

Wilcox, Rhonda (MDA)

From: Lynn Henning <lynnh@sraproject.org>
Sent: Wednesday, January 22, 2014 3:28 PM
To: Wilcox, Rhonda (MDA)
Subject: 2014 Draft GAAMPs
Attachments: LHenning MI draft 2014 GAAMPs comments - January 22.pdf; Bakerlad water samples.pdf

Thank you for the opportunity to comment on the 2014 Draft GAAMPs.
If you have any questions please contact me.

Lynn

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January 22, 2014

Via email: WilcoxR2@michigan.gov

Michigan Department of Agriculture & Rural Development

Environmental Stewardship Division

P.O. Box 30017

Lansing, MI 48909

RE: Public Input Comments on the 2014 Draft Generally Accepted Agricultural and Management Practices (GAAMPs)

GAAMPs Task Force Committee Chairperson and Members:

Thank you for the opportunity to comment on the above referenced matter. As a preliminary note, I assert that the Michigan Right to Farm Law is unconstitutional. It is a taking of property, life, health, and environment without just compensation.

According to Michigan's Right to Farm Act Brochure:

The Michigan Right to Farm Act, P.A. 93, was enacted in 1981 to provide *farmers* with nuisance protection. This state law authorizes the Michigan Commission of Agriculture and Rural Development to develop and adopt Generally Accepted Agricultural and Management Practices (GAAMPs) *for farms and farm operations in Michigan*. These farm management practices are scientifically based and updated annually to utilize current technology promoting sound environmental stewardship on Michigan farms.

By utilizing GAAMPs, farmers and Michigan residents benefit: through environmental protection of natural resources; sound management of agricultural inputs; and sustaining a strong and stable agricultural industry.

While adherence to the GAAMPs does not act as a complete barrier to complaints or lawsuits, it does provide an umbrella of protection from nuisance litigation. In addition to conformance to the GAAMPs, farmers also need to comply with all state and federal environmental and agricultural laws (emphasis added).

While this says that farmers need to comply with all state and federal environmental and agricultural laws, nowhere does it state that GAAMPS must comply with the law. This gives farmers in Michigan a false sense of security that if they comply with GAAMPS, they are complying with state and federal law. Under the draft 2014 GAAMPS program, practices that violate state and federal law are made to be voluntary.

Further, while it is said that the Right to Farm Act works for everyone, it doesn't. urban agriculture is excluded. In addition, and most importantly, the Act and its corresponding GAAMPS program essentially protect polluters at the expense of Michigan rural residents. New practices are not developed to address concerns of the neighbors, but rather are designed to protect commercial agriculture operations or concentrated animal feeding operations (CAFOs).

The comments that follow address these issues.

MANURE GAAMPS

As proposed, solids stacking in the fields are a direct violation of Michigan's National Discharge Elimination System (NPDES) permit program. For example, the production area is the portion of the CAFO that includes all areas used for animal product production activities. This includes, but is not limited to: the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The animal confinement area includes "open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milk rooms, milking centers, cow yards, barnyards, medication pens, walkers, animal walkways (not within pasture areas), and stables. The manure storage area includes lagoons, runoff ponds, storage sheds, *stockpiles*, under-house or pit storages, liquid impoundments, static piles, and composting piles" (emphasis added). According to state law, all production area waste must be contained to meet NPDES permit requirements.

Further, under state's environmental regulations, CAFOs must address the transfer of waste via manifests. The manure GAAMPS do not appropriately address waste manifests in accordance with state law. Nor do they address the manifest of waste back to the owner or operator under a different name.

The manure GAAMPS also do not address: shared properties for waste application; CAFOs that operate under multiple facility names, or waste taken

from other operations or outside sources. These are major loopholes that will lead to violations of state and federal law for manure management.

In addition, manure is not recommended on food for human consumption as stated by the Nebraska Extension Service for irrigation. The draft GAAMPs do not address this and, as such, pose a risk to public health and safety.

SITE SELECTION GAAMPs

The purpose of site selection GAAMPs is to focus specifically on water quality protection and odor control. If this were truly the case, there would be few sites in Michigan adequate for large-scale industrial livestock production facilities. Under each proposed category in the GAAMPs, impacts to surrounding populations are collateral damage. Why would a residential zone be categorized any differently than people living within a ½ mile radius?

IRRIGATION GAAMPs

Sub irrigation should never be allowed with the use of animal waste, chemicals or fertigation. Sub irrigation has already caused groundwater and surface water contamination with E-coli 0'157 at a CAFO (see attached).

Furthermore, there is no limit for how many irrigators can be placed over an aquifer. There is also no limit to withdrawal of groundwater from an aquifer for irrigation. In addition, there is no mention of irrigators being placed directly over open waterways or directly over county drains while irrigating waste. As such, the irrigation GAAMPs are wholly inadequate to protect public health and impacts to surface and ground waters.

PUBLIC HEALTH CONSIDERATIONS

Overall, there is NO consideration of the public health impacts caused by CAFO facilities or their waste application practices in the draft GAAMPs. This is unacceptable.

As a family farmer, I can speak to the fact that good farmers don't need the Right to Farm Act or the GAAMPs. The rural code is "you don't harm your neighbor and he doesn't harm you." The Right to Farm Act creates conflicts in rural communities by placing farmers rights above the rights of the residents and property owners. It also pegs farmers against CAFOs. The Act and the GAAMP

program flaunts practices as “industry standards” and being “based on science,” that can actually harm people.

In August and October of 2013, my father-in-law, Gerald Henning, a lifetime family farmer, was taken to the emergency room due to breathing problems caused by animal waste. The second time he had breathing problems and had to go to the emergency room, he was going through radiation treatments. His immune system was compromised. The waste application being done by a nearby CAFO was so extreme that hydrogen sulfide was in his home. He could not breath. Gerald Henning died on October 15, 2013.

The first picture provided below is the application in August 9th with Gerald Henning’s House in the background. This application got 1.0 ppm of hydrogen sulfide meter.



The picture below was taken inside Gerald Henning's home on the morning October 8, 2013. The picture is from his kitchen. 1.2 PPM of hydrogen sulfide with oxygen at 18.6, should be 20.9 for oxygen.



I refer the Chairperson and the Committee to some examples of sound science.

Bioterrorism Agents

Bacteria, viruses and toxins that can be emitted from CAFOs can be compared to bioterrorism agents. Please see information on bioterrorism from the Southern Illinois University (SIU) School of Medicine, at:

<http://www.siumed.edu/medicine/id/bioterrorism.htm#infec>.

Category B - Bioterrorism Agents

This category (47) contains the *second highest priority agents* because they:

- a. are moderately easy to disseminate

b. cause moderate morbidity and low mortality

c. require specific enhancement of CDC's diagnostic capacity and enhanced disease surveillance.

Table 3 - Category B Bioterrorism Agents

Bacteria	Viruses	Toxins
Coxiella burnetti (Q fever)	Alpha viruses	Ricin toxin (Ricinus communis) Epsilon toxin (Clostridium perfringens) Enterotoxin B (Staphylococcus aureus) T2 - Mycotoxins*
Brucella species (Brucellosis) Burkholderia mallei	Venezuelan encephalomyelitis	
(Glanders)	Eastern equine encephalomyelitis	
Burkholderia pseudomallei (Meliodosis)	Western equine encephalomyelitis	
Rickettsia promazekii (Typhus fever)		*Not listed under CDC Category B agents
Chlamydia psittaci (Psittacosis)		

Pathogens

Both manure and animal carcasses contain pathogens (disease-causing organisms), which can impact human health, other livestock, aquatic life, and wildlife when introduced into the environment. Several pathogenic organisms found in manure can infect humans. Food or water borne pathogens include, Salmonella species, Shigella dysenteria, Escherichia coli 0157:H7, Vibrio cholera and Cryptosporidium parvuus.

See USEPA's information on pathogens, at:
<http://www.epa.gov/oecaagct/ag101/impactpathogens.html>.

Table 1. Some Diseases and Parasites Transmittable to Humans from Animal Manure

Disease	Responsible Organism	Symptoms
Bacteria		
Anthrax	Bacillus anthracis	Skin sores, fever, chills, lethargy, headache, nausea, vomiting, shortness of breath, cough, nose/throat congestion, pneumonia, joint stiffness, joint pain
Brucellosis	Brucella abortus, Brucella melitensis, Brucella suis	Weakness, lethargy, fever, chills, sweating, headache
Colibacillosis	Escherichia coli (some serotypes)	Diarrhea, abdominal gas
Coliform mastitis-metritis	Escherichia coli (some serotypes)	Diarrhea, abdominal gas
Erysipelas	Erysipelothrix rhusiopathiae	Skin inflammation, rash, facial swelling, fever, chills, sweating, joint stiffness, muscle aches, headache, nausea, vomiting
Leptospirosis	Leptospira Pomona	Abdominal pain, muscle pain, vomiting, fever
Listeriosis	Listeria monocytogenes	Fever, fatigue, nausea, vomiting, diarrhea
Salmonellosis	Salmonella species	Abdominal pain, diarrhea, nausea, chills, fever, headache
Tetanus	Clostridium tetani	Violent muscle

		spasms, "lockjaw" spasms of jaw muscles, difficulty breathing
Tuberculosis	Mycobacterium tuberculosis, Mycobacterium avium	Cough, fatigue, fever, pain in chest, back, and/or kidneys
Rickettsia		
Q fever	Coxiella burneti	Fever, headache, muscle pains, joint pain, dry cough, chest pain, abdominal pain, jaundice
Viruses		
Foot and Mouth	Virus	Rash, sore throat, fever
Hog Cholera	Virus	
New Castle	Virus	
Psittacosis	Virus	Pneumonia
Fungi		
Coccidioidycosis	Coccidioides immitus	Cough, chest pain, fever, chills, sweating, headache, muscle stiffness, joint stiffness, rash wheezing
Histoplasmosis	Histoplasma capsulatum	Fever, chills, muscle ache, muscle stiffness, cough, rash, joint pain, joint stiffness
Ringworm	Various microsporium and trichophyton	Itching, rash
Protozoa		
Balantidiasis	Balatidium coli	
Coccidiosis	Eimeria species	Diarrhea, abdominal gas

Cryptosporidiosis	Cryptosporidium species	Watery diarrhea, dehydration, weakness, abdominal cramping
Giardiasis	Giardia lamblia	Diarrhea, abdominal pain, abdominal gas, nausea, vomiting, headache, fever
Toxoplasmosis	Toxoplasma species	Headache, lethargy, seizures, reduced cognitive function
Parasites/Metazoa		
Ascariasis	Ascaris lumbricoides	Worms in stool or vomit, fever, cough, abdominal pain, bloody sputum, wheezing, skin rash, shortness of breath
Sarcocystiasis	Sarcosystis species	Fever, diarrhea, abdominal pain

<http://www.epa.gov/oecaagct/ag101/impactpathogens.html>

Appendix A (draft animal feed attached)

Chemical Compounds

The following table lists 168 chemical compounds (and their synonyms) that have been identified in manure and in the air around various livestock operations. This list of compounds is an adaptation of the information found in "A Review of the Control of Odour Nuisance from Livestock Buildings: Part 3, Properties of the Odorous Substances which have been identified in livestock wastes or in the air about them," by D. H. O' Neill and V. R. Phillips (Journal of Agricultural Engineering Research, 1992, 53, 23-50). This same information is also presented in the "Generic Environmental Impact Statement on Animal Agriculture: A Summary of the Literature Related to Air Quality and Odor," prepared for the Minnesota Environmental Quality Board. The data comes entirely from a review

of available literature. In addition to the chemical compound name(s), a column has been added (EPA Classification) that identifies the substances that have been classified by EPA as being a hazardous air pollutant (HAP), volatile organic compound (VOC), or a criteria air pollutant (criteria). In a few cases, the compound does not fall into any of the above categories (i.e., acetone). In these particular instances, the classification field is left blank.

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Appendix A.

**Listing of Chemical Substances Identified In and Around Livestock Manure
(Adapted from O'Neill and Phillips 1992)**

	Compound (names)	EPA Classification
Carboxylic Acids		
1	formic acid methanoic acid	VOC
2	acetic acid ethanoic acid	VOC
3	propionic acid propanoic acid	VOC
4	n-butyric acid butanoic acid	VOC
5	i-butyric acid 2-methylpropanoic acid	VOC
6	n-valeric acid pentanoic acid	VOC
7	i-valeric acid 3-methylbutanoic acid	VOC
8	2-methylbutanoic acid	VOC
9	2-methyl-2-butenoic acid (angelic acid)	VOC
10	n-caproic acid hexanoic acid	VOC

11	i-caproic acid 4-methylpentanoic acid	VOC
12	2-methylpentanoic acid	VOC
13	oenanthic acid heptanoic acid	VOC
14	caprylic acid octanoic acid	VOC
15	pelargonic acid nonanoic acid	VOC
16	capric acid decanoic acid	VOC
17	hendecanoic acid undecanoic acid	VOC

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Appendix A.

Listing of Chemical Substances Identified In and Around Livestock Manure (Adapted from O'Neill and Phillips 1992) (Continued)

	Compound (names)	EPA Classification
18	lauric acid dodecanoic acid	VOC
19	tredecanoic acid	VOC
20	myristic acid tetradecanoic acid	VOC
21	benzoic acid benzenecarboxylic acid	VOC
22	penylacetic acid phenylethanoic acid -toluic acid	VOC
23	^α 3-phenylpropionic acid 3-phenylpropanoic acid hydrocinnamic acid	VOC

Alcohols		
24	methanol methylalcohol	HAP, VOC
25	ethanol ethyl alcohol	VOC
26	n-propyl alcohol l-propanol	VOC
27	i-propyl alcohol 2-propanol	VOC
28	n-butyl alcohol l-butanol	VOC
29	sec-butyl alcohol 2-butanol	VOC
30	isobutyl alcohol 2-methyl-l-propanol	VOC
31	pentanol n-amyl alcohol	VOC
32	i-pentanol 3-methylbutanol iso-amyl alcohol	VOC
33	l-hexanol n-hexyl alcohol	VOC

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Appendix A.

Listing of Chemical Substances Identified In and Around Livestock Manure (Adapted from O'Neill and Phillips 1992) (Continued)

	Compound (names)	EPA Classification
34	hex-3-ene-1-ol	VOC
35	2-methy-2-pentanol demethyl-n-propyl-carbinol	VOC
36	l-heptanol	VOC
37	iso-heptanol	VOC
38	3-octanol amylethyl alcohol	VOC
39	2-ethylhexanol	VOC

40	2-methoxyethanol methyl cellosolve methyl glycol	VOC
41	2-ethoxy-1-propanol	VOC
42	2,3-butanediol	VOC
43	benzyl alcohol hydroxytoluene	VOC
44	-methylbenzyl alcohol	VOC
	α	
45	4-methylcyclohexanol	VOC
46	2-penylethanol	VOC
Phenolics		
47	phenol carbolic acid benzenol hydroxybenzene	HAP, VOC
48	p-cresol 4-hydroxytoluene 4-methylphenol	HAP, VOC
49	m-cresol 3 hydroxytoluene 3-methylphenol	HAP, VOC
50	o-cresol 2-hydroxytoluene 3-mthylphenol	HAP, VOC

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Appendix A.

Listing of Chemical Substances Identified In and Around Livestock Manure (Adapted from O'Neill and Phillips 1992) (Continued)

	Compound (names)	EPA Classification
51	p-methoxyphenol 4-methoxyphenol hydroquinone mono-methylether	VOC
52	o-methoxyphenol 2-methoxyphenol guaiacol	VOC
53	p-ethylphenol 4-ethylphenol 1-ethyl-4-hydroxybenzene	VOC

54	m-ethylphenol 3-ethylphenol 1-ethyl-3-hydroxybenzene	VOC
55	o-ethylphenol 2-ethylphenol 1-ethyl-2-hydroxybenzene phlorol	VOC
56	2,6-dimethyl phenol 1,3-diethyl 2-hydroxybenzene	VOC
57	3,4-dimethylphenol 1,3-dimethyl- 5-hydroxybenzene	VOC
58	3-hydroxy-2-methyl-4-pyrone lanxinic acid maltol	VOC
Aldehydes		
59	formaldehyde methanal	HAP, VOC
60	acedtaldehyde ethanal	HAP, VOC
61	propionaldehyde propanal	HAP, VOC
62	acrolein 2-propenal acrylaldehyde	HAP, VOC
63	butyraldehyde butanal	VOC

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Appendix A.

Listing of Chemical Substances Identified In and Around Livestock Manure (Adapted from O'Neill and Phillips 1992) (Continued)

	Compound (names)	EPA Classification
64	iso-butyraldehyde 2-methyl propanal	VOC
65	crotonaldehyde 2-butenal	VOC
66	valeraldehyde pentanal	VOC
67	iso-valeraldehyde 3- methylbutanal	VOC

68	2-pentenal	VOC
69	caproaldehyde hexanal	VOC
70	2-hexenal	VOC
71	oenanthaldehyde heptanal	VOC
72	2-heptenal	VOC
73	2,3-heptadienal	VOC
74	caprylaldehyde octanal	VOC
75	pelargonaldehyde nonanal	VOC
76	2-nonenal	VOC
77	2,4-nonadienal	VOC
78	capraldehyde decanal decylaldehyde	VOC
79	2,4-decadienal	VOC
80	benzaldehyde benzenecarbonal	VOC
81	acetone dimethylketone (2-)propanone	

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Appendix A.

Listing of Chemical Substances Identified In and Around Livestock Manure (Adapted from O'Neill and Phillips 1992) (Continued)

	Compound (names)	EPA Classification
82	diacetyl dimethylglyoxal 2,3-butanedione	VOC
83	(2-)butanone methylethylketone	HAP, VOC

84	acetoin 3-hydroxy-2-butanone	VOC
85	3-pentanone diethylketone propione	VOC
86	cyclopentanone adipic ketone	VOC
87	2-methyl cyclopentanone	VOC
88	2-octanone hexylmethylketone	VOC
89	amylvinylketone 1-octene-3-one	VOC
90	acetophenone acetylbenzene methylphenylketone	HAP, VOC
Esters		
91	methylformate formic acid methyl ester	VOC
92	methylacetate acetic acid methyl ester	VOC
93	ethylformate formic acid ethyl ester	VOC
94	ethyl acetate acetic acid ethyl ester	VOC
95	propylacetate acetic acid propyl ester	VOC

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Appendix A.

**Listing of Chemical Substances Identified In and Around Livestock Manure
(Adapted from O'Neill and Phillips 1992) (Continued)**

	Compound (names)	EPA Classification
96	i-propylacetate acetic acid isopropyl ester	VOC
97	butylacetate acetic acid butyl ester	VOC
98	i-butylacetate acetic acid isobutyl ester	VOC
99	i-propylpropionate propanoic acid iso-propyl ester	VOC

Nitrogen heterocycles		
100	indole l-benzopyrrole	VOC
101	skatole 3-methylindole	VOC
102	pyridine azine	VOC
103	3-aminopyridine	VOC
104	(2)-methylpyrazine	VOC
105	methylpyrazine	VOC
106	trimethylpyrazine	VOC
107	tetramethylpyrazine	VOC
Amines		
108	methylamine aminomethane	VOC
109	ethylamine aminoethane	VOC
110	n-propylamine aminopropane	VOC
111	i-propylamine amino iso-propane	VOC

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Appendix A.

