

### REDUCING YOUR ENVIRONMENTAL FOOTPRINT WITH SOY BIOBASED PRODUCTS

Chris Case, NPS (Retired) and USB Biobased Consultant



#### **Biobased Products**

- -Products made from biological materials, including renewable agricultural, forestry, and marine materials.
- -One source of these materials is **soybeans**; others are corn, sugar cane, plant residues, wood, etc.
- -Food products are excluded







### How large of an environmental footprint will <a href="mailto:my">my</a> actions leave today?











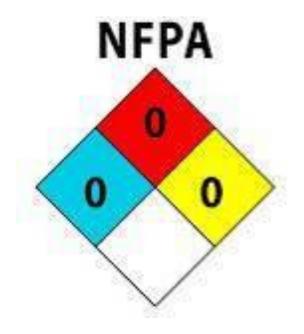


#### **How Low Can You Go!**

### **HMIS**



- 4. Severe Hazard
- 3. Serious Hazard
- 2. Moderate Hazard
- 1. Slight Hazard
- 0. Minimal Hazard



Get those numbers down

**Try to Zero Out** 



### **Custodial and Cleaning Products**

Wide variety of products available that PERFORM!





There are products available that will work for you!



### Fleet Operation There's more to greening a vehicle than just Fuel!





Biobased Fluids, Greases, Oils & lubricants







#### **Shop Operations**

#### Also consider GREENING Fleet Maintenance Activities



**Bio Penetrating Fluid** 

- Penetrates between threads
- High flash point
- Low evaporation
- Residual lubrication
- Water displacing



**Bio Parts Cleaning Fluid** 

- Performance equal to petroleum solvents
- Low VOC and health hazard
- 300 degree flash point



Bio Hydraulic Fluid

- -Equal performance to petroleum Hydraulic fluid
- Reduced impact in event of leak



#### **Grounds Maintenance**

"Green-Up" taking care of your green areas











### **Paints, Coatings, Strippers and Sealers**

#### Low VOC's and exceptional performance



Paints and Stains







**Paint Removers** 

Mastic Removers

Concrete Sealers



### Biobased Roof Treatment - Restores Shingle Flexibility and Extends Roof Life 5 + Years

#### Restores Shingle:

- Pliability
- Granule Adhesion
- Permeability Resistance
- Hale Impact Resistance





### Plywood made with Soy-Based Formaldehyde- Free Adhesives



Shelving



Veneer-Core hardwood plywood panels



Cabinets



### **Spray Foam Building Insulation** with Soy and Recycled Plastic





Heatlok Soy 200+





### **Soy Backed Carpeting**

Replaces more than 90 percent of the petroleum-based polymers



Hyatt Hotels

### Yellowstone Line with Recycled Plastic



Yellowstone and Grand Teton National Parks



10% + of USAF Qtrs.



### Artificial Turf with Soy Backing and Recycled Material



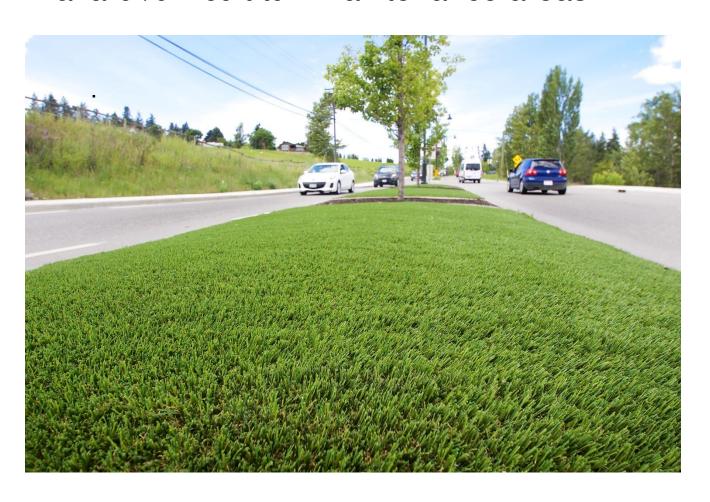








### Soy backed artificial is turf a popular alternative in high hazard /difficult turf maintenance areas





#### **Road Construction & Pavement Preservation**

**Adding Longevity to Asphalt Roads with Biobased Products** 



Pavement Marking Paint



**Pavement Seal Coating** 



Soy Oil Additives mixed for Pavement Construction



### Pavement Sealing with Biobased Asphalt Preservation Coating

- Reverses oxidization
- Reduces moisture penetration
- Goes on easily
- Cures in about 30 minutes
- No need to restripe
- It's affordable





### Biobased Pavement Marking Paint Premium performance from a sustainable source



- Excellent durability
- Superior color retention
- Low VOC's
- Quick, easy application
- Applys to all types of pavement
- Excellent shelf life



#### **Soy Oil Now in Goodyear Assurance Tires**



- Replaces 60% of Petroleum Oil in Tire
- Better Flexibility at Low Temperatures which Improves Traction
- Improves Manufacturing Efficiency & Energy Use



### **How to Find Biobased Products**

### **USB** Website

https://www.soybiobased.org

### **USDA BioPreferred<sup>SM</sup> Program Catalog**

https://www.biopreferred.gov



## How much can I reduce my Environmental Footprint?





# Thank You For Your Efforts How can the USB and I help?

Chris V. Case

**Biobased Coach** 

chrisvcase@gmail.com

(906) 553-2511