

Response to City of Boulder Mitigation Plan for Prairie Dog Relocation to Richardson II, Gunbarrel



Introduction

The purpose of this document is to provide an objective analysis of the numerous deficiencies, contradictions and scientific inaccuracies in the City's proposed prairie dog relocation mitigation plan for the Richardson II Plot.

Summary

The City's mitigation plan fails to address the community concerns and relies on empty hopes, not on scientific evidence to provide assurances to the community. The proposal is a perfect example of the tone deaf posture the City has taken with regards to the concerns of the more than 1,100 concerned citizens in Gunbarrel who have actively opposed prairie dog relocation to Richardson II. Aside from the lack of scientific evidence or supporting research for their proposed mitigation tactics, the City further demonstrated its weak standing on the issue by proactively undermining the efficacy of their own mitigation strategies.

Mitigation Plan Deficiencies & Inaccuracies

The comments that follow track to Section III, *Mitigation Plan for Richardson Receiving Site*, of May 27, 2011 Revision of the City of Boulder Prairie Dog Relocation Mitigation Proposal for the Richardson II Receiving Site.

A. Project Modifications – Reduction of number of prairie dogs to be relocated from 500-300.

1. It is disingenuous of the City to suggest that the reduction in the number of prairie dogs to be moved is "in response to public comment." Their own plan states the reduction is due to a smaller than previously anticipated number of prairie dogs at Foothills Park.
2. If the number of prairie dogs at Foothills Park has fallen from fall 2010 census number by 40% there is deep concern that the Foothills colony may be experiencing the onset of a plague event. If this is true, the colony cannot legally be relocated. This needs to be studied before potentially infected prairie dogs are relocated to Gunbarrel.
3. If the City's own counts can vary by as many as 40%, the community has a grave concern that the existing Richardson II population may not be the small 389 the City counted in its fall 2010 census of the site, rather may be as large as 550. The City is acknowledging an unacceptably high error rate that is entirely consistent with its historically well documented inability to manage colony populations and expansions. This gives community members no confidence in any protective efforts proposed by the City.

B. Site Mitigation

1. The City's plan claims to have selected specific mitigation techniques based on: cost feasibility, likelihood of success, lack of negative impacts to other aspects of the ecosystem, and attractiveness to neighbors. We believe this to be a false set of criteria and disingenuous assurance for the following reasons:

- a) **Cost feasibility** – the proposed measures may be economically affordable in the short term, but create long-term liabilities for the City that will be far more costly to remedy.
- b) **Lack of negative impacts to other aspects of the ecosystem** - the proposed barrier systems on the western edge of the property ignore the historically significant stormwater events that have prompted the County to expend significant resource over the past 20 years to mitigate flood, erosion and drainage issues. A water retaining and absorbing barrier of straw-bales will exacerbate the known stormwater issues and create an unwelcome habitat for mosquitoes during the rainy and summer seasons. Further, the barrier will trigger a population explosion of other burrowing rodents and rabbits that will increase the number of vectors for plague carrying fleas. This will result in a corresponding increased risk of disease transmission for domestic animals and human members of the local ecosystem.
- c) **Attractiveness to neighbors** – No feedback on mitigation tactic attractiveness to the neighbors has been sought nor provided by the community. Further, it is indefensible to suggest the neighbors will find a half-mile long straw-bale barrier in anyway attractive. The proposed barrier wall will have an immediate, significant and lasting detrimental impact on the value of, and enjoyment from, the properties owned by neighbors to Richardson II and among those who recreate on the adjacent open space pathway.

