Hybrid Poplar as a Wastewater Management Tool

MWMC Case Study
Todd Miller – City of Springfield, Oregon
“...achieve, sustain, and promote balance between community, environmental, and economic needs while meeting customer service expectations...”
Biocycle Farm – a biosolids management asset

Drying and aerating

Land application
Nitrogen (PAN) Capacity = Biosolids/Irrigation Application Capacity

[Graphs showing comparison of Poplar and Ryegrass for different PAN rates and biosolids application.]
Irrigation Capacity & Reuse Benefit

Translated over 396 acres (Biocycle Farm):

- Poplar = 323 million gallons/year
- Grass = 252 million gallons/year

Max monthly difference: 46 million gallons

Equivalent million kilocalories/day: 26.8
(additional thermal load reduction with poplar irrigation)

Equivalent value as shade credit:
$1,610,000 (20 year NPV)
Double Benefit: more poplar product

Maximize irrigation:
 Increase sales revenue
> $1,000/acre?
Chipping
Stockpiled Chips and Hog Fuel
Veneer Product Trial

8-year old trees (small diameter)
Poplar Sales and Distribution

- Kraft Paper
- Cardboard
- Newsprint
- Veneer
- Charcoal
- Electricity
- Compost
- Mulch
Thank You!