rate may be lower due to little or no predation.

Legal Protection

The statewide wild turkey population is on the increase and receives no protection as a rare or sensitive species. However, wild turkeys are designated as a state harvest species regularly taken by hunters during the non-breeding months. CDFW requires a hunting permit to take individuals during open season or a scientific collection permit to collect or transport individuals or their eggs. Permits are not needed to haze individuals or remove nests without eggs.

COMMUNITY IMPACTS

The establishment of a wild turkey population within the urban habitat provides a unique wildlife observation opportunity for Davis residents. However, the wild turkey have contributed to negative impacts to the community via “aggressive” behavior toward pedestrians and bicyclists, traffic safety hazards, landscape damage, and fecal deposits on sidewalks, driveways and rooftops.

The supplemental feeding of turkeys by well-meaning residents causes the turkeys to lose their fear of humans. Territorial male turkeys have been observed to closely approach and aggressively display toward humans. Bicyclists have also reported receiving brief chase by the males. Rarely do such encounters result in physical contact. Two incidents have been reported regarding physical contact between turkeys and humans in Davis. However, neither occurrence was a result of direct aggression nor unprovoked.

In addition to the loss of fear for humans, the nomadic foraging behavior of the turkeys frequently leads them across streets and bike lanes. This often causes traffic to stop suddenly to observe or avoid collisions with the turkeys. Such sudden stopping of traffic presents a hazardous condition and may lead to collisions between vehicles or with bicyclists or pedestrians.

Aesthetic impacts associated with the turkeys primarily include damage to landscaping via turkeys eating vegetation and scratching or digging for buried hard mast, insects, or roots and tubers. Community concern also includes the localized littering of sidewalks and driveways with turkey feces, and potential cosmetic damage to vehicles associated with turkeys walking on them.

It is clear that the Davis wild turkey population is increasing. This increase in the number of individuals is likely to increase the impacts on the community and may serve as a “source” population for further expansion in range.

PUBLIC SCOPING ON MANAGEMENT STRATEGIES

On May 4, 2016, City staff with the assistance of the Yolo Conflict Resolution Center held a community forum on wild turkey management in Davis at the Senior Center. The forum was held in a “World Café” format involving several small round table discussions on topics ranging from personal interest in local wild turkeys to management strategy preference. Table moderators summarized the dialogue at each table and presented it to a graphic recorder. The graphic recorder recorded the information on several large posters at the front of the room. Participants had the chance to ensure their input was recorded and then rank preference in management strategy. Results from this ranking are summarized in Table 1. Participants were also given comment/ question cards to facilitate additional/ direct communication with staff. Sixty community members participated in the discussion.

During the forum, participants received information on four management strategies identified by staff. Four additional management strategies were identified by the community participants during the meeting. These strategies included egg removal/ nest disruption, promoting natural turkey predator population, harvesting turkeys to feed people who are food insecure, and to do nothing. These additional strategies were included in the management method analysis for this Plan.

Table 1. Management strategy preference by community members

Method	Total votes	# Primary	# Secondary	Rank
Outreach and Education	14	2	12	2
Relocation	8	7	1	3
Sterilization	0	0	0	8
Selective Lethal Removal	7	2	5	5
Egg/ Nest Removal	17	11	6	1
Promote Natural Predators	6	6	0	4
Harvest for Food Bank	2	1	1	7
Do Nothing	6	3	3	6

MANAGEMENT STRATEGY ANALYSIS

Typical strategies to manage urban wildlife populations/ community impacts include public outreach on coexistence, habitat modification, relocation, sterilization and lethal removal.

In this plan, several factors were involved in selecting the appropriate method(s) of population management for turkeys in Davis. Animal welfare (target and non-target species), state wildlife regulation, passive recreation preservation, conflict reduction, cost effectiveness, and public acceptance were constraints for analyzing appropriate management strategies. Because the turkey population is already creating impacts to the community a desirable management strategy, at a minimum, should realize an immediate reduction in number of local turkeys. Habitat modification is not feasible as the turkeys are selecting for an urban landscape and have exhibited flexibility in urban resource utilization. City staff understands that a number of citizens enjoy viewing the wild turkey. A dramatic reduction in turkey numbers may upset this viewing opportunity.

