

# IT BETTER BUG YOU: STOPPING THE INSECT ARMAGEDDON



Clarion Associates, LLC

Chris Duerksen

[cjduerksen@aol.com](mailto:cjduerksen@aol.com)

# INSECT ARMAGEDDON

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- Decline In Pollinators Like Honey Bees Troubling—But Just Tip Of Iceberg
- Monarch Butterfly Plight Is Cautionary Tale



# INSECT ARMAGEDDON: WHAT, ME WORRY??



- 10 QUINTILLION INSECTS ON PLANET
- INSECTS MAKE UP 80% OF ALL ANIMALS
- THEY ARE ANNOYING CRITTERS



# INSECT ARMAGEDDON: WHY WORRY??

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- WINDSHIELD EFFECT
- 76% DECLINE IN FLYING INSECTS IN GERMAN NATURAL AREAS
- 80% DECLINE IN NEW HAMPSHIRE BEETLES
- MAYFLY DECLINE BY 50% SINCE 2012 IN UPPER MIDWEST





# INSECTS: FIVE CRUCIAL ECOSYSTEM JOBS

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- POLLINATORS
- PROVIDERS
- PEST CONTROLLERS
- DECOMPOSERS
- SOIL ENGINEERS



# INSECT ARMAGEDDON: WHAT'S BEHIND THE CRISIS

- CLIMATE CHANGE
- FARMING/RESIDENTIAL PESTICIDE USE
- HABIT LOSS TO AG/DEVELOPMENT





# INSECT ARMAGEDDON: WHAT CAN LOCAL GOVTS DO?

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- PROTECT/RESTORE HABITAT
- PHASE OUT PESTICIDE USE
- PROMOTE COMPACT DEVELOPMENT
- ADDRESS CLIMATE CHANGE
- LEAD BY EXAMPLE

# Key Elements of a Successful Local Bug Protection Program

**LESSON #1: NEED A WELL-ROUNDED IMPLEMENTATION STRATEGY.**



**“If the only tool you have is a hammer, everything begins to look like a nail”—Mark Twain**



# Key Elements of a Successful Local Bug Protection Program

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- PLANNING
- ACQUISITION/  
FUNDING
- RESTORATION
- EDUCATION/LAND-  
OWNER OUTREACH
- LEAD BY EXAMPLE
- REGULATORY

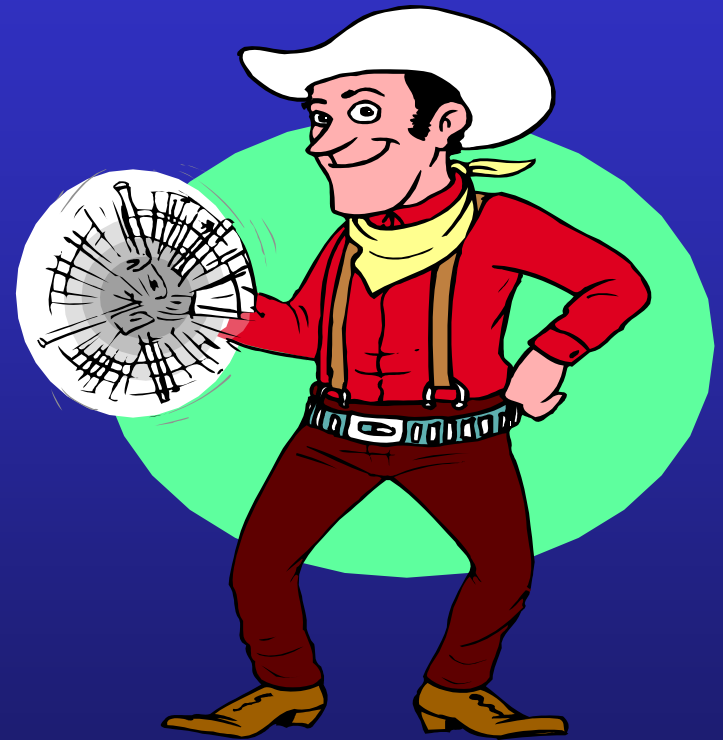


# Key Elements of a Successful Local Bug Protection Program

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## REGULATORY:

“In the West, a six-shooter  
and a smile are more  
persuasive than a smile  
alone” --Teddy Roosevelt





# Key Elements of a Successful Local Bug Protection Program

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- Remove Regulatory Barriers
- Create Regulatory Incentives
- Enact Protective Regulations

# REMOVE REGULATORY BARRIERS

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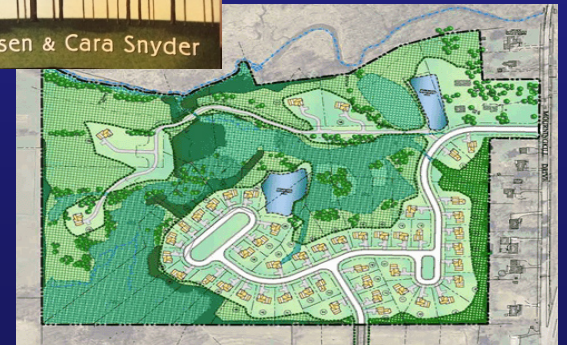
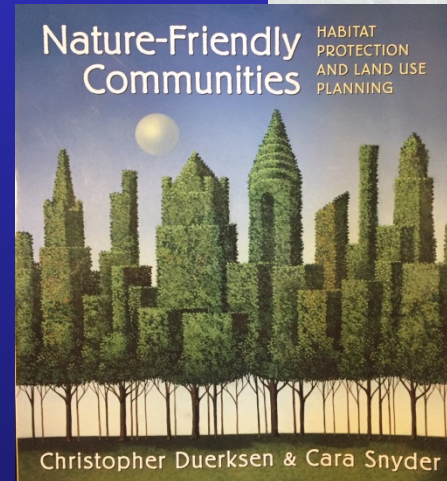
- ALLOW BEE KEEPING IN RESIDENTIAL AREAS
- COMMUNITY GARDENS AS PERMITTED USE
- ALLOW FRONT-YARD VEGETABLE GARDENS





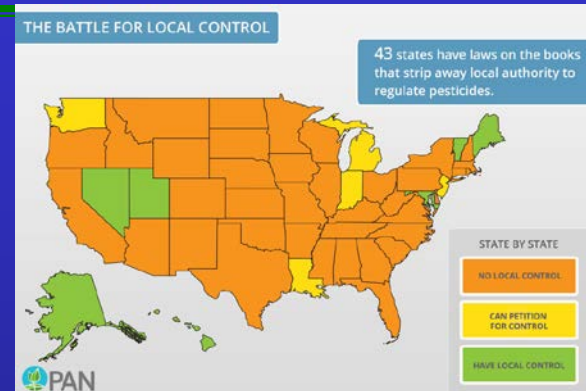
# CREATE REGULATORY INCENTIVES

- OFFER DENSITY BONUSES FOR INSECT-FRIENDLY LANDSCAPING IN REQUIRED OPEN SPACE
- PROMOTE CONSERVATION SUBDIVISIONS IN RURAL AREAS



# ENACT PROTECTIVE REGULATIONS

- REQUIRE REDUCED USE OF PESTICIDES IN LANDSCAPED AREAS.
- FORBID EATING OF BUGS.
- REQUIRE USE OF POLLINATOR-FRIENDLY VEGETATION.
- SPECIFY INSECT-FRIENDLY BUFFERS ALONG RIPARIAN HABITAT AND AROUND STORM-MANAGEMENT DETENTION AREAS



# IMPLEMENTATION

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DIFFERENT STROKES FOR  
DIFFERENT FOLKS—TAILOR TO  
COMMUNITY SIZE, ENVIRONMENT,  
POLITICS