Listing of Chemical Substances Identified In and Around Livestock Manure (Adapted from O'Neill and Phillips 1992) (Continued)

	Compound (names)	EPA Classification
112	pentylamine 1-aminopentane amylamine	VOC
113	trimethylamine	VOC

114	triethylamine	HAP, VOC
Sulphides		
115	carbon disulphide	HAP, VOC
116	carbonylsulphide carbon oxysulphide	HAP, VOC
117	dimethylsulphide methylthiomethane	VOC
118	diethylsulphide ethylthioethane	VOC
119	dimethyldisulphide dimethyldithiomethane	VOC
120	dimethyltrisulphide methylthiomethane 2,3,4 - trithiapentane	VOC
121	diethyldisulphide ethyldithioethane	VOC
122	dipropyldisulphide propyldithiopropane	VOC
123	methylpropyldisulphide methylthiopropane	VOC
124	propylprop-1-enyl disulphide	VOC
125	diphenylsulphide phenylthiobenzene	VOC
126	3,5-dimethyl-1,2,4- trithiolane	VOC
127	3-methyl-5-propyl-1,2,4- trithiolane	VOC
128	3,6-dimethyltetra-thiane	VOC
129	2,6-dimethylthi- 3-oxo-carbaldehyde	VOC

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Appendix A.

**Listing of Chemical Substances Identified In and Around Livestock Manure
(Adapted from O'Neill and Phillips 1992) (Continued)**

	Compound (names)	EPA Classification
Thiols (mercaptans)		
130	methanethiol methyl mercaptan	VOC
131	ethanethiol ethylmercaptan	VOC
132	propanethiol n-propylmercaptan	VOC
133	2-propanethiol isopropylmercaptan	VOC
134	2-propene-1-thiol allylmercaptan	VOC
135	butanethiol n-butylmercaptan	VOC
136	2-butene-1-thiol crotylmercaptan	VOC
137	benzenethiol thiophenol	VOC
138	-toluenethiol benzylmercaptan <small>α</small>	VOC
Unclassified		
142	sulphur dioxide	Criteria
143	methane	
144	pentane	VOC
145	2-methylpentane	VOC
146	hexane	HAP, VOC

147	hexene	VOC
148	heptane	VOC
149	octane	VOC
150	octene	VOC
151	undecene hendecene	VOC

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Appendix A.

**Listing of Chemical Substances Identified In and Around Livestock Manure
(Adapted from O'Neill and Phillips 1992) (Continued)**

	Compound (names)	EPA Classification
152	dodecane	VOC
153	benzene	HAP, VOC
154	toluene	HAP, VOC
155	xylene dimethylbenzene (isomer not specified)	HAP, VOC
156	indane hydrindene	VOC
157	naphthalene	HAP, VOC
158	methylnaphthalene	VOC
159	chloroform trichloromethane	HAP, VOC
160	tetrachloroethane perchloroethylene	VOC
161	hydrazine	HAP, VOC
162	2-methylfuran sylvan	VOC
163	2-pentylfuran	VOC

164	2-methylthiophene 2-methylthiofuran	VOC
165	2,4-dimethylthiophene 2,4-thioxene	VOC
166	diethylether ether ethoxyethane	VOC
167	limonene citrene carvene	VOC
168	ocimene	VOC

In summary, the GAAMPs Task Force should consider sound science in evaluating the draft 2014 GAAMPs. Livestock waste emissions can be compared to bioterrorism agents and contain pathogens and chemical compounds that can have serious negative impacts to the surrounding environment and the public health of rural residents.

CONCLUSION

The Right to Farm Act is unconstitutional and is a taking of property, life, health, and environment. The corresponding GAAMPs program and the draft 2014 GAAMPs perpetuate this problem.

While it is said that the Right to Farm Act works for everyone, it clearly doesn't. Provisions of the draft GAAMPs do not comply with state environmental laws and there is no consideration of sound science as it relates to the impacts of livestock waste to the public health of rural residents. In essence, the GAAMPs do not address concerns of the neighbors, but rather are designed to protect CAFOs. I urge the Task Force to address these issues in the draft GAAMPs in a meaningful way.

Thank you for your consideration.

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Fecal-Indicator Bacteria and *Escherichia coli* Pathogen Data Collected Near a Novel Sub-Irrigation Water-Treatment System in Lenawee County, Michigan, June–November 2007

By Joseph W. Duris and Stephanie Beeler

In cooperation with Lenawee County Conservation District

Open File Report 2008–1025

**U.S. Department of the Interior
U.S. Geological Survey**

U.S. Department of the Interior
DIRK KEMPTHORNE, Secretary

U.S. Geological Survey
Mark D. Myers, Director

U.S. Geological Survey, Reston, Virginia 2008

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Suggested citation: Duris, J.W., and Beeler, Stephanie, 2008 fecal-indicator bacteria and *Escherichia coli* pathogen data collected near a novel sub-irrigation water-treatment system in Lenawee County, Michigan, June–November 2007: U.S. Geological Survey Open-File Report 2008–1025, 13 p.

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Conversion Factors

Multiply	By	To obtain
Length		
inch (in.)	2.54	centimeter (cm)
foot (ft)	0.3048	meter (m)
meter (m)	3.281	foot (ft)
yard (yd)	0.9144	meter (m)
Volume		
gallon (gal)	3.785	liter (L)

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$^{\circ}\text{F}=(1.8\times^{\circ}\text{C})+32$$

Small sample volumes are reported in milliliters (mL) and microliters (μL); very small masses are given in nanograms (ng).

Bacteria concentrations are given in colony-forming units per 100 milliliters (CFU/100 mL).

Fecal-Indicator Bacteria and *Escherichia coli* Pathogen Data Collected Near a Novel Sub-Irrigation Water-Treatment System in Lenawee County, Michigan, June–November 2007

By Joseph W. Duris and Stephanie Beeler

Abstract

The U.S. Geological Survey, in cooperation with the Lenawee County Conservation District in Lenawee County, Mich., conducted a sampling effort over a single growing season (June to November 2007) to evaluate the microbiological water quality around a novel livestock reservoir wetland sub-irrigation system. Samples were collected and analyzed for fecal coliform bacteria, *Escherichia coli* (*E. coli*) bacteria, and six genes from pathogenic strains of *E. coli*.

A total of 73 water-quality samples were collected on nine occasions from June to November 2007. These samples were collected within the surface water, shallow ground water, and the manure-treatment system near Bakerlads Farm near Clayton in Lenawee County, Mich. Fecal coliform bacteria concentrations ranged from 10 to 1.26 million colony forming units per 100 milliliters (CFU/100 mL). *E. coli* bacteria concentrations ranged from 8 to 540,000 CFU/100 mL. Data from the *E. coli* pathogen analysis showed that 73 percent of samples contained the *eaeA* gene, 1 percent of samples contained the *stx2* gene, 37 percent of samples contained the *stx1* gene, 21 percent of samples contained the *rfbO157* gene, and 64 percent of samples contained the LTIIa gene.

Introduction

The management of animal wastes on dairy farms is commonly driven by the need of farmers to effectively manage nutrient content in soils where crops are grown, as well as to control and manage manure in a way that avoids negative effects on local surface water and ground water. Typically, the management of manure in and around a farm is locally controlled by use of comprehensive nutrient-management plans that define how manure will be handled on the farm under various conditions. To meet the guidelines of these management practices, the Bakerlads Farm, working with the U.S. Department of Agriculture and the Lenawee County Conservation District, in 2005 installed novel manure-management system called a Livestock Reservoir Wetland Sub-Irrigation System (LRWSIS) on the farmstead, which is near Clayton, Mich (fig. 1; all figures and tables are at back of report).

The U.S. Geological Survey (USGS), in cooperation with the Lenawee County Conservation District (LCCD) in Lenawee County, Mich., sampled nine sites (surface water and ground water) over a single growing season, from June to November 2007. The purpose of this study was to evaluate the microbiological water quality around the LRWSIS. By studying the populations of fecal coliform and *E. coli* bacteria and by characterizing the types of *E. coli* pathogens and other bacterial markers in manure sources, we can assess how manure-management practices may contribute to indicator and pathogen loading in environmental waters. This could lead to a better understanding of how and why bacterial indicators and pathogens might be found in other environmental settings affected by agriculturally influenced waters. In addition, this work builds on a growing body of work by the USGS Michigan Water Science Center related to understanding how manure management affects the transport of fecal indicator and pathogenic bacteria. Samples were collected and analyzed for fecal coliform bacteria, *Escherichia coli* (*E. coli*), and six genes from pathogenic strains of *E. coli*, including *E. coli* O157:H7. This report summarizes the results of this sampling.

Methods

Site Information

The LRWSIS directs dairy barn wash water and runoff from the entire facility into a primary settling reservoir. Once settled, the liquid waste is then transferred into an 80,000 gal constructed wetland via a 3-in. subsurface PVC pipe that bridges a small unnamed tributary to the South Branch of the River Raisin. The liquid waste from the influent pond of the constructed wetland is allowed to move via subsurface flow through a packed layer of sand and pea gravel, planted with wetland vegetation, into the subsurface irrigation holding pond. This water is then pumped directly into a closed subsurface tile irrigation system below a planted cornfield, where it supplies water and nutrients to the crop that is planted above.

Samples for this study were collected from nine locations in and around the Bakerlads Farm (table 1 and fig. 1). For flowing water, the tributary to the South Branch of the River Raisin was sampled at three locations: upstream from the sub-irrigated field and the LRWSIS, downstream from the sub-irrigated field, and downstream from the LRWSIS. For ground water, samples were collected from two piezometers within the cropped area of the sub-irrigated field and one piezometer 10 m from the bank of the tributary to the South Branch of the River Raisin. For ponded water, samples were collected from the primary settling pond, the influent pond of the wetland system, and the sub-irrigation holding pond of the wetland system to evaluate potential inputs to the ambient water. Samples were collected on nine dates over the 2007 growing season, from June 25 through November 27, 2007 (table 2).

Sample Collection

Samples were collected by the LCCD staff using standard USGS sampling procedures documented by the USGS National Field Manual (Myers, 2003). Each sample was evaluated for fecal coliform bacteria and *E. coli* and for six genes from pathogenic *E. coli*.

Bacteriological Indicator Organisms

Samples were examined for the presence of fecal-indicator bacteria by means of standard membrane filtration and serial dilution methods as indicated in Britton and Greeson (1989), whereas *E. coli* analysis followed protocols of the American Public Health Association and others (1998), method 9222D/9222G. Fecal coliform bacteria from the membrane filter with the most growth for each site and date were collected and suspended in 1 mL of phosphate buffered saline (PBS) with a final concentration of 15 percent glycerol. This fecal coliform stock (FC) was used for all subsequent analysis for pathogenic *E. coli*.

E. coli Gene Analysis

The FC stocks were analyzed by use of three polymerase chain reaction (PCR) methods. Deoxyribonucleic acid (DNA) was extracted from one-tenth of the volume of the FC stock, using alkaline polyethylene glycol (APEG) DNA extraction (Chomczynski and Rymaszewski, 2006). A volume of 100 μ L of FC stock was transferred to a volume of 1,000 μ L of APEG reagent and incubated at 55°C for 30 minutes, at which point it was stored at 4°C until PCR analysis for *E. coli* pathogen genes.

A volume of 1 μ L of DNA representing 1–100 ng of DNA was used to conduct all PCR analysis. Samples were analyzed for the gene responsible for the O157 type (*rfbO157*) as indicated by Osek (2003). The gene targeted by this assay is the gene responsible for the production of the specific antigen found on the surface of an *E. coli* O157 cell.

The samples were also analyzed for the pathogenic *E. coli* toxin genes *eaeA*, *stx2*, and *stx1* (Fagan and others, 1999; Sabat and others, 2000). The genes targeted by this assay are those required to confirm the presence of enterohemorrhagic *E. coli* in clinical samples (Nataro and Kaper, 1998; Fagan and others 1999). The method was modified to include analysis for a gene common to all *E. coli*, both pathogenic and nonpathogenic, which was used to confirm the presence of *E. coli* (Duris and others, 2003; Fogarty and others, 2005). The LTIIa gene, carried by some pathogenic *E. coli* strains common to bovine sources, was analyzed according to Khatib and others (2002) and Chern and others (2004). A summary of all genes and their common functions and associations can be found in table 3. All gene assays followed standard protocols (U.S. Environmental Protection Agency, 2004). All methods included positive controls and method blanks.

Results

Water-quality samples were collected on nine occasions from June to November 2007. A total of 73 water samples were collected within the surface water, shallow ground water, and manure-treatment system near Bakerlads Farm, in Lenawee County, Mich. Fecal coliform bacteria concentrations ranged from 10 to 1.26 million CFU/100 mL. *E. coli* bacteria concentrations ranged from 8 to 540,000 CFU/100 mL. Data from the *E. coli* pathogen analysis showed that 73 percent of samples contained the *eaeA* gene, 1 percent of samples contained the *stx2* gene, 37 percent of samples contained the *stx1* gene, 21 percent of samples contained the *rfbO157* gene, and 64 percent of samples contained the LTIIa gene. The EC gene that is common to all *E. coli* was present in 97 percent of samples. The data from the fecal-indicator bacteria testing at each site are presented in table 4 and figures 2–10. Data from the *E. coli* pathogen analysis are presented in table 4. Those samples that had countable *E. coli* but no detectable EC gene were considered not amplifiable by PCR and are noted in table 4.

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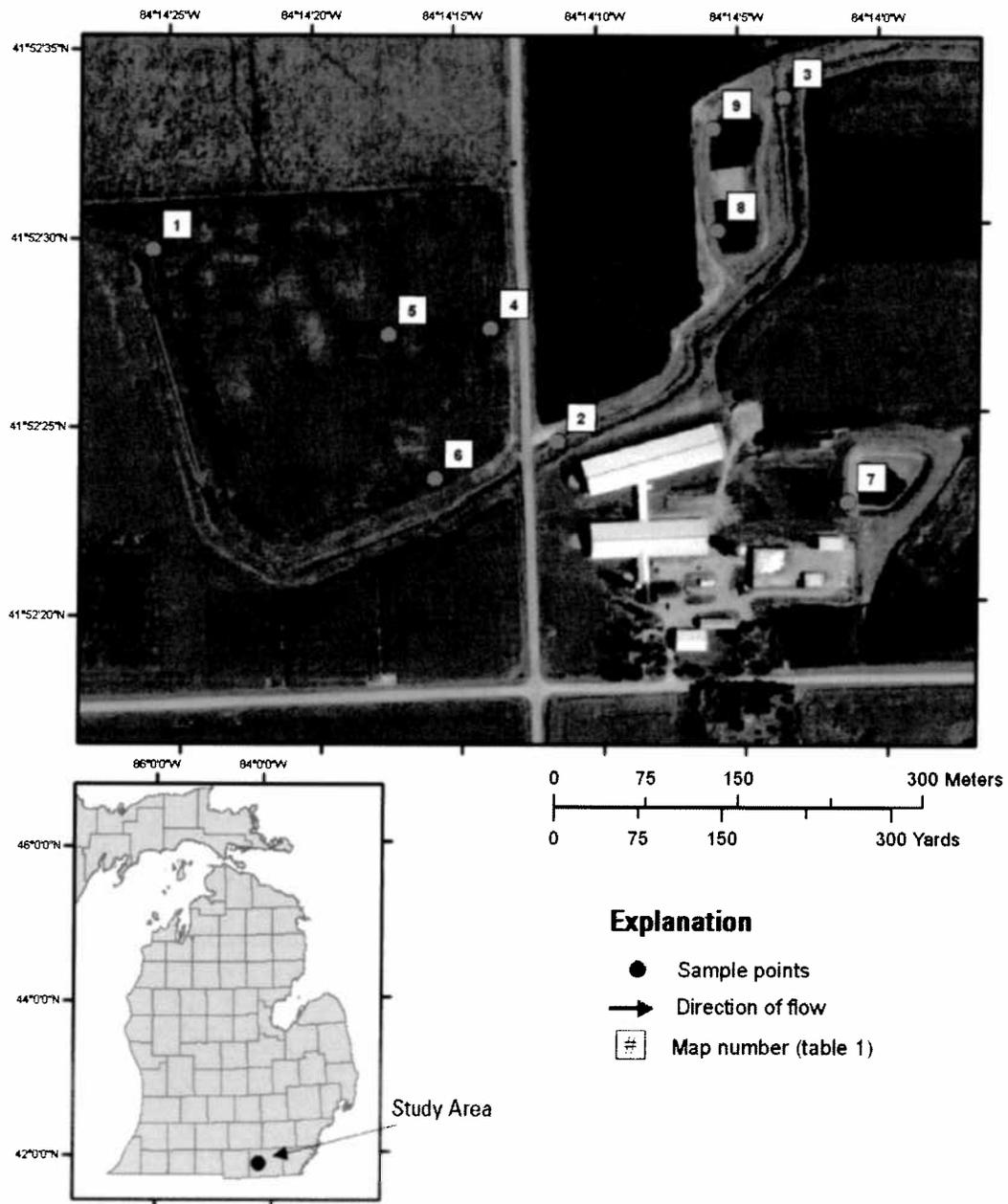


Figure 1. Sampling locations for fecal indicator bacteria and *E. coli* pathogen study, Lenawee County, Mich., 2007.

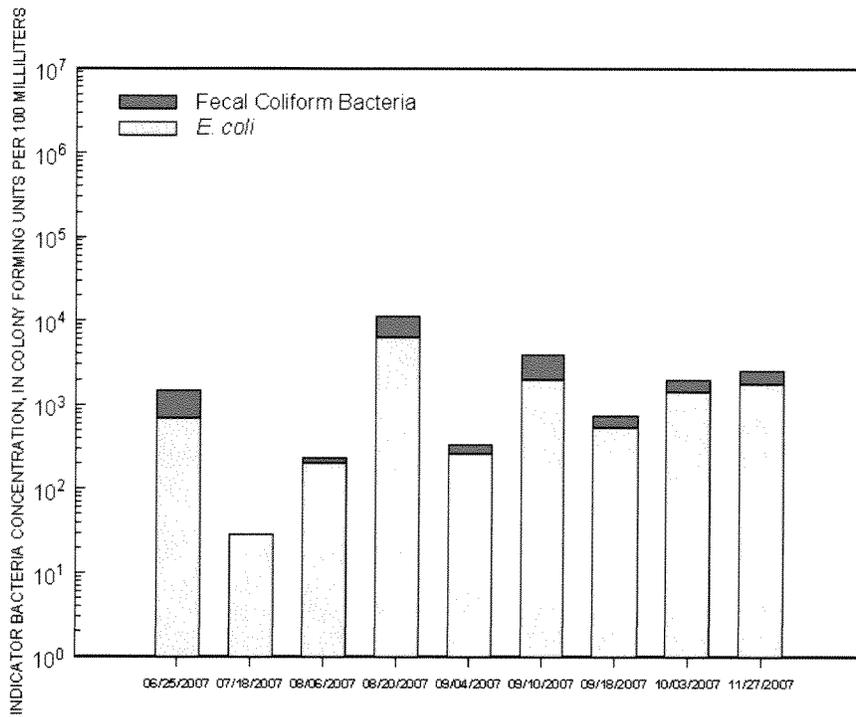


Figure 2. Fecal coliform bacteria and *Escherichia coli* concentrations by date for station 415233084140309 (D1), in Lenawee County, Mich., 2007.