Four management strategies were initially identified by staff in this Plan as possible solutions to mitigate the impacts associated with the turkeys. These strategies include: public outreach and education/ coexistence, trap and relocation, trap and sterilization, and selective lethal removal. An additional four management strategies were suggested by participants of the public scoping meeting. Table 2 provides a matrix which compares all potential management strategies as they relate to management results, methodology, costs, and constraints.

Table 2. A matrix of proposed management strategies as they relate to management results, effort, cost and constraints.

Strategy	Expected Results	Method	Direct Costs*	Timing	Constraints
Outreach and Education on Coexistence and Hazing with removal for public safety	<ul style="list-style-type: none"> • Status quo. • Possible reduction in “aggressive” encounters. • No population reduction. 	<ul style="list-style-type: none"> • Distribute information on coexistence and not feeding wildlife. • Lethal removal of overly aggressive individuals, as identified. 	<ul style="list-style-type: none"> • Approx. \$5,000 annually. 	<ul style="list-style-type: none"> • Ongoing 	<ul style="list-style-type: none"> • Supplemental feeding may continue to occur. • Population continues to reproduce. • Population remains elevated and little reduction in associated aesthetic impacts. • Not all residents willing to coexist.
Relocation (City staff trapping, CDFW relocation)	<ul style="list-style-type: none"> • Reduced population size and associated aesthetic impacts. • Reduced aggressive encounters. • Reduced reproduction. 	<ul style="list-style-type: none"> • Apply once local population meets or exceeds 80 individuals. • Mass capture as many turkeys as possible. • Hand off to CDFW for health screening and relocation to a suitable location. • Apply every 5-10 years. 	<ul style="list-style-type: none"> • \$15,000 for trapping at 3 locations in first year. • \$6,500 for subsequent treatments every 5-10 years. 	<ul style="list-style-type: none"> • Trapping must occur in the fall. • Could be applied as early as fall/ winter 2016. 	<ul style="list-style-type: none"> • Effectiveness dependent on the number of individuals successfully captured. • Difficult and labor intensive to trap turkeys. Not possible to capture all. • Associated impacts are reduced but not removed.

Strategy	Expected Results	Method	Direct Costs*	Timing	Constraints
<p>Sterilization (City trapping, UC Davis sterilization)</p>	<ul style="list-style-type: none"> Reduction in the growth of the population resulting from reduced reproduction. Possible reduction in population size, over 10 to 15 years, assuming limited immigration. Possible reduction in aggressive encounters with sterilized males. 	<ul style="list-style-type: none"> Similar to Relocation except the birds are taken to UC Davis Vet Med School for surgical sterilization. Sterilized birds would be color banded and released back into Davis population. 	<ul style="list-style-type: none"> Estimate of \$390/ bird for sterilization. \$31,500 to trap and sterilize at 3 locations in the first year. Approx. \$8,000 for subsequent treatments. 	<ul style="list-style-type: none"> Trapping must occur in the fall. Could be applied as early as fall/ winter 2016. 	<ul style="list-style-type: none"> Similar to capture constraints noted for Relocation. No near-term population reduction to relieve associated aesthetic impacts. Some mortality due to trapping and post-operative complications. Poor cost effectiveness. CDFW approval.
<p>Selective Lethal Removal (Staff and Wildlife Control Contractor)</p>	<ul style="list-style-type: none"> Reduced aggressive encounters. 	<ul style="list-style-type: none"> Apply as needed to remove overly aggressive individuals. Selective removal from night roosts using an air rifle. 	<ul style="list-style-type: none"> \$200 per application. Two to three applications per year. \$400-\$600/ year. 	<ul style="list-style-type: none"> Could be applied as early as fall/ winter 2016. 	<ul style="list-style-type: none"> The ability to safely apply this method depends on the location of the active roost sites in relation to dwellings and other sensitive areas. Coordination with Davis PD for safe application. Does not fit the interests of community members that are sensitive to animal rights.