2. Mitigation Techniques

- a) **Barriers** *"A straw-bale barrier will be installed along the western boundary of the prairie dog colony."*
 - i. There is absolutely no scientific or anecdotal evidence that straw-bale barriers will have any impact on colony dispersal.
 - ii. The City has acknowledged this is an experiment. The Friday, May 27 Daily Camera, reported, "[Heather] Swanson the [Boulder City Wildlife] Ecologist said that, all barrier technologies are imperfect, and that the hay bales would be something of an experiment."
 - iii. Mountain View Fire Department, the local fire department with jurisdiction for Richardson II advised that a large straw-bale structure presents a significant risk of spontaneous combustion. The combustion occurs when large bales of straw become

wet (i.e. exposed to rain and stormwater). The moisture fosters bacterial growth. The resultant organic decomposition heats the straw – especially prone in areas where the straw is exposed to direct, intense sunlight - to the point of initiating a “thermal runaway” or exothermic chemical reaction which ignites the straw. The National Fire Protection Association (NFPA) has published extensively on this phenomenon and the associated risks.

- iv. Mountain View Fire Department also indicated that baled straw is combustible and that regardless of ignition source, if a structure or wild fire were to occur nearby the City’s proposed hay-bale wall, wind-blown straw could spread the fire.
- v. Any straw-bale structure established by the City on land adjacent to the neighborhood, daycare facilities, church playground and open space trail system will create an attractive nuisance as defined under common law. The attractive nuisance doctrine clearly states that a landowner may be held liable for injuries to children trespassing on the land if the injury is caused by a hazardous object or condition on the land that is likely to attract children who are unable to appreciate the risk posed by the object or condition.



This photograph is of a 13-foot tall straw-bale pile after approximately one year of environmental exposure in Boulder, County, Colorado. Note the structural collapse, instability, straw dispersion and numerous rabbits that are visible. Several rats and one large bull snake were observed when the photo was taken at mid-day on 28 May, 2011.

- vi. The proposed straw-bale barriers exceed County regulations for fence height without a building permit. The City’s design plan would also need to have integrated safe-passage breaks for wildlife to comply with County building codes. Any such game passage breaks would render the fence useless for its proposed purpose.
- vii. Straw-bales in a field environment quickly become infested with mice, rats, other rodents and rabbits. All of these animals increase the vectors for plague-carrying flea populations magnifying the risk to the adjacent human populations.

- viii. Due to the natural decay process, a straw-bale fence could not be relied upon to provide any long-term mitigation against prairie dog dispersal to private property.
- ix. Structurally, straw-bale walls are highly subject to instability and collapse resulting from bottom-up rotting. Metal tee-stakes are not an approved structural design standard and would not meet County Building Code permit requirements for a fence more than 6-feet high to be capable of sustaining 3-second, 110 mile-per-hour wind gusts. As such, the City's proposed straw-bale wall design would create a new hazard for pedestrians, service workers and recreational users of the open space properties.
- x. The +\$33,000 expense of straw-bale mitigation will be unacceptably high given its "experiment" status. Based on CSU Extension data, the smaller of the City's proposed bale size (6' x 6' x 8') would require at least 330 bales for single-height and 660 for double stacking as the plan states. Bales this size weigh 1,000 lbs each. A conservative cost of hay is \$100/ton not including loading / unloading, transportation, stacking and staking. Even if the hay comes from City-owned land, the lost revenue costs would more than double the City's proclaimed cost of the entire relocation effort.

b) **Vegetation Management** *"A 50-foot wide buffer of un-mowed vegetation will be maintained around the eastern, northern and southern boundaries of the prairie dog colony."*

- i. The City's plan has been scientifically proven to be completely ineffective by the only scientific study of vegetation as barrier for colony dispersal; USE OF NATURAL VEGETATIVE BARRIERS TO LIMIT BLACK-TAILED PRAIRIE DOG TOWN EXPANSION IN WESTERN SOUTH DAKOTA, by David F. Terrall (2006, South Dakota State University). Provided courtesy of *Prairie Dog Coalition* (<http://nopca.com/wp-content/uploads/2011/05/Terrall-Barrier-Research-SD.pdf>).
 - a. Terrall's study reveals that an effective barrier must be at least 100-meters thick with a maximum visual opacity of 10-cm.
 - b. This density of vegetation requires at least 45" of annual rainfall. In drought years (fewer than 45" of rain), vegetative barriers were proven to be completely ineffective at slowing prairie dog colony expansion. Boulder receives 19" of precipitation annually.
 - c. A 100-meter vegetative barrier along Richardson II's 11,054' perimeter would reduce the available land mass by 83.7 acres [11,054 feet around total perimeter x 330 (1 meter equals 3.3 feet) equals 3,647,820 square feet divide by 43,560 square feet (square feet in an acre) equals **83.7** acres for the barrier.]