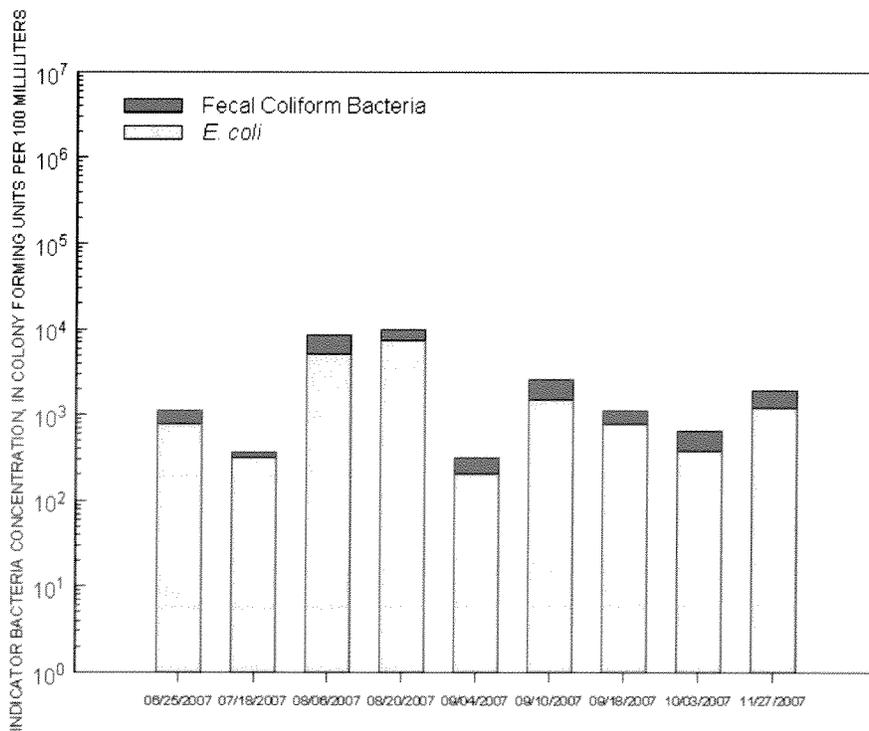


Figure 3. Fecal coliform bacteria and *Escherichia coli* concentrations by date for station 415224084141108 (D2), in Lenawee County, Mich., 2007.

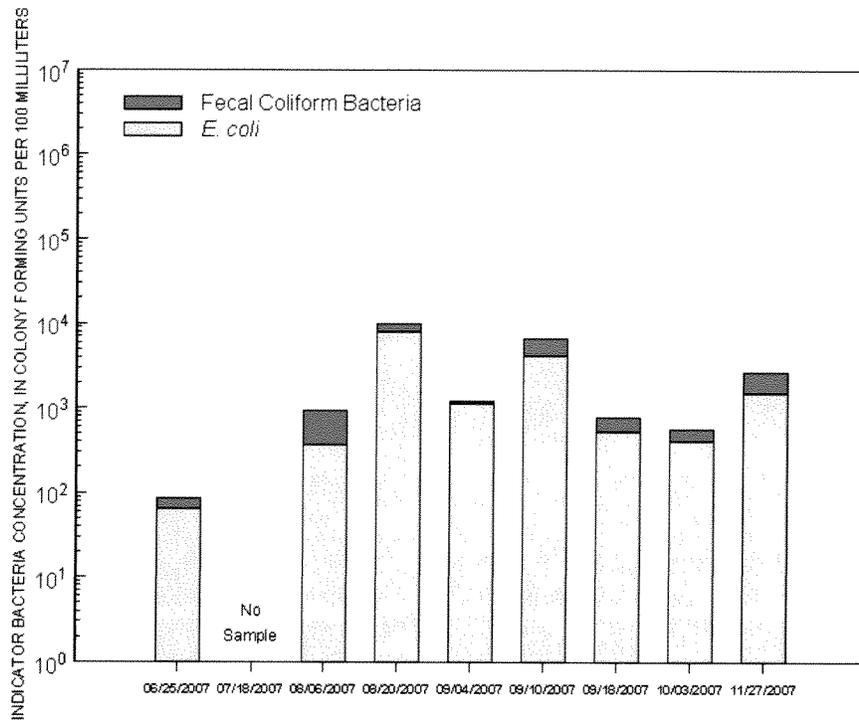


Figure 4. Fecal coliform bacteria and *Escherichia coli* concentrations by date for station 415230084142607 (D4), in Lenawee County, Mich., 2007.

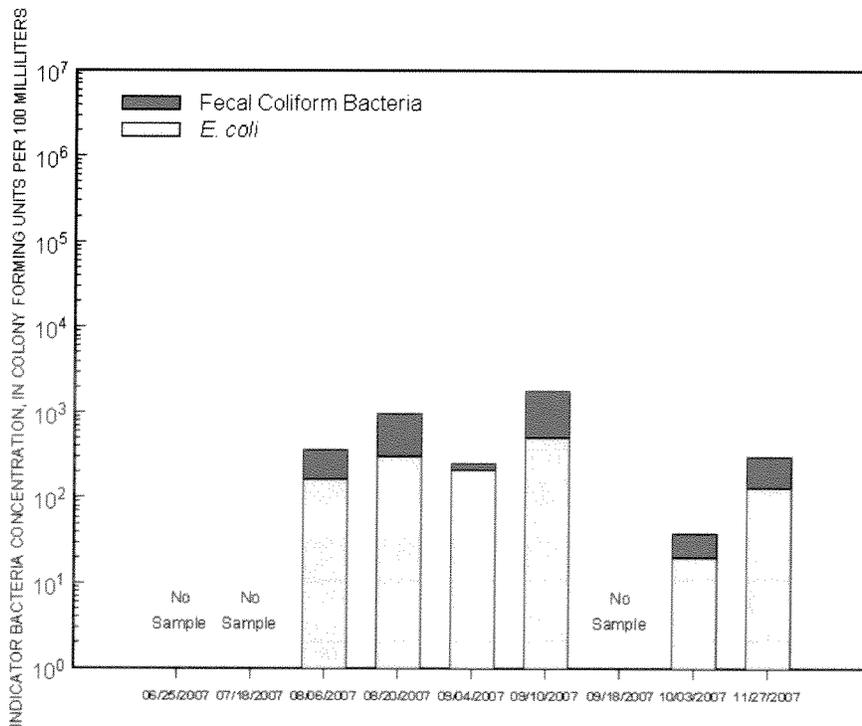


Figure 5. Fecal coliform bacteria and *Escherichia coli* concentrations by date for station 415224084141604 (W1), in Lenawee County, Mich., 2007.

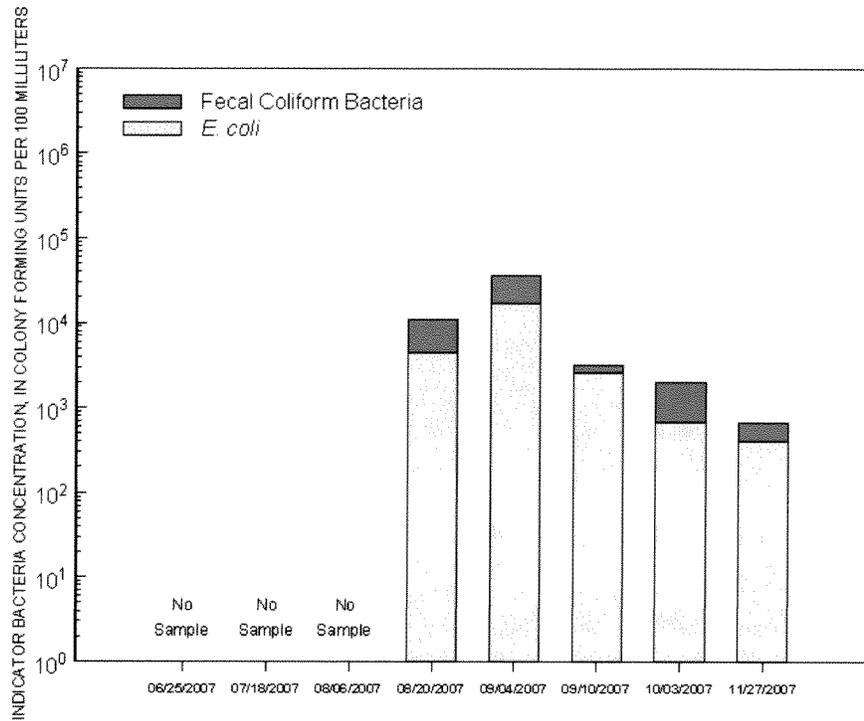


Figure 6. Fecal coliform bacteria and *Escherichia coli* concentrations by date for station 415227084141405 (W2), in Lenawee County, Mich., 2007.

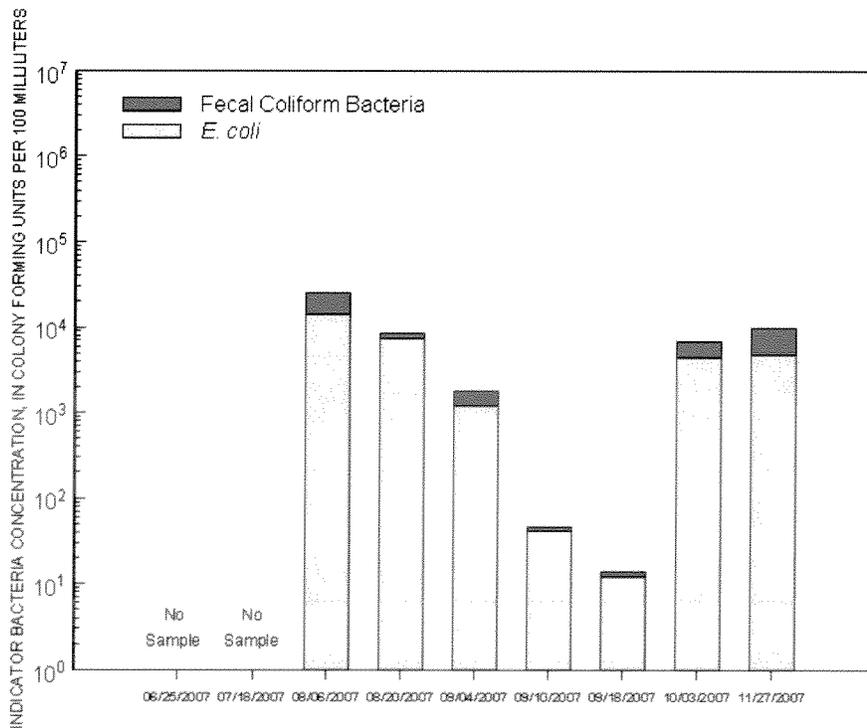


Figure 7. Fecal coliform bacteria and *Escherichia coli* concentrations by date for station 415227084141806 (W3), in Lenawee County, Mich., 2007.

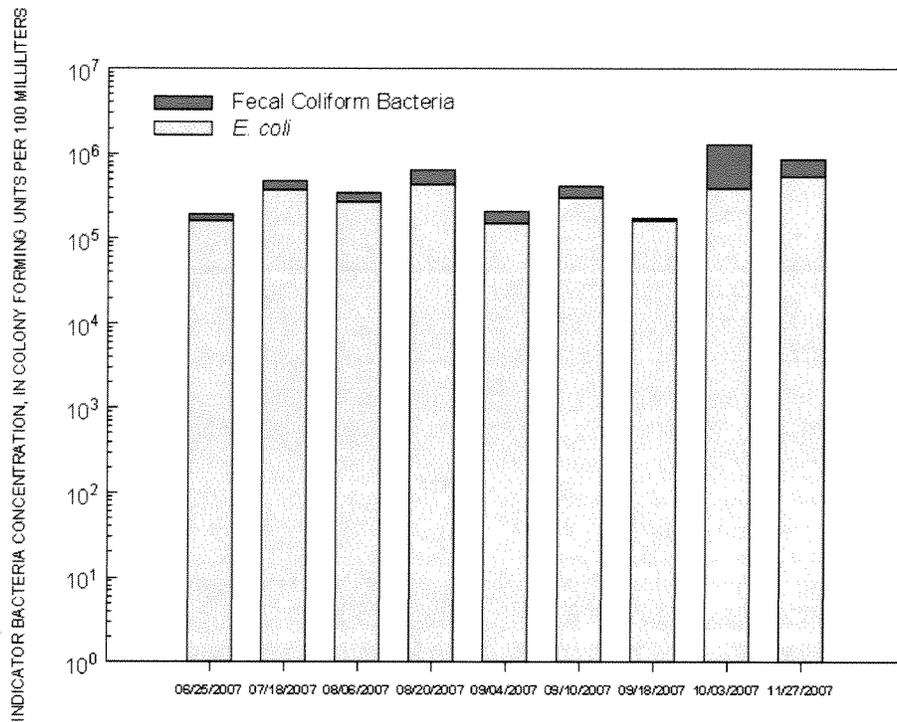


Figure 8. Fecal coliform bacteria and *Escherichia coli* concentrations by date for station 415223084140101 (P2), in Lenawee County, Mich., 2007.

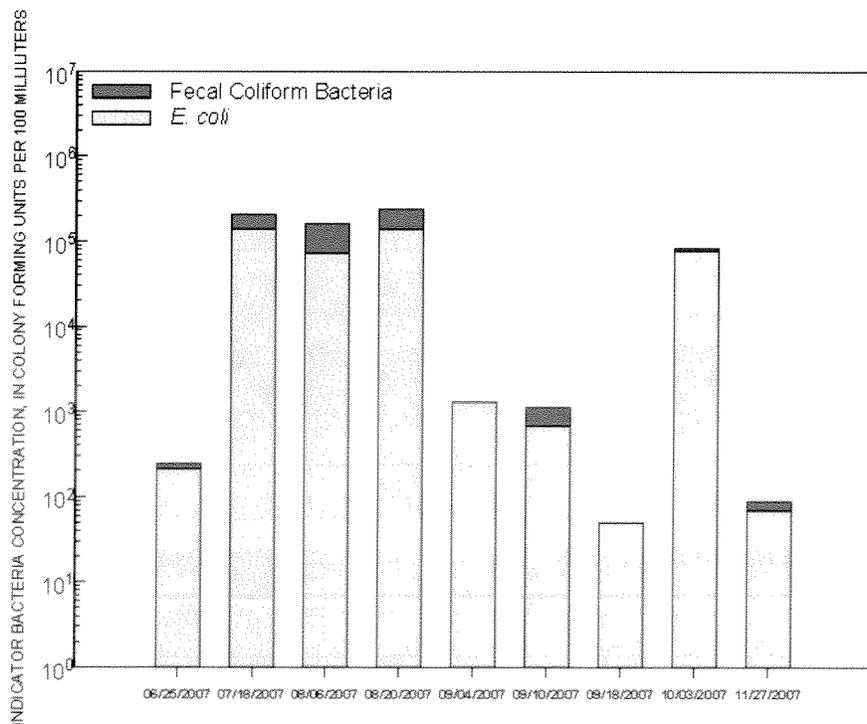


Figure 9. Fecal coliform bacteria and *Escherichia coli* concentrations by date for station 415230084140602 (P3), in Lenawee County, Mich., 2007.

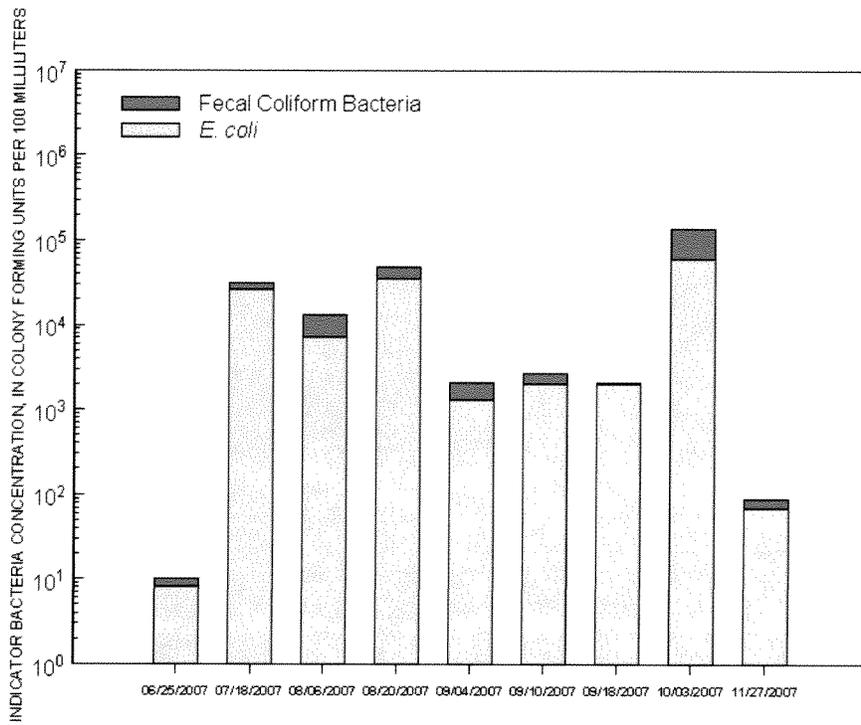


Figure 10. Fecal coliform bacteria and *Escherichia coli* concentrations by date for station 415233084140603 (P4), in Lenawee County, Mich., 2007.

Table 1. U.S. Geological Survey stations sampled in Lenawee County, Michigan.
[USGS, U.S. Geological Survey; ID, Identification]

USGS station ID	USGS field ID	Map number	USGS station name	Station type
415230084142607	D4	1	Tributary to South Branch River Raisin (site D4) near Clayton, MI	Surface water
415224084141108	D2	2	Tributary to South Branch River Raisin (site D2) near Clayton, MI	Surface water
415233084140309	D1	3	Tributary to South Branch River Raisin (site D1) near Clayton, MI	Surface water
415227084141806	W3	4	Unnamed Well W3 near Clayton, MI	Ground water
415227084141405	W2	5	Unnamed Well W2 near Clayton, MI	Ground water
415224084141604	W1	6	Unnamed Well W1 near Clayton, MI	Ground water
415223084140101	P2	7	Unnamed Storage Lagoon P2 near Clayton, MI	Place of use
415230084140602	P3	8	Unnamed Wetland Pond P3 near Clayton, MI	Place of use
415233084140603	P4	9	Unnamed Wetland Pond P4 near Clayton, MI	Place of use

Table 2. Sampling dates and conditions.

Sample number	Sampling date	Condition
1	6/25/2007	4 days prior to treatment system start
2	7/18/2007	Day 20 of system operation
3	8/6/2007	Day 39 of system operation
4	8/20/2007	Day 53 of system operation
5	9/4/2007	Day 68 of system operation
6	9/10/2007	Day 74 of system operation
7	9/18/2007	Day 82 of system operation
8	10/3/2007	10 days post system shutdown
9	11/27/2007	37 days after field drained

Table 3. Microbiological analytes and supplemental information for fecal-indicator-bacteria analysis.
[*E. coli*, *Escherichia coli*; NA, Not Applicable]

Analyte	Category	Gene product	Importance
Fecal coliform	Indicator group	NA	Commonly used group of fecal indicator bacteria.
<i>E. coli</i>	Indicator group	NA	Commonly used species of fecal indicator bacteria.
<i>eaeA</i>	Gene	Intimin	Product causes tight binding of pathogenic <i>E. coli</i> to intestinal cells (Nataro and Kaper, 1998; Fagan and others, 1999).
<i>stx1</i>	Gene	Shiga toxin 1	Product causes intestinal cell death. <i>stx1</i> is associated with bovine sources (Nataro and Kaper, 1998; Fagan and others, 1999).
<i>stx2</i>	Gene	Shiga toxin 2	Product causes intestinal cell death. When found with <i>eaeA</i> is associated with human disease (Nataro and Kaper, 1998; Fagan and others, 1999).
EC	Gene	16s rRNA	Common to all <i>E. coli</i> , pathogenic and nonpathogenic (Fogarty and others, 2005).
<i>rfbO157</i>	Gene	O157 surface protein	Gene is marker for <i>E. coli</i> O157:H7 (Osek, 2003).
LTIIa	Gene	Heat labile toxin	Product causes diarrheal disease in calves, commonly associated with bovine sources (Khatib and others, 2002; Chern and others, 2004).