<p>Egg Removal/ Nest Disruption</p>	<ul style="list-style-type: none"> • Reduce reproduction/ population growth • Reduced population size and associated impacts over time. 	<ul style="list-style-type: none"> • Annual search and treatment. • Oil eggs to stop development. • Remove nests prior to egg laying to deter use. 	<ul style="list-style-type: none"> • Approx. \$10,000 per year 	<ul style="list-style-type: none"> • Applied during the breeding season between March and May. • Could be applied in spring 2017. 	<ul style="list-style-type: none"> • Not permissible by law - State law prohibits the destruction of bird eggs. Permits may be issued for egg destruction for scientific research only. • Labor intensive to locate, treat, monitor and re-treat eggs.
<p>Support Turkey Predators</p>	<ul style="list-style-type: none"> • Increased predation of poults reduces population growth over time. 	<ul style="list-style-type: none"> • Continue to foster coexistence with local coyotes. • Continue to protect urban hawk nesting sites. 	<ul style="list-style-type: none"> • No additional costs above existing effort. 	<ul style="list-style-type: none"> • Ongoing 	<ul style="list-style-type: none"> • Human conflict with coyotes within the urban area.
<p>Turkey Harvest for Food Banks</p>	<ul style="list-style-type: none"> • Same as for Relocation. 	<ul style="list-style-type: none"> • Same as for Relocation. 	<ul style="list-style-type: none"> • Unknown. Estimate of \$3,000 to apply at 3 locations per year, as needed. 	<ul style="list-style-type: none"> • Same as for Relocation. 	<ul style="list-style-type: none"> • Not permissible by law - State law only allows for personal consumption of legally taken harvest species. Depredated animals must be disposed of. • Does not fit animal welfare interests.

* Direct costs associated with staff time, materials and/ or contracts. First year of trapping requires acquisition of equipment.

Education and Outreach/ Coexistence

Public education and outreach, regarding not feeding of turkey and how to properly respond to turkey confrontation, would help to reduce – but may not eliminate - “aggressive” encounters. Other turkey related impacts would continue and increase.

The city currently utilizes outreach and education regarding turkeys. The core of this program is the distribution of outreach literature provided by the CDFW’s Keep Me Wild program (Attachment 1), information posted on the city’s website, periodic postings on the city’s social media outlets, and continued consultation with residents on turkey conflict resolution. Community meetings are also held on request, focusing on impacted residential neighborhoods, and residential contacts regarding turkey feeding. Costs associated with this strategy are nominal and the method received high support during public scoping. This strategy should be continued regardless what additional methods are selected.

It’s important to note that despite efforts to educate the public about the problems with supplemental feeding, certain members of the community continue to provide food. It may be helpful, therefore, to investigate and implement ordinance to prohibit the feeding of wild turkey.

Trap and Relocation

Trapping and relocating as many individuals as possible from the population would result in a reduced population (removal of approx. 30-40 individuals) and reduce “aggressive” encounters with humans. Aesthetic and traffic hazard impacts would continue, to a lesser degree, with this strategy. Removing reproductively mature turkeys would also suppress reproduction. Assuming limited immigration from outside the City, the lack of reproduction into the population would result in a natural attrition. Not all individuals could be successfully trapped and relocated leaving turkeys within the urban environment for recreational viewing. Future relocation treatments would occur when the local population reached or exceeded 80 individuals.

Public education and outreach would remain an important component. Population monitoring and public feedback could be used to assess continuation of impacts or population regrowth.

Cost of implementing this strategy would be moderate to high. City staff time and materials would be necessary to trap the turkeys. The majority of the associated costs are attributed to the one-time purchase of trapping equipment. Under a written agreement, CDFW would assist with identifying suitable relocation sites and transportation/ release of the birds. CDFW would also be responsible for incurring the veterinarian cost associated with quarantine/ pathogen testing of the birds prior to release. This strategy received higher preference over lethal removal during public scoping.

Trap and Sterilization

Trapping and sterilization at least 50% (i.e. 40 individuals) of the population would help to curb population growth via suppressed reproduction. However, sterilized birds would

be released back into the Davis population. As such, little relief from associated aesthetic impacts would be realized initially, but the population may decline over 10-15 year due to natural attrition. Aggressive encounters with sterilized males may be reduced.

The cost to the City with implementation of this strategy would be high. Similar to trap and relocation, a significant effort would be needed to trap the turkeys and not all individuals could feasibly be captured. Trapped birds would be taken to the UC Davis School of Veterinarian Medicine for surgical sterilization. At this time the costs associated with the sterilization estimated to be \$390/ bird. This strategy received no support during public scoping and it's unknown if CDFW would approve such a strategy.

Selective Lethal Removal

Under a depredation permit from the CDFW and the supervision of the Davis Police Department, a wildlife control contractor lethally removes select turkeys from their night-time roost location using an air rifle. This action could only be applied during the non-breeding season and destroyed turkeys must be disposed of via incineration or burial. Reducing the number of turkeys in the population will reduce associated aesthetic impacts and aggressive encounters. Fewer breeding adults also results in reduced population growth associated with reproduction.

