Soil Sustainability "Wrap-Up" and Water Sustainability

Sustainability Workgroup

October 25, 2010

Agenda

- Soil Sustainability Principles and Criteria Draft
- Forest
  - Water quality
- Agriculture/Waste
  - Water quality, quantity, rights
- Biofuel Production
  - Water quality, quantity, rights

Soil Sustainability Principle

- Soil quality is maintained or improved by minimizing erosion, enhancing carbon sequestration, and promoting healthy biological systems and chemical and physical properties.

Soil Sustainability Criteria

Operators should ensure that:

- A good practices management plan should be implemented that includes practices that prevent or reverse degradation over the long term;
- Soil quality is maintained or improved;
- Erosion is avoided;
- Soil is conserved;
- Soil productivity is maintained or improved;
- Field travel zones or paths are limited;
- Nutrient levels of soil or plants and soil are monitored and assessed;
- Biomass production or collection will not destroy or damage large above or below ground carbon stocks; and
- None of the chemicals recorded in the WHO's 1a and 1b list should be used.

Discussion on
Soil Sustainability

Water Sustainability Principle

- Water quality and quantity should be maintained or improved, while respecting water rights and complying with all applicable laws and regulations.

Forestry and Water Quality

- Written plans should be prepared and implemented to protect water resources.
- Surface and groundwater quality should be maintained or improved.
- Forest management should conserve water resources, which will help maintain ecological functions and the integrity of the forest.

Forest, Water Quality, and Ecosystems

- Written plans should be prepared and implemented to protect water resources.
- Natural vegetation areas around springs and along natural watercourses are maintained or re-established.
- Preserve or enhance the functions and services of aquatic ecosystems.

Forest, Water Quality, and Chemicals

- None of the chemicals recorded in the WHO's 1a and 1b lists should be used.
- If chemicals are used, proper equipment and training should be provided to minimize health and environmental risks.
- Chemicals, containers, liquid, and solid non-organic wastes, including fuel and oil, should be disposed of in an environmentally appropriate manner at off-site locations and in compliance with federal and state laws.

Agriculture and Water Quality

- Written plans should be prepared and implemented to protect water resources.
- Surface and groundwater quality should be maintained or improved.

Discussion on
Water Sustainability and Forestry

Agriculture, Water Quality, and Chemicals

- Recommendations for application of fertilizers are given by competent, qualified persons.
- None of the chemicals recorded in the WHO's 1a and 1b lists should be used.
- If chemicals are used, proper equipment and training should be provided to minimize health and environmental risks.
- Chemicals, containers, liquid, and solid non-organic wastes, including fuel and oil, should be disposed of in an environmentally appropriate manner at off-site locations and in compliance with federal and state laws.

Agriculture, Water Quality, and N&P

- Operations use a gate nitrogen budget to balance nitrogen entering and leaving the operation with a minimum amount of residual nitrogen left, or adopts a comprehensive set of conservation practices.

- Operations adopt a comprehensive set of conservation practices that address phosphorus management if fertilizer, sludge, or manure is applied.

- Operations take steps necessary to achieve a score of low or medium risk on the NRCS Phosphorus Index.

Agriculture and Water Quantity

- Irrigation and water management practices should not contribute to the depletion of surface or groundwater resources beyond replenishment capacities.

- Operations should include a water management plan which aims to use water efficiently.

- When irrigating, there is documentation that best practices are being used and can be measured in accordance with applicable laws and regulations

Agriculture and Water Rights

- Operations should respect prior formal or customary water rights.
- Operation uses water for irrigation which they held legally valid water rights before commencement of biomass production, or rights that have been subsequently acquired through legal means.
- The producer can justify irrigation in light of accessibility of water for both human consumption and conservation.

Discussion on
Water Sustainability and Agriculture

Fuel Production and Water Quality

- Operations should maintain or enhance the quality of surface and groundwater resources.
- Natural vegetation area around springs and along natural watercourse are maintained or re-established.
- Chemicals, by-products, containers, liquid, and solid non-organic wastes, including fuel and oil, should be disposed of in an environmentally appropriate manner at off-site locations and in compliance with federal and state laws.

Fuel Production and Water Quantity

- Operations should include a water management plan which aims to use water efficiently.
- Operations should maintain and enhance the quantity of surface and groundwater resources.
- Operations should not contribute to the depletion of surface or groundwater resources beyond replenishment capacities.

Fuel Production and Water Rights

- Operations should respect prior formal or customary water rights.
- Operations should respect the existing water rights of local and indigenous communities.
- The producer can justify water use in light of accessibility of water for both human consumption and conservation.

Discussion on Water Sustainability and Biofuel Production

Expert Presentations

- Next meeting will be a panel of experts who will address our outstanding concerns
- Suggested speakers?
- Suggested topics?

Tentative Next Steps

- December 15th Meeting – Water Expert Presentations
- January 20th Meeting – Air Sustainability
- February 16th Meeting – Social and Economic Sustainability
- March Meeting – Expert Presentations of Social and Economic Sustainability

Future Topics

- Chain of Custody
- Reporting Requirements
- Incentives
- Scope of Recommendations to the Board

THANK YOU!