Table 4. Microbiological data collected in Lenawee County, Michigan.

[USGS, U.S. Geological Survey; *E. coli*, *Escherichia coli*; EC, *E. coli* 16S ribosomal DNA gene that is common to all *E. coli*; +, gene present in sample; -, gene absent in sample; ns, no sample; na, not amplifiable with polymerase chain reaction]

USGS station ID	Field ID	Date	Colony forming units per 100 milliliters water		<i>Escherichia coli</i> gene data					
			Fecal coliforms	<i>E. coli</i>	<i>eaeA</i>	<i>stx2</i>	<i>stx1</i>	EC	<i>rfb</i>	LTIIa
415233084140309	D1	6/25/2007	1,500	700	+	-	-	+	-	+
415224084141108	D2	6/25/2007	1,100	780	+	-	-	+	-	-
415230084142607	D4	6/25/2007	84	64	+	-	-	+	-	-
415223084140101	P2	6/25/2007	190,000	160,000	+	-	+	+	-	+
415230084140602	P3	6/25/2007	240	210	+	-	-	+	-	-
415233084140603	P4	6/25/2007	10	8	-	-	-	+	-	+
415224084141604	W1	6/25/2007	ns	ns	ns	ns	ns	ns	ns	ns
415227084141405	W2	6/25/2007	ns	ns	ns	ns	ns	ns	ns	ns
415227084141806	W3	6/25/2007	ns	ns	ns	ns	ns	ns	ns	ns
415233084140309	D1	7/18/2007	28	28	+	-	-	+	-	-
415224084141108	D2	7/18/2007	370	310	+	-	-	+	-	+
415230084142607	D4	7/18/2007	ns	ns	ns	ns	ns	ns	ns	ns
415223084140101	P2	7/18/2007	480,000	370,000	+	-	+	+	-	+
415230084140602	P3	7/18/2007	210,000	140,000	+	-	+	+	-	+
415233084140603	P4	7/18/2007	31,000	26,000	+	-	+	+	+	+
415224084141604	W1	7/18/2007	ns	ns	ns	ns	ns	ns	ns	ns
415227084141405	W2	7/18/2007	ns	ns	ns	ns	ns	ns	ns	ns
415227084141806	W3	7/18/2007	ns	ns	ns	ns	ns	ns	ns	ns
415233084140309	D1	8/6/2007	230	200	-	-	-	+	-	-
415224084141108	D2	8/6/2007	8,600	5,100	+	-	+	+	-	+
415230084142607	D4	8/6/2007	930	370	+	-	-	+	-	+
415223084140101	P2	8/6/2007	340,000	270,000	+	-	+	+	-	+
415230084140602	P3	8/6/2007	160,000	73,000	+	-	+	+	-	-
415233084140603	P4	8/6/2007	13,000	7,000	+	-	-	+	-	-
415224084141604	W1	8/6/2007	360	160	+	-	-	+	-	-
415227084141405	W2	8/6/2007	ns	ns	ns	ns	ns	ns	ns	ns
415227084141806	W3	8/6/2007	25,000	14,000	na	na	na	na	na	na
415233084140309	D1	8/20/2007	11,000	6,300	+	-	+	+	-	+
415224084141108	D2	8/20/2007	10,000	7,400	+	-	+	+	+	+
415230084142607	D4	8/20/2007	10,000	8,000	+	-	+	+	-	+
415223084140101	P2	8/20/2007	630,000	430,000	+	-	+	+	+	+
415230084140602	P3	8/20/2007	240,000	140,000	+	-	+	+	+	+
415233084140603	P4	8/20/2007	49,000	35,000	+	-	-	+	-	+
415224084141604	W1	8/20/2007	970	300	na	na	na	na	na	na
415227084141405	W2	8/20/2007	11,000	4,500	+	-	-	+	-	+
415227084141806	W3	8/20/2007	8,400	7,400	-	-	-	+	-	-
415233084140309	D1	9/4/2007	330	260	+	-	-	+	-	+
415224084141108	D2	9/4/2007	320	200	+	-	-	+	-	+
415230084142607	D4	9/4/2007	1200	1,100	+	-	-	+	+	+
415223084140101	P2	9/4/2007	210,000	150,000	+	-	+	+	+	+
415230084140602	P3	9/4/2007	1,300	1,300	-	-	-	+	-	+

Table 4. Microbiological data collected in Lenawee County, Michigan.

[USGS, U.S. Geological Survey; *E. coli*, *Escherichia coli*; EC, *E. coli* 16S ribosomal DNA gene that is common to all *E. coli*; +, gene present in sample; -, gene absent in sample; ns, no sample; na, not amplifiable with polymerase chain reaction]

USGS station ID	Field ID	Date	Colony forming units per 100 milliliters water		<i>Escherichia coli</i> gene data					
			Fecal coliforms	<i>E. coli</i>	<i>eaeA</i>	<i>stx2</i>	<i>stx1</i>	EC	<i>rfb</i>	LT11a
415233084140309	D1	6/25/2007	1,500	700	+	-	-	+	-	+
415224084141108	D2	6/25/2007	1,100	780	+	-	-	+	-	-
415230084142607	D4	6/25/2007	84	64	+	-	-	+	-	-
415223084140101	P2	6/25/2007	190,000	160,000	+	-	+	+	-	+
415230084140602	P3	6/25/2007	240	210	+	-	-	+	-	-
415233084140603	P4	6/25/2007	10	8	-	-	-	+	-	+
415224084141604	W1	6/25/2007	ns	ns	ns	ns	ns	ns	ns	ns
415227084141405	W2	6/25/2007	ns	ns	ns	ns	ns	ns	ns	ns
415227084141806	W3	6/25/2007	ns	ns	ns	ns	ns	ns	ns	ns
415233084140309	D1	7/18/2007	28	28	+	-	-	+	-	-
415224084141108	D2	7/18/2007	370	310	+	-	-	+	-	+
415230084142607	D4	7/18/2007	ns	ns	ns	ns	ns	ns	ns	ns
415223084140101	P2	7/18/2007	480,000	370,000	+	-	+	+	-	+
415230084140602	P3	7/18/2007	210,000	140,000	+	-	+	+	-	+
415233084140603	P4	7/18/2007	31,000	26,000	+	-	+	+	+	+
415224084141604	W1	7/18/2007	ns	ns	ns	ns	ns	ns	ns	ns
415227084141405	W2	7/18/2007	ns	ns	ns	ns	ns	ns	ns	ns
415227084141806	W3	7/18/2007	ns	ns	ns	ns	ns	ns	ns	ns
415233084140309	D1	8/6/2007	230	200	-	-	-	+	-	-
415224084141108	D2	8/6/2007	8,600	5,100	+	-	+	+	-	+
415230084142607	D4	8/6/2007	930	370	+	-	-	+	-	+
415223084140101	P2	8/6/2007	340,000	270,000	+	-	+	+	-	+
415230084140602	P3	8/6/2007	160,000	73,000	+	-	+	+	-	-
415233084140603	P4	8/6/2007	13,000	7,000	+	-	-	+	-	-
415224084141604	W1	8/6/2007	360	160	+	-	-	+	-	-
415227084141405	W2	8/6/2007	ns	ns	ns	ns	ns	ns	ns	ns
415227084141806	W3	8/6/2007	25,000	14,000	na	na	na	na	na	na
415233084140309	D1	8/20/2007	11,000	6,300	+	-	+	+	-	+
415224084141108	D2	8/20/2007	10,000	7,400	+	-	+	+	+	+
415230084142607	D4	8/20/2007	10,000	8,000	+	-	+	+	-	+
415223084140101	P2	8/20/2007	630,000	430,000	+	-	+	+	+	+
415230084140602	P3	8/20/2007	240,000	140,000	+	-	+	+	+	+
415233084140603	P4	8/20/2007	49,000	35,000	+	-	-	+	-	+
415224084141604	W1	8/20/2007	970	300	na	na	na	na	na	na
415227084141405	W2	8/20/2007	11,000	4,500	+	-	-	+	-	+
415227084141806	W3	8/20/2007	8,400	7,400	-	-	-	+	-	-
415233084140309	D1	9/4/2007	330	260	+	-	-	+	-	+
415224084141108	D2	9/4/2007	320	200	+	-	-	+	-	+
415230084142607	D4	9/4/2007	1200	1,100	+	-	-	+	+	+
415223084140101	P2	9/4/2007	210,000	150,000	+	-	+	+	+	+
415230084140602	P3	9/4/2007	1,300	1,300	-	-	-	+	-	+

Table 4. Microbiological data collected in Lenawee County, Michigan.—Continued

[USGS, U.S. Geological Survey; *E. coli*, *Escherichia coli*; EC, *E. coli* 16S ribosomal DNA gene that is common to all *E. coli*; +, gene present in sample; -, gene absent in sample; ns, no sample; na, not amplifiable with polymerase chain reaction]

USGS station ID	Field ID	Date	Colony forming units per 100 milliliters water		<i>Escherichia coli</i> gene data					
			Fecal coliforms	<i>E. coli</i>	<i>eaeA</i>	<i>stx2</i>	<i>stx1</i>	EC	<i>rfb</i>	<i>LT11a</i>
415233084140603	P4	9/4/2007	2,100	1,300	-	-	-	+	-	-
415224084141604	W1	9/4/2007	250	210	+	-	-	+	-	+
415227084141405	W2	9/4/2007	36,000	17,000	+	-	-	+	-	-
415227084141806	W3	9/4/2007	1,800	1,200	+	-	-	+	-	+
415233084140309	D1	9/10/2007	3,900	2,000	+	-	+	+	-	+
415224084141108	D2	9/10/2007	2,600	1,500	+	-	+	+	+	+
415230084142607	D4	9/10/2007	6,500	4,100	+	-	-	+	-	+
415223084140101	P2	9/10/2007	410,000	300,000	+	-	+	+	+	+
415230084140602	P3	9/10/2007	1,100	670	+	-	-	+	-	-
415233084140603	P4	9/10/2007	2,700	2,000	-	-	+	+	-	+
415224084141604	W1	9/10/2007	1,800	500	+	-	-	+	-	-
415227084141405	W2	9/10/2007	3,200	2,600	-	-	-	+	-	-
415227084141806	W3	9/10/2007	46	42	-	-	-	+	-	+
415233084140309	D1	9/18/2007	730	530	-	-	-	+	-	-
415224084141108	D2	9/18/2007	1100	770	+	-	-	+	-	-
415230084142607	D4	9/18/2007	770	530	+	-	+	+	-	+
415223084140101	P2	9/18/2007	170,000	160,000	+	-	+	+	+	+
415230084140602	P3	9/18/2007	50	50	-	-	-	+	-	-
415233084140603	P4	9/18/2007	2,100	2,000	-	-	-	+	-	+
415224084141604	W1	9/18/2007	ns	ns	ns	ns	ns	ns	ns	ns
415227084141405	W2	9/18/2007	ns	ns	ns	ns	ns	ns	ns	ns
415227084141806	W3	9/18/2007	14	12	-	-	-	+	-	+
415233084140309	D1	10/3/2007	2,000	1,400	+	-	-	+	-	-
415224084141108	D2	10/3/2007	660	380	+	-	-	+	-	-
415230084142607	D4	10/3/2007	570	410	+	-	+	+	-	+
415223084140101	P2	10/3/2007	1,260,000	390,000	+	-	+	+	+	+
415230084140602	P3	10/3/2007	83,000	76,000	+	-	+	+	-	+
415233084140603	P4	10/3/2007	140,000	60,000	+	-	-	+	-	+
415224084141604	W1	10/3/2007	38	20	-	-	-	+	-	-
415227084141405	W2	10/3/2007	2,000	670	+	-	-	+	+	-
415227084141806	W3	10/3/2007	6,800	4,400	+	-	-	+	+	+
415233084140309	D1	11/27/2007	2,500	1,800	+	+	+	+	-	+
415224084141108	D2	11/27/2007	1,900	1,200	+	-	+	+	+	+
415230084142607	D4	11/27/2007	2,700	1,500	+	-	+	+	+	+
415223084140101	P2	11/27/2007	860,000	540,000	+	-	+	+	+	+
415230084140602	P3	11/27/2007	90	70	+	-	-	+	-	+
415233084140603	P4	11/27/2007	90	70	-	-	-	+	-	-
415224084141604	W1	11/27/2007	300	130	-	-	-	+	-	+
415227084141405	W2	11/27/2007	670	400	-	-	-	+	-	+
415227084141806	W3	11/27/2007	9,900	4,700	-	-	-	+	-	-
415233084140309	D1 Rep	8/6/2007	460	300	-	-	-	+	-	-
415223084140101	P2 Rep	8/6/2007	390,000	310,000	+	-	+	+	-	+

Wilcox, Rhonda (MDA)

From: Shanna Voss <mail@changemail.org>
Sent: Tuesday, January 21, 2014 8:57 PM
To: Wilcox, Rhonda (MDA)
Subject: 5 new petition signatures: Shanna Voss, Larry Bartz...

5 new people recently signed julie burkey's petition "Michigan Department of Agriculture and Rural Development's Environmental Stewardship Division: protect and extend the rights of urban, suburban, and rural small-scale farming operations throughout the state <http://www.change.org/petitions/michigan-department-of-agriculture-and-rural-development-s-environmental-stewardship-division-protect-and-extend-the-rights-of-urban-suburban-and-rural-small-scale-farming-operations-throughout-the-state/responses/new?response=ceee530c602a&utm_source=target&utm_medium=email&utm_campaign=two_hundred_fifty> " on Change.org.

There are now 145 signatures on this petition. Read reasons why people are signing, and respond to julie burkey by clicking here:
<http://www.change.org/petitions/michigan-department-of-agriculture-and-rural-development-s-environmental-stewardship-division-protect-and-extend-the-rights-of-urban-suburban-and-rural-small-scale-farming-operations-throughout-the-state/responses/new?response=ceee530c602a>
<http://www.change.org/petitions/michigan-department-of-agriculture-and-rural-development-s-environmental-stewardship-division-protect-and-extend-the-rights-of-urban-suburban-and-rural-small-scale-farming-operations-throughout-the-state/responses/new?response=ceee530c602a&utm_source=target&utm_medium=email&utm_campaign=two_hundred_fifty>

Dear Michigan Department of Agriculture and Rural Development's Environmental Stewardship Division,
protect and extend the rights of urban, suburban, and rural small-scale farming operations throughout the state

Sincerely,

145. Shanna Voss West Bloomfield Township, Michigan 144. Larry Bartz zeeland, Michigan 143. Scott Campbell Portage, Michigan 142. Frances Martin Ann Arbor, Michigan 141. Leilani Ruesink Three Rivers, Michigan

<<http://api.mixpanel.com/track?data=eyJldmVudCI6Im9wZW5fZW1haWwiLCJwcm9wZXJ0aWVWzlp7ImVtYWlsX25hbWUiOiJ0d29faHVuZHJlZl9maWZ0eSIsImkljoidXNlcl83NDMwOTI2IiwY2I0eSI6ImthbGFtYXpvbyIsInN0YXRlljoiTUkiLCJ6aXBjb2RlljoiNDkwMDEiLCJjb3VudHJ5X2NvZGUiOiJVUyIsImluY29tcGxldGVfYWRkcmVzcyI6ZmFsc2UsInNpZ251cF9kYXRlljoiMjAxMS0wOS0yMSIsImxvZ2luX2NvdW50ljo0MywidG90YWxfYWN0aW9ucyl6ODYslmNvbM5IY3RlZl90b19mYWNIYm9vaz8iOnRydWUslmdlbmRlcil6IkZlZW5nZS16IjQ1LTU0liwic2lnbnVwX2NvbnRleHQiOiJhY3Rpb25QYXJ0aWNpcGFudCIsImRpc3RpbmN0X2kljoiZDQzYT E2MjAtY2U4OC0wMTJmLTBjYTMtNDA0MGIwOTEyOGRlliwidG9rZW4iOilzMGFhMjZlMWQ2ZTtzYWUxNThkZmJkYzE2YjQ5MzIxMjlnRpbWUjOiEzOTAzNTU4MDh9fQ==&ip=1&img=1>>
<<http://email.changemail.org/wf/open?upn=m-2Fix5CYJc2TQM91qcfpEil20xTedgmhe06dAUi7h2w8sUsuo6As7aj6KuBptJ6FdCOLUSXrHiARysB08nPGTPEaf5bb2PKCaA4leMNP42bG-2FZAhe0DqUNYNaxDXIQKuSlapVeJTg40r9vv7dnfjW5lfetUD0NaubR8IWrpUhKfigsFvERus1BnGnou-2FCX4nT95H-2BDwslDgc6BG7O4kCDXUovOhv33xEEy4MwvMJh80ydc5x9xbntENrCwTrtlmpBZ009Vvo7LI0LPRxKHWC9Bjcr6qGdm3OMVd9tlQGksII-3D>>

Wilcox, Rhonda (MDA)

From: Janet Smith-Hickman <mail@changemail.org>
Sent: Wednesday, January 22, 2014 9:16 AM
To: Wilcox, Rhonda (MDA)
Subject: 5 new petition signatures: emily whitehead, Kim Taylor...

5 new people recently signed julie burkey's petition "Michigan Department of Agriculture and Rural Development's Environmental Stewardship Division: protect and extend the rights of urban, suburban, and rural small-scale farming operations throughout the state <http://www.change.org/petitions/michigan-department-of-agriculture-and-rural-development-s-environmental-stewardship-division-protect-and-extend-the-rights-of-urban-suburban-and-rural-small-scale-farming-operations-throughout-the-state/responses/new?response=ceee530c602a&utm_source=target&utm_medium=email&utm_campaign=two_hundred_fifty> " on Change.org.

