Appendix G: Introductory Text
Conservation Band-Aids or Real Watershed Changes

If your city or county is subject to flood issues, if your city's water and sewer rates continue to climb because of increased regulation, you have the justification and political capital to become involved in and change why those things are happening to you.

This presentation will introduce crops and cropping systems which will mitigate future flooding and non-point ag pollution (the reason for your increased water and sewer rates) without sacrificing food and manufacturing needs.

We will introduce a language and contextual story many people may not be familiar with concerning descriptions of: why confinements and feedlots pollute; modern floods and their ag origins; the drought; non-point pollution and the "Iowa Nutrient Reduction Strategy"; the link between food and fracking; and, the very important revitalization of rural America.

These descriptions will be followed by a prescription for creating a non-polluting, biologically benign and beneficial, soil building agriculture (re-perennialize agriculture) which would mitigate many of the described problems. The descriptions of the problems may be different, but since they are all industrial ag related, the prescription for solving them is the same.

After this presentation, you will be able to use this language and contextual story to understand and discuss, or become involved in, these issues. And, you can use your city's and county's political capital to help create a new clean and healthy agriculture.

This presentation is an abridged and modified version of our two original presentations about the unintended consequences of CAFO's and a watershed approach to floods. In this presentation we have introduced non-point ag pollution reduction (fecal material, nitrates, and phosphorus, etc.) as a third major focal point.

The intensive, petro-chemical, fossil fuel based model of farming produces pollutants – nitrogen, phosphorus, eroded topsoil, and toxic waste from confinements and feedlots – that have made Iowa a toilet for industrial

agriculture. But the rest of society, as rate payers of water and wastewater treatment systems, and as people who live with the health effects of this pollution, bears the cost of what this industrial Green Revolution agriculture considers "externalities." Do we need an agriculture that pollutes in order to feed ourselves and supply our manufacturing goods? No.

Pollution reduction is attained by using crops and cropping systems that exist today which don't need industrial fertilizers, herbicides or pesticides, that don't need to be worked up every year, hold water and soil on the land, and still meet our food and manufacturing needs.

The much ballyhooed but useless "Iowa Nutrient Reduction Strategy" is needed only if we assume we will continue with this corn – beans – confinement – feedlot model of agriculture. We have a choice; continue with this inherently polluting, soil losing, petro/chemical/industrial agriculture; or, switch to a non-polluting biologically benign and beneficial, soil building agriculture.

The political process could help make that choice. Cities and counties can use their political capital to push for changes in the farm bill to promote sustainable cropping systems (re-perennialize agriculture) – rather than policies that encourage all-out commodity production and subsidize clearing of fragile lands.

What is new about our approach is that we are taking this directly to cities and counties whose people, through flooding and polluted rivers, are affected; and, who have political capital to spend on correcting that problem through changing the farm bill.

Listening to the public conversation, you would think non-point nutrient reduction is complicated. It is not. But, most of the conversations today are descriptions of the problems. Our conversation goes beyond describing and is a prescription for solving the problems.

Our request is that you work to change the farm bill. Most farmers have to farm the farm bill in order to make money. Change the farm bill and you will change agriculture. Change agriculture and you will change flooding and pollution.

We know that the two pollutants most responsible for our surface waters being classified impaired are phosphorus and nitrogen. And, we know that the majority of those pollutants come from agricultural practices.

The Great Lakes were becoming much cleaner 20 years ago in part because of the elimination of phosphorus from detergents. But, 10 years ago scientists noticed that the lakes were once again seeing new and expanding dead zones.

The only obvious difference in the watersheds was the introduction of no-till cropping. It turns out there is a form of phosphorus, dissolved reactive phosphorus, coming from no-till acres that washes off fields and into the lakes. Yet, no-till is considered a conservation measure.

It is known that nitrogen has always been in our rivers. Before World War II, most nitrogen in our waters was from animal and green manure, which had to break down before it could be used by plants. With the Green Revolution and industrial fertilizers, however, that nitrogen is in the form of nitrates, which are readily available to algae and other plants. This nitrate nitrogen, unlike organic nitrogen, leads directly to the algae blooms and other problems we see in our surface waters.

Research tells us that prior to sod-busting in the 1830's, rain and snow stayed on the land where it fell because of the sponge-like landscape of prairies, savannahs, forests, and wetlands.

There was a spring melt consisting of 10% of the year's total rain and snow amount. But that happened over days and/or weeks. The melt's volume was 3 to 4 inches of the annual rainfall of approximately 36 inches, and instead of flooding, the spring melt gently raised river volumes for a short time.

This presentation is about adopting crops and cropping systems that exist today that will, to the extent possible, recreate that sponge landscape (re-perennialize) without sacrificing our ability to feed ourselves and provide for our manufacturing needs.

The pillars of our prescription are:

a. edible perennial prairie grains – no chemicals, no runoff, no erosion, no yearly tillage, builds soil;

b. strips of perennial native prairie in all annual fields – 10% in strips stops 95% of soil erosion, builds soil;

c. prairie and grass based animal farming – no chemicals, no runoff, no erosion, builds soil;

d. industrial hemp – cover crop, no chemicals if used in crop rotations, used with strips, provides food and fiber, replaces many oil based manufactured products;

e. small grains, fruits, and vegetables – used with strips.