Costs associated with this strategy are estimated to be low. The strategy is considered the most cost effective in terms of meeting management objectives. The ability to safely implement this option depends on the location of the active roost sites in relation to dwellings and other sensitive areas. As such it may not be able to be safely implemented at all roost locations, if any. The strategy does not fit the interests of animal welfare proponents and received relatively little support during public scoping.

Egg Removal/ Nest Disruption

This strategy involves searching for nests and determining status. If eggs are present, the eggs are humanely addled or oiled to prevent development. If no eggs are present the nest can be destroyed to deter the female from laying them.

This strategy was suggested by community members and received high preference during public scoping meeting. However, the method is not permitted under California law which protects the nests and eggs of wildlife. The method may only be used for migratory birds under permit from the U.S. Fish and Wildlife Service. As such the strategy cannot be considered a feasible option for this Plan.

Support Natural Turkey Predators

Urban turkeys have few natural predators. Without predation, there is no natural population control. Supporting a health population of natural predators of wild turkeys (ex. coyotes, fox, red-tailed hawks and Swainson's hawks) in and around the City would help to stabilize turkey population growth.

The City currently has policy to promote coexistence with local coyotes and protect and restore breeding habitat for large birds-of-prey. Continued adherence to such policies would be considered implementation of this method.

This strategy was suggested by community members and received moderate preference during scoping. There are no additional costs expected with implementation of this strategy.

Harvest Turkeys and Donate to Food Banks

This strategy was suggested by community members and received a low preference ranking during public scoping. The strategy is generally a modification of the selective lethal removal method to redirect lethally removed turkeys to a local food bank in order to support people with food insecurity. While an admirable concept, California state law prohibits the consumption of wildlife taken under a depredation permit. Only legally taken harvest species may be consumed (i.e. taken with hunting license using firearms). Depredated animals must be disposed of. As such this strategy cannot be considered a feasible strategy for this plan.

Do Nothing

This strategy was suggested by community members and received a low preference ranking during public scoping. It is assumed that this method is essentially the cessation of all management efforts and adopts a complete acceptance policy for local turkeys. Under such a policy, there would be no efforts to control the turkey population or associated community impacts, nor efforts to educate the community on turkey coexistence.

Implementation of this strategy would result in cost savings of approximately \$5,000 annually due to discontinuation of existing turkey management activity.

OBJECTIVE AND RECCOMENDED STRATEGIES

Objective: Find a balance between wild turkey related community impacts and preserving a unique wildlife viewing opportunity in a humane and cost effective manner.

Strategy 1: Reduce public safety and aesthetic impacts by trapping and relocating as many individuals as possible. Monitor and maintain a population below an action threshold of 80 individuals citywide, but no less than 10 individuals.

Strategy 2: Selectively remove overly aggressive individuals via trapping and relocation or cull.

Strategy 3: Continue to promote natural predators of wild turkeys by enforcing existing policy that protects nesting birds-of-prey and coyote coexistence.

Strategy 4: Provide educational materials on hazing methods and the hazards of feeding wildlife. Distribute to community members, focusing on impacted neighborhoods.

Facilitate community meetings within impacted neighborhoods to demonstrate hazing methods.

Strategy 5: Post advisory signage at busy road crossings and in locations where aggressive turkeys occur to warn motorists, bicyclists and pedestrians of associated hazards.

Strategy 7: Investigate and draft a “No Feeding Turkeys” ordinance. Seek City Council ratification of said ordinance if necessary.

RECOMMENDATION

In order to find a balance between wild turkey related community impacts and preserving a unique wildlife viewing opportunity in a humane and cost effective manner, it is recommended that the city implement all of the above strategies with a minimum implementation of strategies 1-4.

Implementation Schedule

Assuming City Council approval of recommended control strategies and associated funding in fall 2016, the following implementation schedule is recommended:

- Immediate and on-going
 - Monitor turkey population size and behavior.
 - Community Outreach and Education - Provide educational material on hazing methods and the hazards of feeding wildlife. Distribute to community members, focusing on impacted neighborhoods.
 - Draft and execute wildlife control contract for trapping/ relocation and selective removal assistance.
 - Remove overly aggressive individuals.
 - Promote natural turkey predators.
- Fall/Winter 2016/17
 - Purchase and fabricate trapping equipment.
 - Draft and execute MOU with California Department of Fish and Wildlife for turkey relocation to an approved site.
 - Initial mass capture and relocation of larger groups at north and central locations. Repeat treatment every 3-5 years or when population management threshold exceeded.
- Spring/ Summer 2017
 - Facilitate community workshops to demonstrate hazing methods.
- Fall/ Winter 2017/18
 - Mass capture and relocation of smaller groups at west and south locations. Repeat treatment every 3-5 years or when population management threshold exceeded.