There are now 165 signatures on this petition. Read reasons why people are signing, and respond to julie burkey by clicking here:

<http://www.change.org/petitions/michigan-department-of-agriculture-and-rural-development-s-environmental-stewardship-division-protect-and-extend-the-rights-of-urban-suburban-and-rural-small-scale-farming-operations-throughout-the-state/responses/new?response=ceee530c602a>
<http://www.change.org/petitions/michigan-department-of-agriculture-and-rural-development-s-environmental-stewardship-division-protect-and-extend-the-rights-of-urban-suburban-and-rural-small-scale-farming-operations-throughout-the-state/responses/new?response=ceee530c602a&utm_source=target&utm_medium=email&utm_campaign=two_hundred_fifty>

Dear Michigan Department of Agriculture and Rural Development's Environmental Stewardship Division,
protect and extend the rights of urban, suburban, and rural small-scale farming operations throughout the state

Sincerely,

163. emily whitehead dearborn, Michigan 162. Kim Taylor Racine, Wisconsin 161. Jim Flatt Kalamazoo, Michigan 160. Traci Selvidge Kalamazoo, Michigan 159. Earl Patterson Lansing, Michigan

<<http://api.mixpanel.com/track?data=eyJldmVudC16Im9wZW5fZW1haWwiLCJwcm9wZXJ0aWVzIjp7ImVtYWIsX25hbWUiOiJ0d29faHVuZHZlZl9maWZ0eSIsImkljoidXNlci83NDMwOTI2IiwuY2I0eSI6ImthbGFtYXpvbyIsInNOYXRlljoiTUkiLCJ6aXBjb2RlljoiNDkwMDEiLCJib3VudHJ5X2NvZGUiOiJVUyIsImluY29tcGxldGVfYWRkcmVzcyl6ZmFsc2UsInNpZ251cF9kYXRlljoiMjAxMS0wOS0yMSIsImxvZ2luX2NvdW50Ijo0NCwidG90YWxfYWw0aW9ucyl6ODgslmNvbm5lY3RlZl90b19mYWwNIYm9vaz8iOnRydWUsImdlbmRlcil6lkZlbfWFsZSIsImFnZV9yYW5nZSI6IjQ1LTU0liwic2lnbnVwX2NvbnRleHQiOiJhY3Rpb25QYXJ0aWNpcGFudCIsImRpc3RpbmN0X2kljoiZDQzYTlE2MjAtY2U4OC0wMTJmLTBjYTMtNDA0MGIwOTEyOGRjllwidG9rZW4iOiZMGFhMjZhMWwQZ2ZkZlYUwXNThkZmJkYzE2YjQ5MzZmMjlsInRpbWUiOiEzOTA0MDAxNDd9fQ==&ip=1&img=1>>
<<http://email.changemail.org/wf/open?upn=m-2Fix5CYJc2TQM91gcfpEil20xTedgmhe06dAUi7h2w8sUsuo6As7aj6KuBptJ6FdCOLUSXrHiARysB08nPGTPB1enihzlrS5G2905QRggqt1ngTLQEZuEguPcjIqzw8T-2FckrpWR48CNGncBphXJHnqFherFM0TeRM3KRgwWZMgj-2FAfBBqJM6dxRO29F-2BtZwE3F0vDYpXnLozn-2BqEzRbFrSMpJr7glgsx1yUI7YNfdLcRb2pCD-2FGfksX04mpb8NELYt4I70OYfAysSotZX8AMRLr9rNg8eN-2F2Z7LKzB4JZw8-3D>>

Wilcox, Rhonda (MDA)

From: angela elhammer <mail@changemail.org>
Sent: Wednesday, January 22, 2014 10:39 AM
To: Wilcox, Rhonda (MDA)
Subject: 5 new petition signatures: Sandy Nordmark, Thomas Beller...

5 new people recently signed julie burkey's petition "[Michigan Department of Agriculture and Rural Development's Environmental Stewardship Division: protect and extend the rights of urban, suburban, and rural small-scale farming operations throughout the state](#)" on Change.org.

There are now 170 signatures on this petition. Read reasons why people are signing, and respond to julie burkey by clicking here:

<http://www.change.org/petitions/michigan-department-of-agriculture-and-rural-development-s-environmental-stewardship-division-protect-and-extend-the-rights-of-urban-suburban-and-rural-small-scale-farming-operations-throughout-the-state/responses/new?response=ceee530c602a>

Dear Michigan Department of Agriculture and Rural Development's Environmental Stewardship Division,

protect and extend the rights of urban, suburban, and rural small-scale farming operations throughout the state

Sincerely,

- 169. Sandy Nordmark Ceresco, Michigan
- 168. Thomas Beller Onondaga, Michigan
- 167. Christine Bishop Berkley, Michigan
- 166. Madonna Lee Grand Rapids, Michigan
- 165. Janet Smith-Hickman Central lake, Michigan



Wilcox, Rhonda (MDA)

From: Alexis Hill <mail@changemail.org>
Sent: Wednesday, January 22, 2014 11:31 AM
To: Wilcox, Rhonda (MDA)
Subject: 5 new petition signatures: Alexis Hill, Erik Pye...

5 new people recently signed julie burkey's petition "[Michigan Department of Agriculture and Rural Development's Environmental Stewardship Division: protect and extend the rights of urban, suburban, and rural small-scale farming operations throughout the state](#)" on Change.org.

There are now 175 signatures on this petition. Read reasons why people are signing, and respond to julie burkey by clicking here:

<http://www.change.org/petitions/michigan-department-of-agriculture-and-rural-development-s-environmental-stewardship-division-protect-and-extend-the-rights-of-urban-suburban-and-rural-small-scale-farming-operations-throughout-the-state/responses/new?response=ceee530c602a>

Dear Michigan Department of Agriculture and Rural Development's Environmental Stewardship Division,

protect and extend the rights of urban, suburban, and rural small-scale farming operations throughout the state

Sincerely,

175. Alexis Hill Central Lake, Michigan
173. Erik Pye kalamazoo, Michigan
172. Amy Drake Central Lake, Michigan
170. angela elhammer kalamazoo, Michigan
169. Sandy Nordmark Ceresco, Michigan



Wilcox, Rhonda (MDA)

From: Wendy Banka <wendy@michigansmallfarmcouncil.org>
Sent: Tuesday, January 21, 2014 7:55 PM
To: Wilcox, Rhonda (MDA)
Subject: Proposed 2014 GAAMPs

To the Michigan Department of Agriculture and Rural Development, the Michigan Commission of Agriculture and Rural Development, and the 2014 GAAMPs Committees:

I am writing in regard to the proposed changes to the 2014 Pesticide and 2014 Site Selection GAAMPs.

First, I object to striking the language on page 8 of the Pesticide GAAMPs that requires farmers to follow label instructions on pesticides to protect state groundwaters. The language to be eliminated from the Pesticide GAAMPs reads as follows:

Applicators need to be aware of, and adhere to, any pesticide use directions or references on pesticide labels concerning state management plans. These plans are specifically developed for the protection of groundwater.

Without this language, farmers will be able to earn Right to Farm protection even if they ignore label directions intended to protect groundwater. The misuse of pesticides cannot be good for Michigan's agricultural sector or for the environment, and I urge you to reject this proposed change.

Second, I object to the two changes in the Site Selection GAAMPs that together ensure, for the first time, that farmers in residential areas will be unable to meet the requirements of the Site Selection GAAMPs. The first change defines a new entity on page 3, a "Livestock Facility", which includes as few as one animal, and so for the first time brings operations with fewer than 50 animal units under the control of the Site Selection GAAMPs:

Livestock Facility – Any facility where farm animals as defined in the Right to Farm Act are confined regardless of the number of animals. Sites such as loafing areas, confinement areas, or feedlots which have any number of livestock that preclude a predominance of desirable forage species are considered a part of a livestock facility.

And then instead of providing management guidelines for Livestock Facilities, a second change on page 12 immediately excludes them as unacceptable in residentially zoned areas:

Category 4 Sites are sites that are exclusively zoned for residential use and are not acceptable locations for livestock facilities regardless of number. Confining livestock in these locations does not conform to the Siting GAAMP.

There are a number of issues related to the proposed changes to the Site Selection GAAMPs:

1. GAAMPs have historically been used to establish guidelines which, if met, earn the farmer protection under the right to farm act. The preface added in 2012, and changes to the Site Selection GAAMPs over the past two years introduce a new kind of requirement which can't be met by any farmer in a residential area. Thus the purpose of this language is not to promote good agricultural management guidelines, but rather to exclude whole classes of farmers from Right to Farm protection. I urge the Ag Commission to turn back from making this kind of a fundamental change to the purpose of the GAAMPs.

2. If the proposed changes to the Site Selection GAAMPs are approved, it will create a conflict between the Right to Farm law and the GAAMPs. The law will prohibit the use of local regulations to supercede RTF, and the Site Selection GAAMPs will require that local zoning supercede RTF, if that zoning is "residential". I expect that most lawyers will be able to explain that conflict to a judge, and that Michigan residents will continue to win Right to Farm cases in Michigan because the law will still protect us, even if this change to the GAAMPs is approved. Still, I urge the Ag Commission to not introduce this conflict between the language of the law and the language of the GAAMPs.

3. One reason given for MDARD pursuing this policy change is that the department is receiving more inquiries from Michigan residents interested in urban and residential agriculture than they can easily handle. This would suggest that it is the express intent of our Department of Agriculture to suppress agricultural efforts in residential areas, where about 80

percent of Michigan residents live. I strongly urge the Ag Commission to not use its authority to thwart agricultural interests among Michigan citizens, but instead to use its authority to promote those interests.

4. A second reason given for MDARD pursuing this policy change is that RTF protection for small farmers could lead RTF back to the legislature for amendment, and amendments to RTF could hurt other agricultural interests in the state. My own view is that the essential unfairness of the proposed changes to the Site Selection GAAMPs have the same power to bring RTF back to the legislature for clarity on who is protected by Right to Farm. I urge the Ag Commission to not pick winners and losers in an effort stabilize our existing RTF law, both because it is wrong and because it appears unlikely to work.

5. Finally, I would note that there is a real and growing frustration among consumers around our food choices. One way that those concerns can be alleviated without fundamental change is to create greater options for purchasing locally grown foods, and greater options for individuals to grow their own food. Instead, the proposed changes to the Site Selection GAAMPs will have an enormous dampening effect on both of these options, and in my view will lead to greatly increased frustration on the part of Michigan residents. I urge the Ag Commission to promote the kind of small sustainable agriculture that is required to support farmer's markets and the locally grown food movement, by not approving the proposed changes to the Site Selection GAAMPs.

Sincerely,

Wendy Lockwood Banka

Wendy Lockwood Banka, PhD, MPP
President, Michigan Small Farm Council

Wilcox, Rhonda (MDA)

From: Amanda Kik <amanda.l.kik@gmail.com>
Sent: Wednesday, January 22, 2014 12:08 PM
To: Wilcox, Rhonda (MDA)
Subject: Do NOT drop the animal units down to 0 in the definition of a Livestock Production Facility.

Dear MDARD,

If we want true food security — defined as the ability of a country, region, state or community to be as self-sufficient in food production as possible — then we need a legal system that supports local, small-scale food production.

Farms that fit this bill turn out healthful food, guard against shortages, stabilize local economies and instill community camaraderie.

Michigan is ahead of the curve when it comes to setting up legal protections for small-scale farmers, and the state's Right to Farm laws are making a real difference.

Do NOT drop the animal units down to 0 in the definition of a Livestock Production Facility. This will create undue burdens on small farmers.

Do NOT gut the Right to Farm Act by giving local zoning ordinances the power to control where farming can happen. This change would violate the language and intent of the Right to Farm Act.

The Michigan RTFA is a template for the defense and encouragement of local food production and the restoration of agriculture to its rightful place — integrated into communities.

Respectfully,
Amanda Kik

Wilcox, Rhonda (MDA)

From: Aria Dammons <ariadamm@yahoo.com>
Sent: Wednesday, January 22, 2014 12:09 PM
To: Wilcox, Rhonda (MDA)
Subject: Right to Farm

No one can say that we, as Americans, are free if the government takes Americans right to farm their own land away.

Aria J. Dammons

Wilcox, Rhonda (MDA)

From: faeriechylde@gmail.com on behalf of Seth and Becca Mallay
<sethandbecca@gmail.com>
Sent: Wednesday, January 22, 2014 12:09 PM
To: Wilcox, Rhonda (MDA)
Subject: The Proposed 2014 GAAMPs

I am writing to tell you I am opposed to two of the changes made in the 2014 GAAMPs. According to the Michigan Small Farm Council, "In the proposed changes, MDARD defines a new term, **Livestock Facility**, as one with any number of animals - including a single animal; by taking this step, MDARD for the first time brings small farm operations under the control of the Site Selection GAAMPs. And then in a second step, MDARD creates a new class of sites - Category 4 sites - that are not ever acceptable sites for Livestock Facilities. Category 4 sites are defined by MDARD as those sites that are exclusively zoned for residential use."

These steps allow too much state government interference in something that is best governed locally, and would only hurt small farms and individual families who want to raise chickens in their backyards. I oppose this limitation of their freedoms and ask that these changes be withdrawn.

Sincerely,
Rebecca Mallay
Quincy, Michigan

Wilcox, Rhonda (MDA)

From: Mark Angelini <angelini.mark@gmail.com>
Sent: Wednesday, January 22, 2014 12:10 PM
To: Wilcox, Rhonda (MDA)
Subject: I do not support the proposed changes to GAAMP

I am writing in protest to the proposed changes to *Generally Accepted Agricultural and Management Practices for Site Selection and Odor Control for New and Expanding Livestock Production Facilities*

It is unreasonable to place additional limitations onto small-scale agricultural activity, especially those stationed near or within urban limits. Even rural areas now zoned residential are at risk, even if local zoning allows for small-scale agricultural activity. It is a grave mistake to undermine time-honored practices of resilient, distributed food production in relative location to its processing and consumption; the home and local economy.

The foundation of a sustainable and just local food system rests largely on the expression of well-intentioned individuals to exercise their right to produce nutritious animal based foods within communities, so long as proper management is followed. Thus, what is more pertinent an issue regarding food safety and quality of life is the education of the public as to where food comes from and how its local rearing supports local economy and a renewed vitality of the general public through its consumption.

Sincerely,

Mark Angelini

Wilcox, Rhonda (MDA)

From: Melanie Guidotti <melanieguidotti@gmail.com>
Sent: Wednesday, January 22, 2014 12:11 PM
To: Wilcox, Rhonda (MDA)
Subject: MI Right to Farm Act

I would like to express my concern, and voice my objection, to the Site Selection GAAMPs being redefined to include the new term Live Stock Facility, and the definition as being one with any number of animals. This would include a single animal. I object strongly to redefining Livestock Production Facilities to less than 50 animal units. I believe the Michigan Right to Farm Act, Act 93 of 1981, adequately addresses generally accepted agricultural and management policies, and would like to see the Act protected. Thank you again for this opportunity.

Respectfully,
Melanie Guidotti
Kalamazoo, MI 49008

Wilcox, Rhonda (MDA)

From: Lynne Freitag <miraniejane@gmail.com>
Sent: Wednesday, January 22, 2014 12:12 PM
To: Wilcox, Rhonda (MDA)
Subject: Michigan's Right to Farm act

Corporate farms have reduced the quality of our food and produced a despicable system for providing meat for the masses. These Companies pump growth hormones and antibiotics into the animals we eat. Eating rare meat and sunny-side up eggs is now hazardous to our health because big business has taken over. We should have the right to provide ourselves with safe wholesome food. The changes proposed to the "Right to Farm Act" would take our ability to provide ourselves with good safe healthy food. Please protect our rights!

--

Lynne Freitag
11399 Nappers Rd. Herron MI 49744
miraniejane@gmail.com
cell ph # (989)464-7306

Wilcox, Rhonda (MDA)

From: katy@fixedgeargallery.com
Sent: Wednesday, January 22, 2014 12:14 PM
To: Wilcox, Rhonda (MDA)
Subject: farm animal facilities

I recently read about proposed changes in agriculture regulations that would define any an animal facility as something having as few animals as 1; and then allowing animal facilities in only particular places. I think this is bad for Michigan. Lots of people are now trying out small scale farming and that is a good thing. The proposed changes could certainly be used to bend policy and zoning and more regulations away from small and start up farms. We don't need more CAFOs, we need more farmers who are concerned with local production, and distribution.

People in subdivisions and residential neighborhoods that are "invaded" by farm animals should be able to work out their differences by themselves. Indeed, many site condos and subdivisions have rules that prohibit the keeping of animals except in the most ordinary way, and numbers. I don't think the State needs to address those at all.

Michigan needs small, creative farms, and places were potential farmers can start their projects without having to own a lot of land, or having to give up "day jobs" that are nearby.

Don't make these changes.

Katy Bean-Larson
small farmer

Wilcox, Rhonda (MDA)

From: Vince Locke <vince.locke@gmail.com>
Sent: Wednesday, January 22, 2014 12:18 PM
To: Wilcox, Rhonda (MDA)
Subject: Do not remove Right to Farm protections

I am writing this to urge you to not remove Michigan Right to Farm protections from suburban and "hobby" farms, as discussed in an Mlive article (http://www.mlive.com/news/kalamazoo/index.ssf/2014/01/removing_michigan_right_to_far.html). Many of us working poor residents of this state rely on these "farms" to feed our families and help us make ends meet. Stripping us of this protection would harm us in very real, physical ways. It would literally take food from our children's mouths. In these hard economic times, it is unconscionable to even consider forcing us into even greater poverty than we already suffer. I thank you for your consideration.

--
Vince Locke
Mount Pleasant, MI

Wilcox, Rhonda (MDA)

From: james n lesley goodgasell <jamesnlesley@hotmail.com>
Sent: Wednesday, January 22, 2014 12:19 PM
To: Wilcox, Rhonda (MDA)
Subject: Agriculture Commission and MI Dept. of Agriculture & Rural Development Seeking Public Input on Agricultural Management Practices

I am writing in regards to changing this "loophole" that is trying to be closed in the GAAMP.

My number one concern of this is that we just purchased a home in a rural community, but it is currently under township ordinances that restrict "livestock" in under 5 acres of land. Our property is 2.4 acres, sufficient enough to house chickens with room to spare. The local municipality considers chickens "livestock" which would prohibit us from raising our own chickens for the source of food that we intend. Under the GAAMP we can do this and fulfill our desire to live a self-sustaining lifestyle. If this is changed it limits our way of life and in turn continues dependency upon the government, who is already in far too much control of the agricultural development of our country.

Please consider the families that will be hindered by this change. Please consider the amount of monies that are contributed to those who cannot afford to place food on their table and then in turn seek the government to meet those needs because they are being told that they are not "allowed" the freedom to live and provide for their families as God has intended. Please hear the voices of so many who strive to live self-sustaining lifestyles and less dependant on our government.

Thank you from a concerned citizen!

Wilcox, Rhonda (MDA)

From: Jason Wojtoviets <JWojtoviets@bmt-aerospace.com>
Sent: Wednesday, January 22, 2014 12:19 PM
To: Wilcox, Rhonda (MDA)
Subject: Michigan Right to Farm Act

I am writing you today concerned with the proposed changes to the Michigan Right to Farm Act. I believe it is the unalienable right of every citizen in this country and every resident of this state to grow their own food and raise their own livestock to be self sufficient, and an individuals personal rights and property rights should not be stripped away because a neighbor or government official does not like and/or agree with the farming they are doing.

I do believe that reasonable restrictions can be placed on the number of animals being raised in conjunction with the size of the property to eliminate the potential for poor animal habitat and conflicts with neighbors, so long as those restrictions do not impede upon that individuals right to be self sufficient. Stripping a person of their rights because of social, political, or economical pressure is egregious.

It is my right to keep enough meat and egg chickens to sustain my nutritional needs as well as plant every square inch of that property in a garden if I so choose regardless of what any government official or government employee has to say about it. It is also my responsibility to ensure the animals have proper habitat and nutrition as well as my responsibility to control pest in the gardened areas of my property.

I urge you to drop all of the proposed changes to the Michigan right to farm act regarding small farms. We deserve to have our rights protected and for the current state law to protect us from our over infringing local governments. The fact that we need government to protect us from government is a joke in itself. If this infringement moves forward we will vote with our money and our feet.

Regards,

Jason Wojtoviets
Process Engineer & Tooling Engineer

BMT Aerospace USA, Inc.
Office: 586 285 7700 x 236
Fax: 586 285 9734
jwojtoviets@bmt-aerospace.com

www.bmt-bevels.com
www.bmtaerospace.com

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BMT Aerospace USA, Inc.

