

# Connecting Green Chemistry to the Existing State Pollution Prevention Program and Design for the Environment

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Minnesota Pollution Control Agency (MPCA)

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# Framework

- MN Toxic Pollution Prevention Act of 1990
- MN Toxic Free Kids Act of 2009
- Several other MN product- or chemical-specific restrictions
- Green chemistry development and projects within EPA State P2 grant proposals since 2009

# Green Chemistry Connections

- Grants to companies for product improvement:
  - Salo (FRP)
  - Cortec (lower-VOC and toxicity metal primers)
  - Ecolab (several hard-surface cleaners – reduced toxicity and improved bio-basis)
- Field-testing and technology diffusion of low- or no-styrene resins in FRP industry (MnTAP, with company partners)
- Grants to colleges for curriculum development

# Ongoing or Future Projects

- Coal tar-based pavement seal coats (PAHs) – phase-out and shift to low-/no-PAH replacements (partnership with DfE?)
- Reducing BPA exposures and contamination through paperless receipt practices
  - Non-BPA paper where receipts still required (DfE study/expertise)
- Closing out remaining use by MN industrial laundries of nonylphenol ethoxylate (NPE) surfactants
  - Future: look for further uses of NP/NPE in MN products and pursue priorities
- Formaldehyde/other PCs in wood/building products sector
- Pb, BPA, phthalates, PBDEs in electronics? (DfE, GC3, TURI)

# Capacity-Building

- Alternatives Assessment training (by DfE, TURI, other states, companies) for companies and technical assistance providers? (MnTAP, MPCA, consultants)
- Policy: update MN P2 act to include product focus?
- Basic and applied research for specific issues, e.g.:
  - Non-chlorinated solvents as basis for ink/dye pigment production (PCBs)
  - Low-toxicity/persistence preservatives for bio-based products prone to bacteria growth which limits shelf life
- Transfer to/collaboration with other State programs on shared priorities

# Further Information

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