Attachment 1- California Department of Fish and Wildlife Turkey Outreach



Wild Turkeys Don't Need Your Handouts!

Feeding wild turkeys is asking for trouble – not only for you, but for your neighbors as well. Prevent problems by discouraging wild turkeys from becoming too comfortable on your property.

- If turkeys begin feeding under hanging bird feeders, remove the feeders until the turkeys leave the area.
- If turkeys are causing problems in your yard, install motion-detecting sprinklers.
- Wild turkeys typically will not enter yards with dogs.
- If confronted by a wild turkey that has lost its fear of humans, an open umbrella may help steer it out of your path.
- Depredation permits are required to kill wild turkeys that are causing property damage. To get a depredation permit, contact your local Department of Fish & Game office.

Please respect and protect wild animals. Keep them wild.

www.keepmewild.org

For More Information
Contact the California Department of Fish and Game (DFG)

Sacramento Headquarters – (916) 653-6420

Northern California, North Coast Region
Redding – (530) 225-2300

Sacramento Valley, Central Sierra Region
Rancho Cordova – (916) 358-2900

Central Coast Region
Napa – (707) 944-5500

San Joaquin Valley, Southern Sierra Region
Fresno – (559) 283-4005 ext. 353

South Coast Region
San Diego – (619) 467-4201

Eastern Sierra, Inland Deserts Region
Ontario – (909) 484-0167

Alternate communication methods are available upon request. If reasonable accommodation is needed, contact the Department of Fish and Game, (916) 653-6420, kenwood@dfg.ca.gov, or the California State Service writing staff and hearing impaired residents call (707) 700-7000, voice, and speech-required calling, at 800-738-5429.



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Feeding Wild Turkeys Will Bring Problems Home to Roost.

California's wild turkeys now occupy about 18 percent of our state, and are a highly valued upland game bird. Many Californians also enjoy watching them.

Some homeowners can't resist feeding them. That's where trouble begins. A few stray visitors soon become a flock of permanent residents that have lost their natural fear of humans.

Adult wild turkeys, which can weigh upwards of 20 pounds, can destroy flowers and vegetable gardens, leave their droppings on cabins and decks, and roost on cars, scratching the paint.

Turkeys can become aggressive during the breeding season, occasionally even charging, threatening, and acting aggressively toward people.

Relocating nuisance wild turkeys is expensive and impractical. But preventing conflicts is simple.

Wild turkeys don't need your handouts. They need your respect.



Controlling Wild Turkey Populations

California's wild turkey populations are healthy and growing, hunting turkeys helps to control their populations and maintain their natural wariness of people. Where safe and legal, hunt wild turkeys on your property, or allow others to hunt them.

- Spring season: season limit is three gobblers per hunter (one per day)
- Fall season: season limit is one turkey per hunter (gobbler or hen)
- A hunting license and upland game bird stamp are required
- Legal methods of take include shotgun, archery equipment, or air rifle
- Hunting regulations are available from DFG offices and online at www.dfg.ca.gov

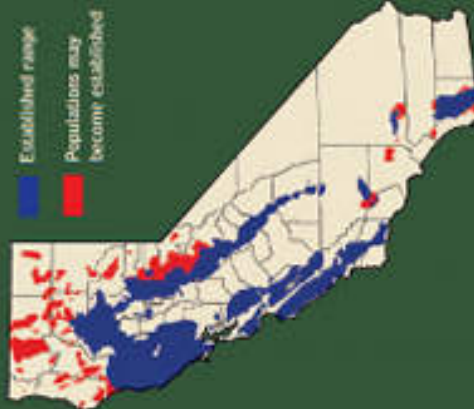
Homeowners experiencing property damage from wild turkeys may obtain a depredation permit from the local DFG office.

Keep them wild.



Feeding wild turkeys can cause major problems for you and your neighbors.