Wilcox, Rhonda (MDA)

From: Kristina Dawkins <kdawkins3@gmail.com>
Sent: Wednesday, January 22, 2014 12:44 PM
To: Wilcox, Rhonda (MDA)
Subject: Right to Farm Act

I hope this goes to the right person. All apologies if not.

Please, do not support, change, or introduce law, or change the GAAMPs related to the Right to Farm Act that would rescind residential zoned areas from owning livestock. At our last house in Traverse City, we owned 4 hens for their egg production. It was not only a bonding opportunity for us as neighbors loved to stop and watch them (oh, the children!) but also to purchase the very fresh eggs. I use the word "purchase," but it was such a small amount as most were given away as a way to interact with the people around me with whom I couldn't find another way to relate. Purchasing was only essential for us to qualify as commercial. The benefit of knowing where the eggs came from and that the egg producers had a wonderful life compared to their mass producing counterparts....immeasurable. We are now in the Lansing area with a larger lot and would love to recreate our previous, fowl hobby. I think you'd find that stories such as mine, real people with small flocks, are the majority most concerned and to be affected.

Talking point, because I love evidence-based:

According to the law, changes to the GAAMPs should be for purposes of improved public health or the environment; no evidence has been provided that small farms in residential zoned areas are a threat to public health or the environment.

Sincerely,
Kristina Dawkins
Delta Township

Wilcox, Rhonda (MDA)

From: DeLaney Becker-Baratta <delaneybaratta@gmail.com>
Sent: Wednesday, January 22, 2014 12:22 PM
To: Wilcox, Rhonda (MDA)
Subject: Michigan's Generally Acceptable Agricultural Practices (GAAMPs)

Good afternoon, I am a resident of Kent County, Michigan. I am emailing you today to express my concern at the proposed changes to the GAAMPs law. These changes which I am speaking of would limit the right of small farmers to own livestock in a place 'not permitted' to have livestock. This ban would include cities, suburbs and smaller acreage, which would hurt small farmers seeking a sustainable way to farm their land. This ban claims it would be reducing the unappealing aspects of owning livestock such as waste and smell. However, in a properly managed system animals waste is converted into biologically rich compost with little to no odor. Further while keeping a rooster in a flock of hens in the city is a noise issue, keeping a small flock of just hens comes with hardly any noise. Why can big agriculture corporations be able to own gigantic amounts of livestock, caged in big open air houses, with tons of waste poisoning groundwater? Why wouldn't this sort of farming be considered a public nuisance? I wonder what people who live around big CAFO's (concentrated animal feeding operations) think about this proposed law, would they be able to have a case against these corporations that pollute and sully their land and water? How much damage really can a small backyard flock of livestock do compared to these huge CAFO's with manure lagoons and the like. If the proposed law is seeking to protect constituents from "Site Selection and Odor Control for Livestock Production Facilities" why aren't huge operations (like CAFO's) with proven negative health effects and proven polluting practices examined with a closer eye? Why are the small operations that pose little to no risk outside a certain area being criticized as smelly and a nuisance? What I am trying to say is why would you seek to shut down backyard operations, where the owners have more at stake for keeping their operation sanitary and nuisance free? Thank you for your time.

Wilcox, Rhonda (MDA)

From: Paige Lloyd <paigelloyd1979@hotmail.com>
Sent: Wednesday, January 22, 2014 12:23 PM
To: Wilcox, Rhonda (MDA)
Subject: Michigan Right to Farm Proposed Changes

To whom it may concern:

I am commenting regarding the proposed changes to the Michigan Right to Farm Act. My family - which includes me (stay at home mom), my husband (a nurse anesthetist) and our 6 young children - live on 26 acres in northwestern Livingston County in an agricultural area. We live in a very country area, and dream of adding animals to our lifestyle, raising cattle for meat and milk for our family, chickens for and eggs, growing berries, grapes and peaches, and keeping bees. But we live next door to a subdivision. We feel that the MRFA protects our right to farm now; however if the state removes those protections and allows local governments and councils to again choose whether they want us to be able to engage in farming practices on our private property, we fear that our right to do so will be in peril. Please consider keeping the MRFA intact as it is, for the protection of small farming families in our great state.

Thank you.

Sincerely,
Paige Lloyd

Wilcox, Rhonda (MDA)

From: Meadow Brady <mysecretmeadow@gmail.com>
Sent: Wednesday, January 22, 2014 12:24 PM
To: Wilcox, Rhonda (MDA)
Subject: 2014 GAAMP

am writing to tell you I am opposed to two of the changes made in the 2014 GAAMPs. According to the Michigan Small Farm Council, "In the proposed changes, MDARD defines a new term, Livestock Facility, as one with any number of animals - including a single animal; by taking this step, MDARD for the first time brings small farm operations under the control of the Site Selection GAAMPs. And then in a second step, MDARD creates a new class of sites - Category 4 sites - that are not ever acceptable sites for Livestock Facilities. Category 4 sites are defined by MDARD as those sites that are exclusively zoned for residential use."

These steps allow too much state government interference in something that is best governed locally, and would only hurt small farms and individual families who want to raise chickens in their backyards. I oppose this limitation of their freedoms and ask that these changes be withdrawn.

Sincerely,
Meadow Brady

Wilcox, Rhonda (MDA)

From: Michelle Smolenski <mmsmo15@gmail.com>
Sent: Wednesday, January 22, 2014 12:28 PM
To: Wilcox, Rhonda (MDA)
Subject: Preserve Michigan's Right to Farm Act!

Michigan has the best Right to Farm Act (RTFA) in the country! Why would you mess up a good thing?

Please, please, please don't fall prey to the big money-making mega-farms or their terrible influence! Let Michigan stand as a shining example of a state that cares more for its people than money at the expense of the people.

1. According to the law, changes to the GAAMPs should be based on scientific evidence; no evidence has been provided that supports the current changes to the Site Selection GAAMPs.
2. According to the law, changes to the GAAMPs should be for purposes of improved public health or the environment; no evidence has been provided that small farms in residentially zoned areas are a threat to public health or the environment.
3. The proposed changes create language in the GAAMPs that contradicts the language of the law (that is, the GAAMPs require zoning to regulate Livestock Facilities while the Law prohibits zoning from regulating them). While the Agriculture Commission has the authority to change the language of the GAAMPs, they do NOT have the authority to change the meaning of the law, and that is what this change attempts to do.

Thank you!
Michelle Smolenski

Wilcox, Rhonda (MDA)

From: jsudol501@yahoo.com
Sent: Wednesday, January 22, 2014 12:39 PM
To: Wilcox, Rhonda (MDA)
Subject: Right to farm act

1. According to the law, changes to the GAAMPs should be based on scientific evidence; no evidence has been provided that supports the current changes to the Site Selection GAAMPs.
2. According to the law, changes to the GAAMPs should be for purposes of improved public health or the environment; no evidence has been provided that small farms in residentially zoned areas are a threat to public health or the environment.
3. The proposed changes create language in the GAAMPs that contradicts the language of the law (that is, the GAAMPs require zoning to regulate Livestock Facilities while the Law prohibits zoning from regulating them). While the Agriculture Commission has the authority to change the language of the GAAMPs, they do NOT have the authority to change the meaning of the law, and that is what this change attempts to do.

Wilcox, Rhonda (MDA)

From: ksoucy@comcast.net
Sent: Wednesday, January 22, 2014 12:41 PM
To: Wilcox, Rhonda (MDA)
Subject: GAAMP

I would like to put my two cents in regarding the new potential changes to the GAAMPs for 2014. My family was the first family in Ann Arbor to receive a permit for backyard chickens in August 2008. We still have one of the original chickens and two others. They are part of our family and neighborhood. Not only has no one ever complained about our keeping chickens but neighborhood children come and visit them and others bring fresh greens to feed them.

Our chickens have been a learning experience and they have brought us many wonderful memories, as well as fresh eggs. Please support the existing 2013 GAAMPs, protecting our right to keep the Ann Arbor maximum of four chickens in our area and other areas zoned as "Residential".

Thank you,
Kristin Soucy

1411 Hatcher Crescent
Ann Arbor MI 48103

Wilcox, Rhonda (MDA)

From: Erica House-Ruiz <erica-house@live.com>
Sent: Wednesday, January 22, 2014 12:43 PM
To: Wilcox, Rhonda (MDA)
Subject: Right to Farm Act Loophole

Hi there!

I have had back yard chickens in the past. No roosters. The organic eggs are awesome! And the chickens are really great pets. They don't bark like dogs. I have neighbors whose dogs can be heard even when they are locked up in their house (!) I don't believe raising a few chickens in the back yard for food (and sweet pets) should be considered circumvented the Right to Farm Act. I encourage you to not make changes to the Right to Farm Act that prohibit back yard chickens.

Thank you!

Sincerely,
Erica House
Springfield Township Michigan

Wilcox, Rhonda (MDA)

From: Becky Hammond <bhammond713@aol.com>
Sent: Wednesday, January 22, 2014 12:42 PM
To: Wilcox, Rhonda (MDA)
Subject: backyard farmers

Hello. I am rather surprised to see an attempt to halt all small backyard farming under the pretense that some are living next to thousands of chickens. That would be a CAFO. If people are understandably bothered by living next to thousands of chickens, please, by all means, deal with that. However, outlawing all the tiny farming operations popping up here and there is overkill. Not to mention the taking over of local government by the state. Thank you.

Sincerely,

Rebecca Hammond
Ferndale, MI

Wilcox, Rhonda (MDA)

From: Michael McGowan <cakchiquel85@yahoo.com>
Sent: Wednesday, January 22, 2014 11:03 AM
To: Wilcox, Rhonda (MDA)
Subject: Michigan right to farm act

Hello,

I am a supporter of the michigan right to farm act and I urge you to keep it intact. Thanks for your consideration.

Sincerely,

Mike McGowan (concerned citizen)

Sent from my iPhone

Wilcox, Rhonda (MDA)

From: Jim Cavender <jimcavender1@gmail.com>
Sent: Wednesday, January 22, 2014 10:32 AM
To: Wilcox, Rhonda (MDA)
Subject: Michigan Right to Farm Act

Please leave the Michigan Right to Farm Act as is. Thanks, James Cavender

Wilcox, Rhonda (MDA)

From: Tanguay,Julie <jtanguay@wccnet.edu>
Sent: Wednesday, January 22, 2014 11:44 AM
To: Wilcox, Rhonda (MDA)
Subject: I support Michigan Right to Farm Act

It is an important part of my life!

Julie Tanguay
Senior Graphic Designer
Public Relations & Marketing Services

Washtenaw Community College
SC308E
734.973.3629
jtanguay@wccnet.edu

Wilcox, Rhonda (MDA)

From: Luke Hollis <lukehollis53@gmail.com>
Sent: Wednesday, January 22, 2014 11:42 AM
To: Wilcox, Rhonda (MDA)
Subject: Right to farm

Pls do not change mi right to farm act

Wilcox, Rhonda (MDA)

From: Theodore Boss <heathen7@yahoo.com>
Sent: Wednesday, January 22, 2014 11:34 AM
To: Wilcox, Rhonda (MDA)
Subject: Michigan Right to Farm Act

I support the Michigan Right to Farm Act and I would like your assurance that you will do your due diligence and protect this right of the citizens of Michigan.

Thank you,

Theodore H. Boss
Michigan Resident and farmer wannabe

Wilcox, Rhonda (MDA)

From: Gregory McGrath <maxfly999@gmail.com>
Sent: Wednesday, January 22, 2014 12:56 PM
To: Wilcox, Rhonda (MDA)
Subject: MRTFA

I am in support of the MRTFA and do not want to see Michigan change something that should stay on the books!

Wilcox, Rhonda (MDA)

From: srschultz@reagan.com
Sent: Wednesday, January 22, 2014 8:16 AM
To: Wilcox, Rhonda (MDA)
Subject: RTFA

PLEASE LEAVE THE RTFA AS IT IS TO MAINTAIN OUR FOOD QUALITY.
SCIENCE NEEDS TO UTILIZED IN THESE TYPES OF CHANGES NOT JUST ANOTHER
GOVERNMENT POWER GRAB.

THANK YOU,

STEVEN SCHULTZ MD

Wilcox, Rhonda (MDA)

From: Elisabeth Biggs <biggsmomma@gmail.com>
Sent: Wednesday, January 22, 2014 10:22 AM
To: Wilcox, Rhonda (MDA)
Subject: MRTF
Attachments: uncle-sam-wants-chickens.jpg

My family and I are AGAINST this proposed change and degradation of the MRTF act...

Uncle Sam Expects You To Keep Hens and Raise Chickens



Two Hens in the Back Yard for Each Person in the House Will Keep a Family In Fresh Eggs

EVEN the smallest back yard has room for a flock large enough to supply the house with eggs. The cost of maintaining such a flock is small. Table and kitchen waste provide much of the feed for the hens. They require little attention—only a few minutes a day.

An interested child, old enough to take a little responsibility, can care for a few fowls as well as a grown person.

Every back yard in the United States should contribute its share to a bumper crop of poultry and eggs in 1918.

In Time of Peace a Profitable Recreation

In Time of War a Patriotic Duty

For information about methods of Back-Yard Poultry Keeping suited to your location and conditions, write

Your State Agricultural College

or

**The United States Department of Agriculture
Washington, D. C.**

Wilcox, Rhonda (MDA)

From: Ana Hotaling <ana@hotalings.com>
Sent: Wednesday, January 22, 2014 4:18 PM
To: Wilcox, Rhonda (MDA)
Subject: Regarding the changes to the Michigan Right to Farm Act

Good afternoon!

I am writing in response to the proposed changes that will affect the Michigan Right to Farm Act. I am quite against these changes, as I understand them.

First off, as a poultry advocate (I was a member of a small group instrumental in getting the Chelsea City Council to allow for backyard hens in the city of Chelsea), I know first hand that opposition to having backyard microflocks comes mostly from those who tend towards selfish, unfounded reasons. These include but are not limited to: the smell (rare if the poultry owner cares for his/her coop, run, and birds correctly); the noise (hens make very little noise, other than soft clucking, unless alarmed or laying an egg; dogs have a greater decibel volume and tend to bark indiscriminately); the possibility of vermin (attracted more by wild bird feeders and pet animal dishes than birds); the devaluation of property (there have been no studies that show actual data that this occurs; in fact, a community in the Carolinas has shown property values rising; in addition, most urban/suburban coops are very fashionable, hence the many Tours de Coops around the county).

Secondly, as a poultry journalist (I am a contributing writer for such magazines as Backyard Poultry, Chickens, and Urban Farm) I am very aware that most microflock owners and urban/suburban farmers are very meticulous and cautious about their animals, how they are cared for, and how to ensure that they provide the very best and use the latest sciences to keep their flocks healthy and safe. Those who invest their time, money, and precious suburban/urban property space to a microflock are those who are serious about raising hens. They aren't lackadaisical slackers who keep their poultry in a lean-to, running all over the place.

Third, as a certified Michigan pullorum tester, I can attest to the fact that incidences of disease based on poultry ownership are very rare indeed. Avian influenza is close to non-existence, and this is the one illness that ignorant people harp on about when hearing that someone is going to have poultry near their home.

Finally, as a poultry farmer myself, it is my understanding that the proposed changes to the Right to Farm Act will pretty much prohibit any suburban or urban farmer from keeping a poultry microflock. I focus on poultry because it is my understanding that the changes will create a classification for suburban and urban residences that will disallow livestock. It is EXTREMELY rare that a suburbanite will have a goat, or a pig, or a cow, or a sheep, but increasingly likely that he or she might have a small coop with a trio of hens, or perhaps a rabbit or two. Agriculture is one of the foundations on which this country was built; it is also something that more and more Americans are returning to in light of the economic issues, as a way to sustain themselves and their families, as a way for their children to learn more about the stages of life and where food comes from, as a way to teach responsibility, as a way to provide their meals with a few eggs per day. For many, their hens are pets. For many, their chickens are breeding projects for 4-H. For others, they are calming influences, either for companions or as therapy birds, officially or unofficially. There are many, many reasons that people raise backyard microflocks. To take this ability, this right to farm away from the people of Michigan not only deprives suburban and urban Michiganders of their agricultural heritage, but this can also be construed as interfering with the right to a pursuit of happiness, which is one of the rights protected by the American Constitution.

Sincerely,

Ana Hotaling
17308 N. M-52
Chelsea, MI 48118

Wilcox, Rhonda (MDA)

From: hwde tar <hwdetar@gmail.com>
Sent: Wednesday, January 22, 2014 4:53 PM
To: Wilcox, Rhonda (MDA)
Subject: Proposed GAAMP Changes

Hello, my name is Hilton de Tar and as a citizen of Michigan I believe it is tantamount to the protection of domestic livelihood and human rights to maintain the integrity of the Michigan Right to Farm Act.

There are currently proposed changes to the GAAMP that I believe would corrode this integrity, and I ask you to please read the letter attached below which summarizes the major talking points that I and the author believe to be a threat to said integrity of the act:

F. Michelle Halley
Attorney
375 N. McClellan Avenue
Marquette, MI 49855
906-361-0520
michelle.halley@sbcglobal.net

January 21, 2014

Dear Members of the Michigan Commission of Agriculture & Rural Development:

I am writing on behalf of Michigan farmers who are acutely concerned about two proposed changes in the 2014 Draft Site Selection & Manure Management Generally Accepted Agricultural Management Practices ("Site Selection GAAMP"). These two changes would undermine the Michigan Right to Farm Act's protection for farmers.

As a small farmer myself and an attorney who represents small farmers, including those who can continue to farm thanks only to the Right To Farm Act, I assure you that small farms are critical to the financial and physical vitality of communities across Michigan. Small farmers form a vibrant portion of the overall community giving hands-on farming classes, providing goods to consumers and fueling lively farmers' markets. Small farms are bastions of teaching the next generation how to farm. The Right to Farm Act is lauded nationally as an act to emulate for the encouragement and success of farming. Farmers need you to protect its integrity. First, we oppose the adoption of language extending the reach of the Site Selection GAAMP to farms with even less than one animal unit:

Livestock Facility – Any facility where farm animals as defined in the Right to Farm Act are confined regardless of the number of animals. Sites such as loafing areas, confinement areas, or feedlots which have any number of livestock that preclude a predominance of desirable forage species are considered a part of a livestock facility.

2014 Draft Site Selection GAAMP, definitions. The addition of this definition would make the Site Selection GAAMP requirements applicable to the smallest of farms. Even a home with one chicken would be required to meet the setbacks of this GAAMP. This change would likely abolish any keeping of livestock, even flocks of less than a dozen chickens or one bee hive, in most urban settings because the setbacks would be difficult or impossible to meet there. We believe that this is unnecessary over-regulation that could be avoided by leaving the definition of "livestock production facility" just as it is, or at a minimum, making it applicable at a reasonable number of animal units.

Second, we oppose the changes throughout the Site Selection GAAMP that ban all keeping of animals in residential areas:

Category 4 Sites: Sites not acceptable for New and Expanding Livestock Facilities and Livestock Production Facilities.

Category 4 Sites are sites that are exclusively zoned for residential use and are not acceptable locations for livestock facilities regardless of number. Confining livestock in these locations does not conform to the Siting GAAMP.

2014 Draft Site Section GAAMP, p. 12. This change would subject every newly regulated "Livestock Facility" (again, just one animal would qualify) to local zoning restrictions. This change would preclude kids across the state from having even one animal for the county fair. Surely this is not your intent, but it would just as surely be a result.