- ii. The site's current vegetation has already been demonstrated by the City's prairie dog migration maps to have had ZERO impact on stopping, or slowing, prairie dog colony outgrowth.
- c) **Prairie Dog Free Area Adjacent to Neighborhood** *"The City of Boulder will commit up to \$2,000 annually to passively relocate prairie dogs and destroy new burrows in order to maintain a burrow-free buffer between the colony and the neighborhood along the west side of the Richardson II site."*
- i. The City & County are already obligated under their trail management plans to keep the buffer area free from burrows as it contains a heavily used Open Space access trail.
 - ii. The City's mitigation budget affords fewer than 45-minutes of human resource per day at Colorado's minimum wage. This is grossly inadequate for a site with an 11,000' perimeter and more than a ½-mile of frontage to 42 individual private property owners.
 - iii. The City of Longmont has experimented with passive relocation and found it to be completely ineffective as a long-term solution for preventing prairie dog migration.
- d) **Targeting Relocation** *"Prairie dogs will only be relocated to sites with existing prairie dog burrows. "*

Restricting relocation to existing burrows provides absolutely no mitigation value to the community. Prior to the 2007/2008 plague event at Richardson II, the site was nearly entirely populated with prairie dogs – including nearly all adjacent private property.

- e) **Raptor Perches** *"Staff will install raptor perches in and around the prairie dog colony on the Richardson II site to encourage more raptor predation of prairie dogs."*
- i. Peer-reviewed and published Wyoming Department of Agriculture / University of Nebraska study on black-tailed prairie dog population dynamics has definitively proven that colony populations must be culled by at least 70% annually to maintain a constant colony population. [POPULATION DYNAMICS AND EXPANSION RATES OF BLACK-TAILED PRAIRIE DOGS, Lyle A. Crosby, Randy Graham] (http://nopca.com/wp-content/uploads/2011/05/Prairie_Dog_Population_Dynamics_Study.pdf)
 - ii. Gunbarrel / Richardson II has nowhere near adequate raptor populations necessary to cull 476 prairie dogs annually [70% x (380 existing population + 300 relocated) = 476 annually].

- iii. There is no scientific documentation to suggest raptor perches will attract large numbers of new predators.
 - iv. The City's own Grasslands Plan undermines this mitigation technique stating, "These species [raptors] are sensitive to human disturbance and are frequently found to be using only prairie dog towns distant from development and human disturbance."
- f) **Signs** *"Signs will be installed on the Richardson II property cautioning visitors of the potential for prairie dogs to be on or near the trail"*

This is not a mitigation effort, nor does it do anything to address the underlying hazards the City's relocation plan will create.

- g) **Education About Sylvatic Plague** *"Information about sylvatic plague will be provided to visitors and the local community in coordination with the Boulder County Health Department. "*
- i. Sylvatic and Bubonic plague are exactly the same disease – it is called sylvatic when contracted by non-human animals. The same disease transmitted to a human animal is called bubonic plague. It is irresponsible of the City to actively obfuscate this very important point.
 - ii. The City's relocation plans ignore the very clear guidelines set by the United States Centers for Disease Control for mitigating the risk of plague transmission from animals to humans.
 - iii. Despite City employee assertions at the March 8 public meeting that plague fears are overblown and that plague is "easily treated by readily available antibiotics," the CDC reports plague has a 20% mortality rate in the United States *when caught early*, 90% if not caught within first few days of symptom onset.
 - iv. The City's prairie dog relocation plans constitute gross negligence and unnecessarily create considerable legal and economic exposure for the City and its taxpayers. It is irresponsible and contrary to all national health resources to relocate prairie dogs, or to create and foster "prairie dog conservation areas" in immediate proximity to private property owners, densely populated neighborhoods, heavily trafficked public foot trails, public elementary schools, private daycare facilities and to a heavily used church facility with designated playground areas.