Wild turkeys are well established in about 29,000 square miles of California.



Established range
Populations may become established

You Can Help Wildlife

Please visit www.keepmewild.org for downloadable posters, newspaper advertisements and other "Keep Me Wild" materials.

F-928-20
07/90

CITY OF DAVIS
Request for Budget Adjustment

Agenda Item: 07

TO: City Manager
VIA: Finance Administrator

City Council Meeting Date: 10/25/16

FROM: Public Works Dept Head [Signature]
Signature and Date

I request the following budget adjustments:

A. Internal Transfers of Currently Appropriated Funds.

TRANSFERS FROM PROGRAM NAME	FUND NO.	DIV/ PROG.	ACTIVITY	ELEMENT/ OBJECT	AMOUNT (CR)	HOURS
						00
						00
						00
TOTAL					<u>0</u>	

B. New Appropriation's Source of funding/Revised Revenue Change.

Unallocated Reserve	General Fund			001	\$ 12,000	
		Fund Name		Fund No.		
Unallocated Reserve						
		Fund Name		Fund No.		
New/Revised Revenue (_ _ _ _ _)						
Circle One	Activity (Elem. Obj)	Fund Name		Fund No.		

C. Allocation of Internal Transfers and/or New Appropriations.

TRANSFERS TO PROGRAM NAME	FUND NO.	DIV/ PROG.	ACTIVITY	ELEMENT/ OBJECT	AMOUNT (DR)	HOURS
Habitat Management - equipment	001	7720	490	2550	\$ 9,000	
Habitat Management - prof. svcs	001	7720	490	4550	\$ 3,000	
TOTAL					<u>\$ 12,000</u>	

D. Reason For Adjustment (Explain fully. Attach sheet if necessary. If new revenue, record a description on reverse side on Part VI.)
Funding for the Turkey Management Plan.

FINANCE DIRECTOR

A. Funds have been appropriated & are available.

B. Funds have been appropriated

Funds must be appropriated.

Comments:

[Signature]

Signature and Date

Date: 10/19/16

BA No. 32

CITY MANAGER

A. Approved
 Disapproved

B. City Council appropriated funds.

City Council informed of revised revenue estimate.

Comments:

Signature and Date

Posted By: _____

WILD TURKEY MANAGEMENT

CITY OF DAVIS MAY 4, 2016

a community conversation

1 OUTREACH:
EDUCATION +
REMOVAL FOR PUBLIC SAFETY
OF OVERLY AGGRESSIVE INDIVIDUALS
(insufficient) (individual responsibility)

2 RELOCATION



6 BRING BACK PREDATORS

STERILIZATION



4 SELECTIVE LETHAL REMOVAL

5 EGG REMOVAL/
NEST DISRUPTION
(illegal to interfere with eggs)
↑ Get a permit to do this

8 Hazing
(noise, etc.)

7 TURKEY FARM
Feed hungry

9 DO NOTHING

ALISON KENT
LISTEN UP

- City should answer
- what's a wild population?
 - what's sustainable?
 - Data? eg impact of sterilization
 - Is relocation really an option?
 - think long term
 - MORE support from State
 - consider in new development - turkeys environmental impact
 - impact of relocation?
 - engage university

WILD TURKEY MANAGEMENT

CITY OF DAVIS MAR 4, 2016

A community conversation

VALUES

embrace wildlife · non-lethal preferred · moderate response · good quality of life · humane solutions · health · Preserving property · individual responsibility (feeding)

VALUES

balance · prioritize people not wildlife · treat turkeys equally · SUSTAINABLE, COST-EFFECTIVE SOLUTIONS · Safety (City needs)

VALUES

valuing nature · ecosystem balance · changes impact habitat · Co-existence

Biocentric paradigm: coexist

Davis is growing; pace is changing

Voice of community

Educated community; plan: need for data + educate community

Entertaining

IMPACTS

Enjoy looking at turkeys:

"in the wild" children enjoy

Davis is a community that can embrace wildlife

IMPACTS

Nuisance

City liability

Seasonal variation

TOO MANY!!

Property damage

observing neighbors feeding

ROOFS SOLAR SYSTEMS

State brought problem - frustration

Turkeys eat bugs!

FECES: pets parks/children disease/bacteria

City's failure to address

mail carriers harassed

Trying too many ways to manage ourselves

IMPACTS

Safety: traffic personal



ALISON KENT LISTEN-INK