This change gives the power to control where farming can and cannot occur to each city, township or village. This change is in direct conflict with the plain language of the Right to Farm Act:

Beginning June 1, 2000, except as otherwise provided in this section, it is the express legislative intent that this act preempt any local ordinance, regulation, or resolution that purports to extend or revise in any manner the provisions of this act or generally accepted agricultural and management practices developed under this act. Except as otherwise provided in this section, a local unit of government shall not enact, maintain or enforce an ordinance, regulation or resolution that conflicts in any manner with this act or generally accepted agricultural and management practices developed under this act.

MCL 286.474(6)(emphasis provided). The legislative intent of this amendment to the Right to Farm Act is obvious: the legislature intended that local zoning schemes not be able to dictate where or how farming could occur. In 1999, the Senate Agricultural Task Force recommended strengthening the Right to Farm Act in order to alleviate the impacts to farmers trying to comply with different zoning requirements all over the state. The report states regarding the state of affairs then, which is exactly what this proposed change would again create, that:

...The current situation of local control creates havoc. Under the current policy regime, 1,800 units of government determine land use policies and regulations. This is a prescription for confusion and frustration on the part of farmers, particularly those who have farmland in more than one unit of government. In order for agriculture to be successful, regulations concerning farming practices have to be consistent on a statewide basis.

1999 Report by the Senate Agricultural Preservation Task Force, p. 32. Returning to this state of affairs would be an immense step backward for agriculture of all sorts everywhere in Michigan. And, it is in direct conflict with the legislative intent and plain language of Michigan's Right to Farm Act.

In its first look at the RTFA, the Michigan Court of Appeals addressed the basis of the law:

The primary rule of statutory interpretation is to ascertain and give effect to the legislative intent. *Farrell v Auto Club of Michigan*, 148 Mich App 165, 169; 383 NW2d 623 (1986). The language of the statute is the best source for ascertaining this intent. *Great Lakes Steel Division of National Steel Corp v Public Service Comm*, 143 Mich App 761; 373 NW2d 212 (1985), *lv den* 424 Mich 854 (1985). From the language chosen by the act's drafters, we ascertain that the Legislature was concerned with the regulation of land use and its impact upon farming operations. This concern was directed towards regulations imposed upon farms by local government sources as well as private sources. MCL 286.474; MSA 12.122(4). The Legislature undoubtedly realized that, as residential and commercial development expands outward from our state's urban centers and into our agricultural communities, farming operations are often threatened by local zoning ordinances and irate neighbors. It, therefore, enacted the Right to Farm Act to protect farmers from the threat of extinction caused by nuisance suits arising out of alleged violations of local zoning ordinances and other local land use regulations as well as from the threat of private nuisance suits.

Northville v. Coyne, 429 NW. 2d 185,187; 170 Mich. App. 446, 448 (1988) (emphasis provided). The Court's interpretation leaves little room for doubt regarding the legislative intent of the RTFA and its proper interpretation. Even so, this interpretation was rendered prior to the 1999 amendment that mandated that the RTFA not be over-ridden by local ordinances.

To the extent that the Site Selection and Odor Control of New and Expanding Livestock Facilities GAAMPs changes purport to require compliance with local zoning, that portion of the GAAMP would be in direct conflict with the RTFA's specific and deliberate language to the contrary, MCL 286.474(6), and would be invalid.

Please contact me at (906) 361-0520 with any questions you may have about these comments.

Sincerely,

F. Michelle Halley (P62637)

c: Farm to Consumer Legal Defense Fund
Michigan Small Farmer Council

Thank you for your consideration.

Sincerely,

Hilton de Tar

Wilcox, Rhonda (MDA)

From: Mary Colborn <slugborns@msn.com>
Sent: Wednesday, January 22, 2014 2:05 PM
To: Wilcox, Rhonda (MDA)
Subject: Statement/Comment regarding Michigan Agriculture
Attachments: 20131219_151303.jpg; 20131219_162906.jpg; 20131219_162921.jpg; 20131219_162948.jpg; Pictures from phone 709.jpg; Pictures from phone 710.jpg

Hello,

I am unable to testify or comment in person, but wish to make a comment regarding my concerns. We own a nearly 60 acre farm in Allegan County. We have been working diligently to farm in a way that sequesters carbon and reduces carbon emissions into the atmosphere. We haven't received any federal or state funds to do our work.

However, we are concerned that many of our fellow farmers feel that they must destroy all the surrounding forest lands to have an advantage of one or two more acres or even feet of land to farm corn, soybeans and wheat. We have witnessed entire forests being pushed down and burned, which not only releases significant amounts of carbon dioxide into the soil, but the practice also removes valuable carbon sinks from our landscape and affects the amount of water retained in our aquifers. The forest pictured is off 118th St. in Allegan Township. I have already spoken with the Allegan township board and also the USDA office in Allegan. I was told that farmers see incentive in cutting down and burning their forests, that the "carrot," as one called it, leans toward putting ALL farmland in corn, soybeans and wheat.

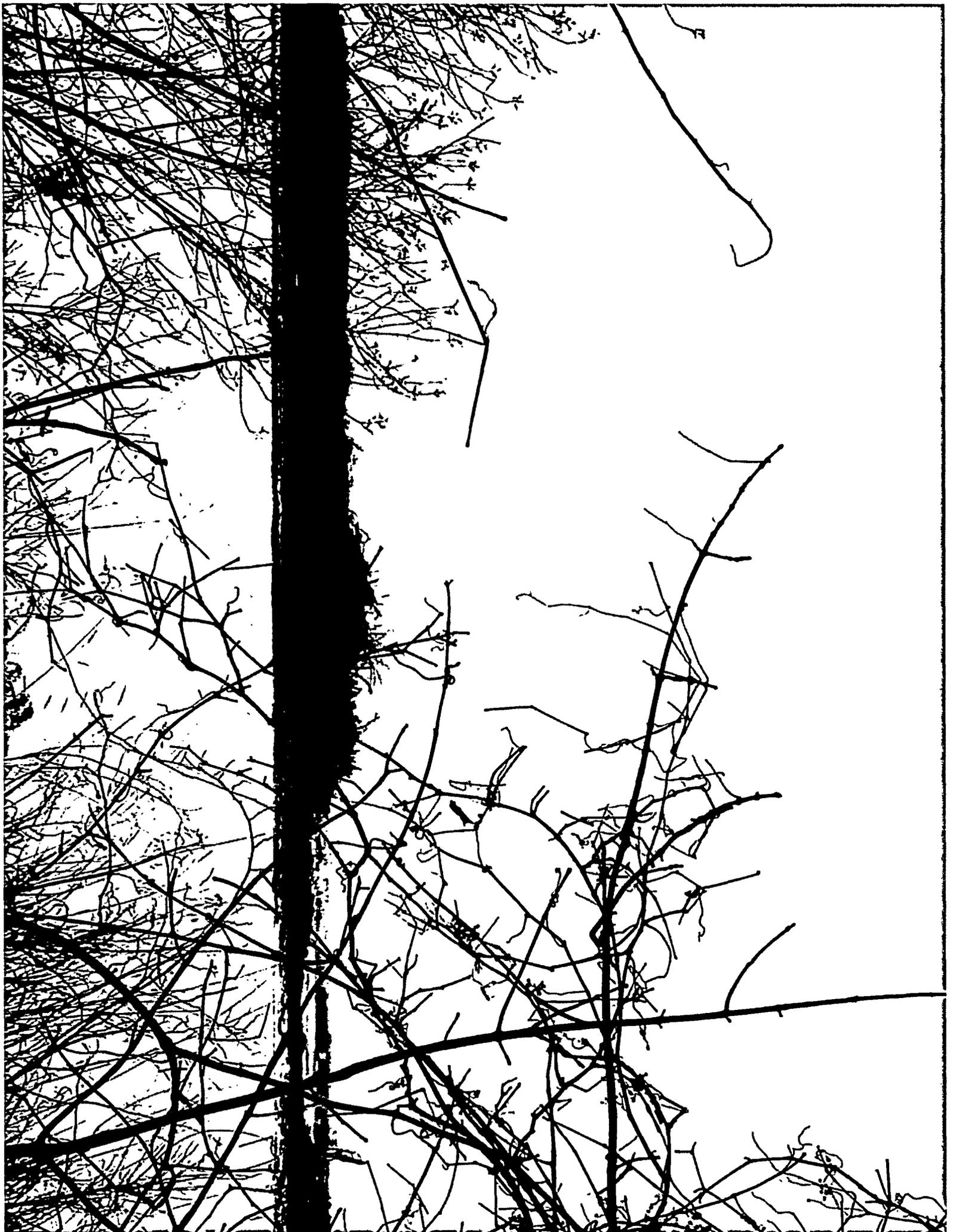
As organic, sustainable farmers this troubles us greatly. Not only because of the resulting blight to the landscape, but also because it is counter productive.

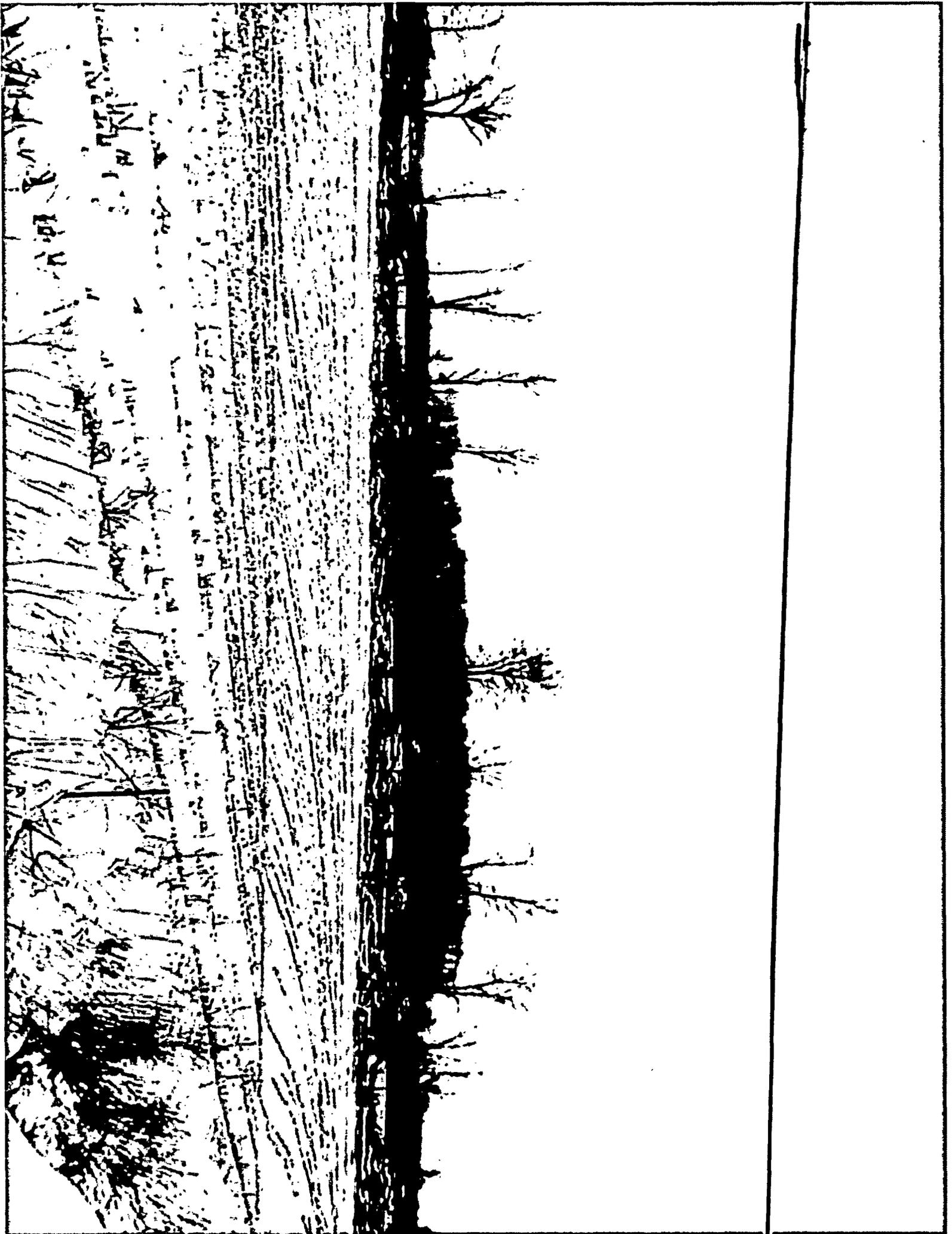
I have attached pictures of the forests being burned. As you can see, the trees are not utilized for anything practical - not for firewood for needy families and not for wood chips that can be composted. They are just pushed over and set on fire.

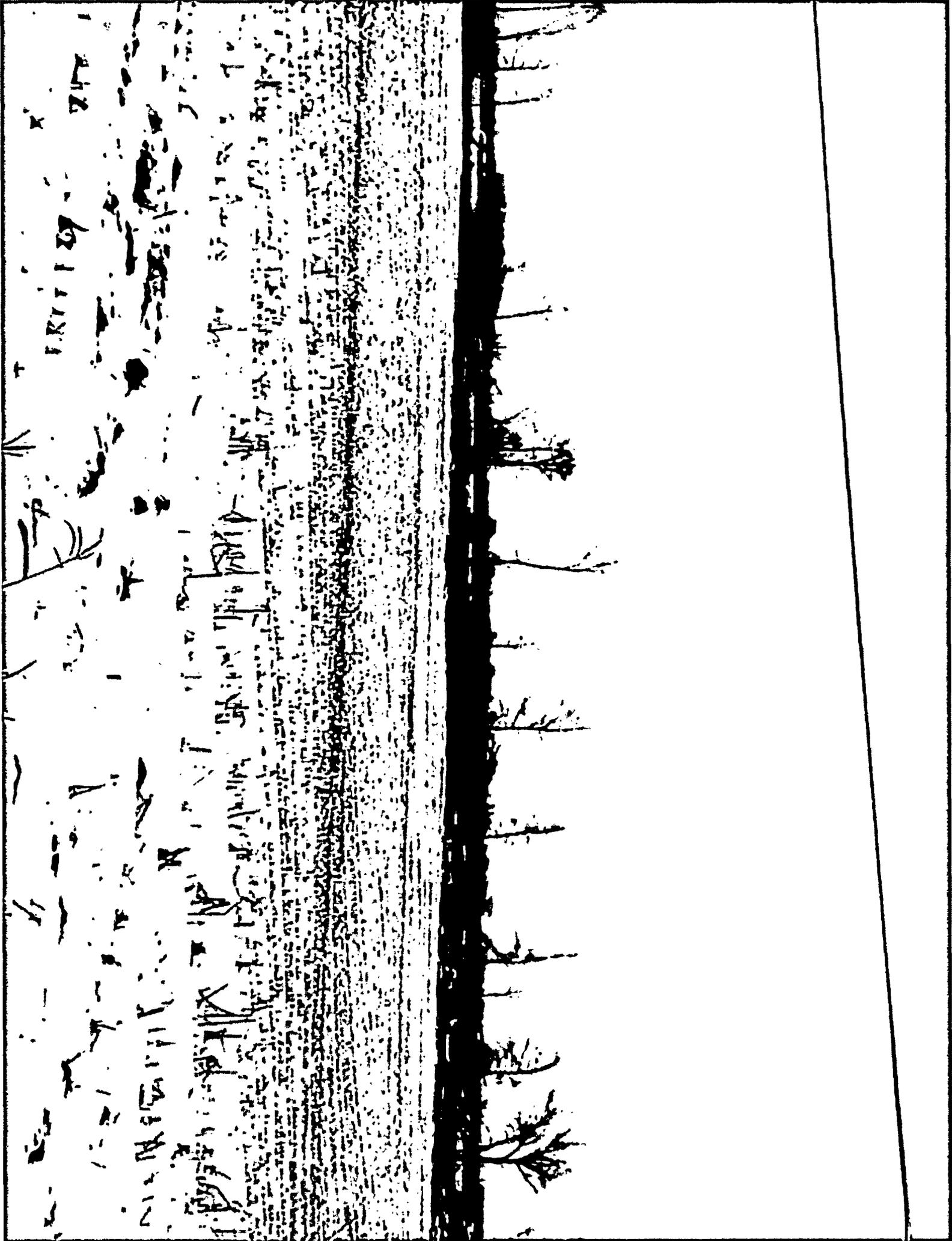
I understand how our farm funding works. I understand all too well that the incentives create situations that are in direct contrast to what is desired.

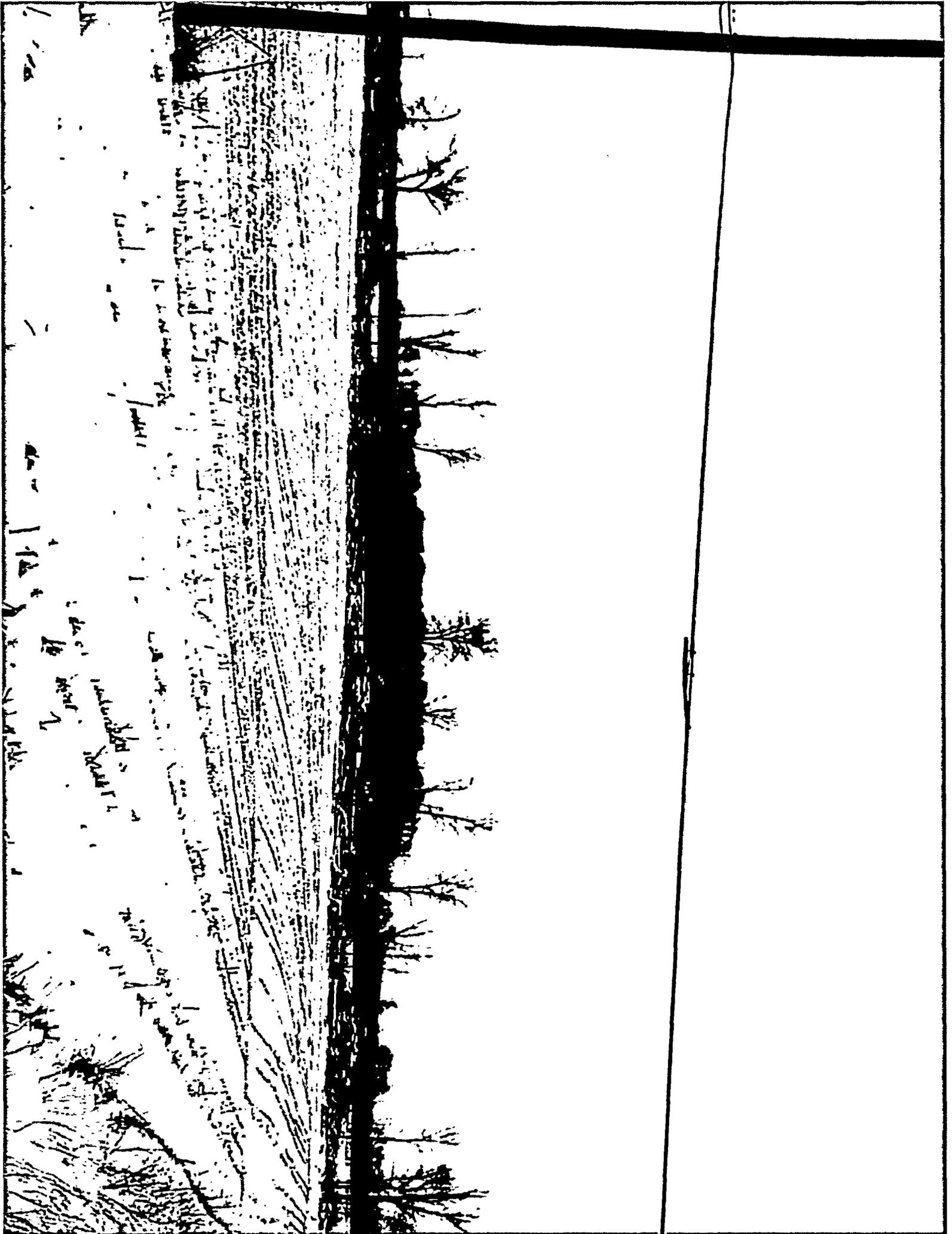
Please consider this a request to revisit farm land/forestry practices and advise us on how to stop this destructive practice.