C. **Mitigation on Private Property** *“City staff will be available to consult with adjacent landowners on issues or conflicts that may arise with prairie dogs from the Richardson II colony.”*

1. The City has no jurisdiction beyond the border of its property line therefore, its consultants have no legal authority to act in any official capacity in this area, nor do they have the necessary indemnification to provide actionable consultation.
2. This mitigation stops short of providing any remedy for property damage caused by prairie dogs relocated by the City.
3. The City’s commitment does not include any removal or hard mitigation services and therefore provides no assurance or comfort to the community whatsoever.

D. **Help from Outside Organizations** *“Nonprofit organizations may provide services or funding to mitigate conflicts between prairie dogs on Richardson II and adjacent properties.”*

The City has no authority to bind private organizations to volunteer mitigation services. This critical consideration is conceded by the City’s use of “may” instead of “will” in this mitigation step. As such, the community takes neither comfort, nor assurance from this mitigation proposal.

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Scientific Error – Deltamethrin Absorption & Plant Uptake*

The City's assertion under its planned use of deltamethrin makes a very important factual error that needs immediate correction. Deltamethrin has been scientifically proven to be absorbed by plants when it is used on the soil. When it is absorbed by plants it has been scientifically proven to be emitted in the plants' pollen and nectar. The impact of deltamethrin transmitted in this manner to honey bees has been scientifically proven to have a detrimental intoxicating effect that impairs the ability of the honeybee to navigate back to its hive. The manufacturers of deltamethrin have ALL acknowledged and accepted these scientific findings. These findings have contributed to recently begun, comprehensive reviews of the safety of deltamethrin by the United States Department of Agriculture and EPA.

*** Sources:**

1. Janine Kievits, 2007, Bee gone: colony collapse disorder, Pesticides News, 76, 3-5;
2. Bonmatin JM et al, 2006 Quantification of Imidacloprid Uptake in Maize Crops, Journal of Agriculture and Food Chemistry, 53, 5336-5341;
3. Chauzat et al, 2006, A survey of pesticide residues in pollen loads collected by honey bees in France, Journal of Economic Entomology 99 (2): 253-262;
4. Draft Assessment Reports also acknowledge the presence of the pesticides in nectar and pollen.
5. Guez D et al, 2001, Contrasting effects of Imidacloprid on habituation in 7 and 8 days-old honeybees, Neurobiology of Learning and Memory, 76 (2) 183-191;
6. Decourtye A et al, 2004, Effect of Imidacloprid and Deltamethrin on associative learning in honeybees under semi-field and laboratory conditions, Ecotoxicology and Environmental Safety, 57, 410-419
7. Colin ME et al, 2004, A method to quantify and analyze the foraging activities of honey bees: relevance to the sub lethal effects induced by systemic insecticides, Archives of Environmental Contamination and Toxicology, 47 (3), 387-395.

Response to Public Comment

The City's responses to public comment are meaningless in relation to the proposed mitigation and therefore will not be individually addressed. However, it is duly noted that through its responses, the City acknowledges and accepts the liability for the detrimental impacts its prairie dog management practices have already had on the adjacent property owners and the Gunbarrel community at large.

Conclusion

The City of Boulder has failed to produce a mitigation plan to offset any of the associated risks and impacts of its planned prairie dog relocation from Foothills Park in Boulder to Richardson II in Gunbarrel. It is disconcerting to the Gunbarrel neighborhood that in fact, the City's proposed mitigation techniques

would worsen some of the consequences of their planned prairie dog relocation including stormwater management, erosion control, plague risk, visual blight and colony expansion.

Given the inadequacy of the City's mitigation plan, we the undersigned, representing the leadership team of *Concerned Citizens of Gunbarrel*, herewith demand the City cease and desist its prairie dog relocation plans and further ask that if such a plan is submitted to the Colorado Division of Wildlife, that the plan be rejected on grounds that it would cause undue harm to the adjacent private property owners and to the community at large.

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