Mary A. Colborn
2566 122nd Ave.
Allegan, MI 49010
(360) 621-0050

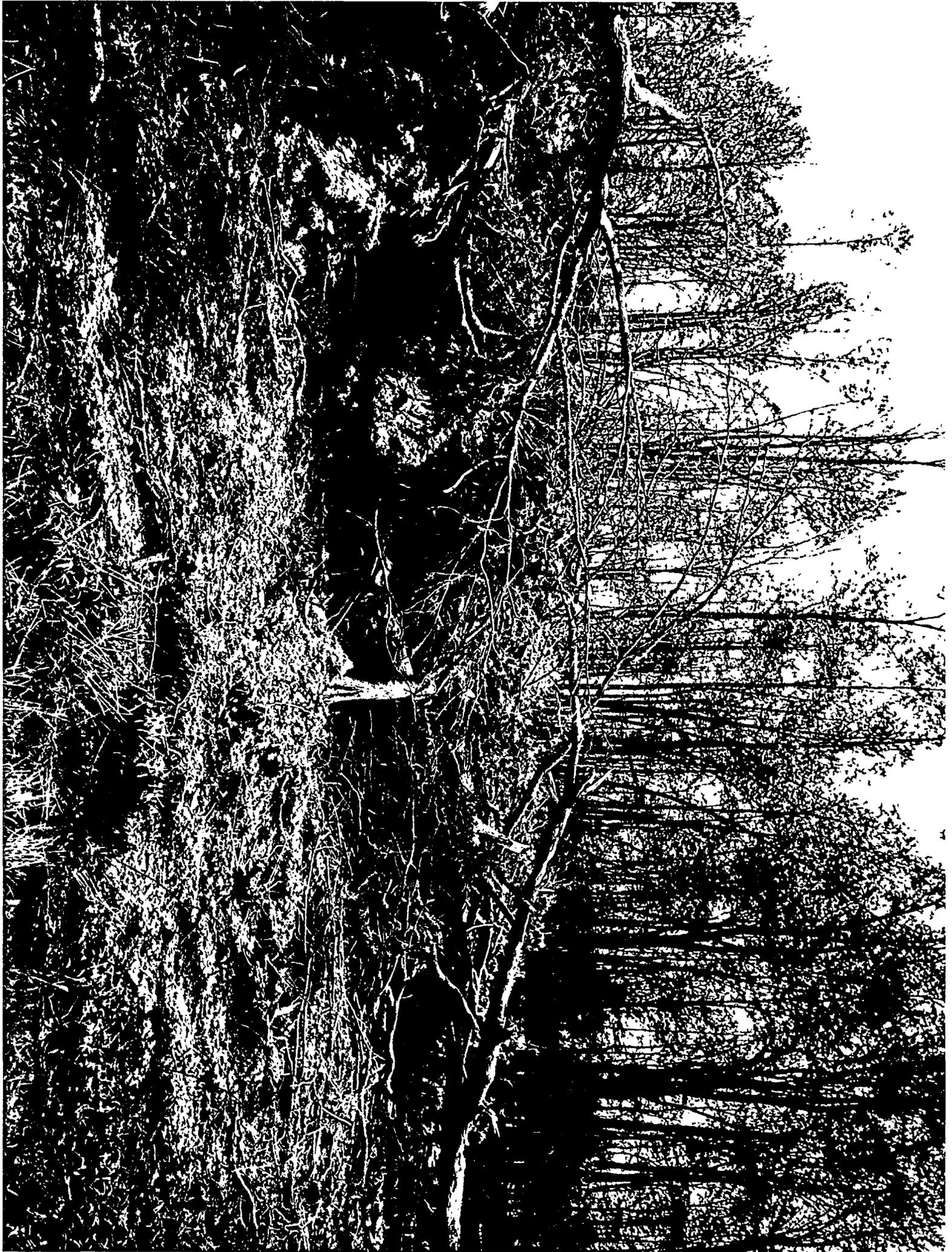












Wilcox, Rhonda (MDA)

From: Amanda Maria Edmonds <amanda@growinghope.net>
Sent: Wednesday, January 22, 2014 3:02 PM
To: Wilcox, Rhonda (MDA)
Subject: GAAMP Comment

Dear Michigan Agriculture & Rural Development Commissioners,

I am the Executive Director of Growing Hope, a nonprofit in Ypsilanti dedicated to helping people improve their lives and communities through gardening and healthy food access. We run four urban farmers markets-- in Ypsilanti, Wayne, and Westland, Michigan, and support near 100 vendors, many of whom are agricultural producers at small scales-- urban, suburban, and rural. We support this sector through offering training, connections, and resources for these producers to grow and sustain their agricultural businesses. Half of our vendors are low-income, making under \$25,000/year in household income, and relying on their small operations to meet basic needs. We also support urban farmers and gardeners throughout the state. We know that these farmers and gardeners are providing critical food for themselves and our broader community, and we've been able to make a big inroads into increasing healthy food access by supporting and growing this sector. Several years ago, we assisted in getting backyard chickens and bees legalized in the City of Ypsilanti, and advise other communities who contact us on how to do the same. We've also helped make ordinances changes that clarify how and where food can be grown in our city in ways that meet community food security needs, personal property rights, and public health and safety.

Additionally, I serve on the Michigan Food Policy Council and chair the healthy food access task force for the state, where we work to identify state-wide policy and administrative barriers to healthy food access in ways that are win-win for our agricultural sector and our citizens.

In reference to the proposed changes to the Site Selection GAAMPs for Livestock Facilities, please consider the following comments:

- 1) I do not support the change that livestock facility is now considered minimum of 1 animal. While I agree with the purpose of GAAMPs to ensure safe and respectful ag management practices, this would hinder the smallest of farmers-- specifically urban farmers-- with tiny production for themselves and/or selling things like eggs to neighbors or at neighborhood farm stands. Urban chicken keeping at a small scale has been found to be a non-issue for the most part across the country, from a health, safety, and nuisance standpoint.
- 2) I also do not support the new clause that sites with residential zoning are never acceptable for livestock facilities. Again, this may prohibit small or hobby farms (which for many growers provides critical household income, and has for decades) from current and future activities found to provide no nuisance to neighbors, water supply, or public health. This change could cripple some of our current market vendors whose zoning doesn't comply. It also keeps neighborhoods from being able to meet their own food needs-- the way many across the state have embraced without challenges through keeping, in particular, of a small flock of chickens or a few goats. I understand the need to consider appropriate scale for a given location, but an outright prohibition is a giant backwards step for our state, especially as communities across the country-- Cleveland, for example-- have become leaders in embracing appropriate allowance of urban livestock in win-win ways.

In general I don't think-- or hope at least-- that these GAAMP changes are intended to rule out urban food production including small numbers of livestock. I know that most urban chicken keepers are not registered as farms, but the continuum in our current world is fluid-- people keep chickens for themselves, sell a few to their

neighbors, join a local farm stand or farmers market (where of course we make sure they know and meet all requirements for how to keep and display eggs, other safety needs, etc), and potentially scale up on other properties after having tested their market. This is the trajectory we see over and over, and the way we're encouraging our next generation of farmers to join the sector that is otherwise losing people far too fast. If we cut off this pipeline, or discourage this activity in the state, so many of these (particularly) younger future farmers or small farmers will no doubt choose to leave the state for places where food security and growing is embraced and encouraged in safe, win-win ways. After so much progress here, that would be a real loss.

Amanda Edmonds
Executive Director, Growing Hope
Member and Healthy Food Access Chair, Michigan Food Policy Council
Vice-Chair, Washtenaw Food Policy Council

--

Amanda Maria Edmonds
Executive Director, Growing Hope
amanda@growinghope.net
734.330.7576

"We must be the change we wish to see in the world."

"To forget to dig the earth and to tend the soil is to forget ourselves."

-Mahatma Gandhi

Wilcox, Rhonda (MDA)

From: pariah tds.net <pariah@tds.net>
Sent: Wednesday, January 22, 2014 3:14 PM
To: Wilcox, Rhonda (MDA)
Subject: 2014 Proposed GAAMPs

Ms. Wilcox,

I am writing in regards to the proposed changes to the Michigan Right to Farm Act, that would strip away the legal protection of farms located in or near residential areas:

Thank you for hearing us out, Ms. Wilcox, in what I assume is a very heated subject.

I live in Grand Rapids where I operate an urban farm. A farm where we are hoping to be able to add three to four chickens.

Officially, owning livestock has been illegal in Grand Rapids. Unofficially, there is a moratorium on prosecuting urban farmers until the city comes up with their own guidelines for urban agriculture. But from what I hear, with a few exceptions, most people running the city have no idea what goes on in urban farms or small hobby farms. They wonder what happens with "all the sewage" that would potentially come from my property. However, when properly raised there is no sewage. They have a myriad of other concerns, such as pesticide use, etc., that shows their total ignorance of the purpose of small farms. Jim Johnson, who is behind these new GAAMPs, also shows total ignorance when arguing these new proposals. For instance, 4999 chickens in someone's backyard is something that simply doesn't happen, and I don't think Johnson can come up with one example in real life that even comes close to that. I've personally visited many small urban farms and have been amazed at not only cleanliness and lack of odor but the care and compassion that goes into maintaining it.

Most urban farms and hobby farms are revolutionizing the way farming has been done over recent decades, and they are returning to organic practices, as well as more humane ways of raising livestock, which usually means fewer animals over a larger space. There is a market for this local food as more people choose to eat organically grown products and animal products from humane sources.

These proposed changes in the GAAMPs would not only limit consumers' choices at the checkout, but they would discourage small farms, and therefore small businesses, which are becoming a burgeoning industry in the state, as well as limiting our individual freedoms and restricting our property rights. I find it ironic that we are allowed to "stand our ground" when it comes to fighting crime, but the trend is to not allow us to "stand our ground" when it comes to the freedom to produce food in a safe and humane manner on our very own property. This, in my opinion, should be an inalienable right.

To tell people to move further into the country is not necessarily the answer either. Most farms, regardless of size, usually rely on another source of income, and these jobs usually require people to be near urban areas. Also, the customers that keep these farms viable live in the urban and suburban parts of the state. Requiring people to reside further on the outskirts would, for all intents and purposes, kill small farms. I know it is up to the individual municipalities to create their own laws regarding agriculture, but knowing that the laws could change, or that one's agricultural property could be zoned residential without warning would discourage people from investing in urban or suburban areas in the first place.

I rely on the Right To Farm Act to protect me and my way of life. It is the one foothold in an otherwise slippery

slope of ignorance and corporate control of agriculture, and one of the many reasons I am proud to live in Michigan, and extremely honored to be part of the growth of urban farms in Grand Rapids.. I propose that no changes be made to the GAAMPs until local governments are up to speed on some of the great things that are happening in urban agriculture and small farms in Michigan. Thanks for hearing me out, and please visit your local farm!

Sincerely,

Kathy Fitzpatrick

Wilcox, Rhonda (MDA)

From: Pamela Dusci <pameladusci@yahoo.com>
Sent: Wednesday, January 22, 2014 3:14 PM
To: Wilcox, Rhonda (MDA)
Subject: Right to Farm Act
Attachments: State of Michigan.docx

To: Rhonda Wilcox WilcoxR2@michigan.gov.

Re: Right to Farm Act

From: Eric A. Dusci, c/o Dusci Farms, LLC.

Date: Wednesday, January 22, 2014

Dear Ms. Wilcox,

I write to you regarding two issues; the first being the new proposal to the Michigan Right to Farm Act (MRTFA) regarding suburban, hobby farms; the second being regarding GAAMP's.

- 1) With regards to the first, I oppose this change. I have seen over the many years my area (Kimball Township) change from 80% agriculture to almost 20% agriculture. I have seen new ordinances come about that are now inhibiting my farming practices, practices that my family has used since 1974 when we purchased the land. While it may sound like a "conspiracy theory" but, as we have seen in time past, it is only a matter of time before government (federal, state, county, local/township) uses those rules to force me either to retool (at my cost) or sell. We oppose this new rule change.
- 2) With regards to the second, we have used a practice in clearing our fields in which we remove the brush and pile it up. We then do a controlled burn; this is after taking, since 1974, the proper precautions, such as having water available, considering the wind, drought level, etc, etc, etc. Recently, however, since Kimball Township has become more "suburban" we have seen new ordinances enacted, including the requirement to purchase a permit to open burn. The requirement to purchase a permit not only requires me to spend extra money to conduct my farming operations, but does not (the purchase of the ordinance) protect me from lawsuit if a forest fire begins (which is what I am told the permit is for).

Madam, I do not know if open burning is a protected practice under the GAAMP's or not. If so, would you please direct me to where I can find this; if not, I respectfully request that this practice, which I know I am not the only farmer who does this, be added to the GAAMP's forthwith. (I can be contacted at Dusci.Farms@gmail.com or 810-488-9562.)

The aforementioned two issues are of deep concern to me as a commercial hops farmer. I thank you for taking my concern before the board, as I am presently out-of-state on business.

Respectfully,

Eric A. Dusci, Dusci Farms, LLC.

Cc. Jennifer Holton (holtonj@michigan.gov)

Wilcox, Rhonda (MDA)

From: Monica King <mkingmsw@aol.com>
Sent: Wednesday, January 22, 2014 9:58 AM
To: Wilcox, Rhonda (MDA)
Subject: GAMMPS , Michigan Right to Farm

Dear Ms Wilcox,

I've been very involved in Southeast Michigan for over 10 years working on a grassroots level with others to help people feel empowered and more secure in uncertain economic times. One important area has been eating healthy food & food security, and engaging people in urban areas to reconnect with their land and food in the ways our grandparents did ~ with some knowledge and greater awareness of how to provide for oneself via gardens, locally grown food, bees and other small scale urban appropriate animals ~ such as rabbits and chickens.

This seems to be good for everyone, particularly kids. Being connected with your land, community, knowing the plants, how the soil works and produces gardens, how small animals and bees help with the garden - these are all grounding for kids and families to learn and be involved in.

This is so important for a sense of security and resilience in communities, it has also opened up the door for some new local livelihoods, for which there is also great need, as people are hard pressed. The cities have passed responsible and supportive ordinances as they see the need for this. People have reskilled, and are able to stretch their money a bit more, and it has as well gotten people more interconnected as community.

Why on earth your new proposed legislation under the "Right to farm act" would aim to restrict and bar this is beyond me. It seems like the kind of changes made with "Right to work", or calling missiles peacekeepers. Communities have worked long and hard to develop these new skills and capabilities in responsible ways ~ who would it possibly benefit to have everyone completely dependent upon the industrial food system and to squash these local efforts to be able to some degree provide for oneself and neighbors in this way ~ very much what was once quite typical in our grandparents time ~.

I wanted to express to you my strong concern and objection to these restrictions on activities that are allowed under local ordinances, and to which people in their communities have given long thought and good responsible efforts.

It would also be nice to know the source of this new effort to change existing law, and create new stipulations that would undermine the wonderful things that have been happening in our communities.

Best,

Monica King
Monica King LMSW, ACSW
Psychotherapist



Office ~ 218 N. Fourth # 211 ~ Ann Arbor, MI 48104 ~ Ph (734) 435-9196

<http://www.counselinginannarbor.com/>

[Linked In profile](#)

Wilcox, Rhonda (MDA)

From: Missy <migreenthumb@yahoo.com>
Sent: Wednesday, January 22, 2014 10:36 AM
To: Wilcox, Rhonda (MDA)
Subject: Changes to GAAMPS

Hello-

I don't normally get involved in writing letters and publicly speaking my mind, but this issue is very dear to my heart, and I felt that I should at least share with you why.

Seven years ago, after my husband was deployed to Iraq, I lost our house in the city and had to move back home with my parents. It was upon returning home that I started a garden and got a few chickens to keep on their large bit of land, as a way of supplementing my groceries, which I now had very little money for. I had grown up in 4-H, so being around animals was not new to me, but for some reason this time was different. This time I new I wanted to farm and help people with less money get access to good food. Farming became my full time goal. My husband returned home and we rented a small forgotten farm now zoned residential, so I could pursue my goal. I started a 1/2 acre market garden and a 5 member CSA and got a few more chickens. I also rented a local greenhouse during the winter months to grow year round, and started selling to chefs and restaurants. Within 2 years I had outgrown the small farm. On one of my trips out to the greenhouse I was renting, I found what would be our new farm. Just under 30 acres, 300 apple trees, a wash/pack, barns and it was zoned agricultural. I could finally apply for the special beginning farmer programs with the USDA and NRCS, because now I would be a "real" farm. We are now working on our MAEAP verification and participating in other programs with NRCS and Michigan Farmers Market Association. We even applied for a loan for a high tunnel through the Hoop Houses for Health project, our CSA is up to 20 members and we are looking to add a second market this year. We also participate in EBT and Double Up Food Bucks at our market, fulfilling my original goal of helping low income families have access to good food.

Last year I had an intern, a stay at home mom with a similar goal for her urban farm. This year she will be returning as an intern but she won't be alone. I also have another girl who has been inspired by the local food movement and will be interning with us this year. It's my hope that these women will become future farmers and maybe one day be a few booths down from me at market.

We have so many great plans for our farm to keep growing and contributing to the State and I feel like my story is one of success so far.

But I wouldn't have got going at all, not even one foot in the right direction, if I hadn't started small in my parents backyard. If I hadn't been allowed to have the chickens I needed to be able to have eggs to take to market and put in my CSA shares, I know I wouldn't be here yet. You see, when I started at the farmers market 3 years ago, only one farmer offered eggs. My market didn't necessarily want or need another veggie producer, but they wanted and needed eggs. I have brought eggs to every market since. So deep down, I can say without fear of exaggeration, that without those few chickens, I wouldn't be here yet. Maybe someday I would have gotten here, but not with out that market, and not as quickly as I have.

Our state has always had the BEST farmer friendly Right To Farm laws in the country. Changing these few things may not seem like a big deal, they may seem like a stream line way of stopping future RTF issues in urban lots. But it very well could end up being the end of someone's farming career, before it even gets started. Have you looked at the surveys lately on the demographic of aging farmers? Where are we going to find farmers to replace them? They have to be able to start small, maybe in back yards or in cleaned up city plots in Detroit, but they have to have our protection to grow, the protection the Right To Farm laws give them, if they are to be successful and become that big farmer we are all going to need them to be. Most of those new farmers coming up are women. Women with kids, who's husbands work outside the home, who aren't going to be able to leave the kiddos at home while they go off and learn how to become farmers on a big farm somewhere. They have a better chance at success, a better chance of growing, if they can start at home, with the kids playing in the yard or right next to them in the garden or chicken coup.

Please, leave GAAMPS as they are. Please honor the legislation that has already been in place and is what the people want.

Thank you for taking the time to read my story and to consider my thoughts.

Missy VanWormer
Toad Hall Farm &
MI Green Thumb CSA