

MPCA Industrial Stormwater Program and

NPDES/SDS Draft General Permit

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Industrial Stormwater Program and NPDES/SDS General Permit Goals

- Better protect surface water and ground water quality
 - adaptive management of stormwater control measures by Permittees
 - reduce pollutants in industrial stormwater discharges
- Have an effective, workable permit
 - reflects key water resource values
 - provides a balance of environmental protection and site-based controls

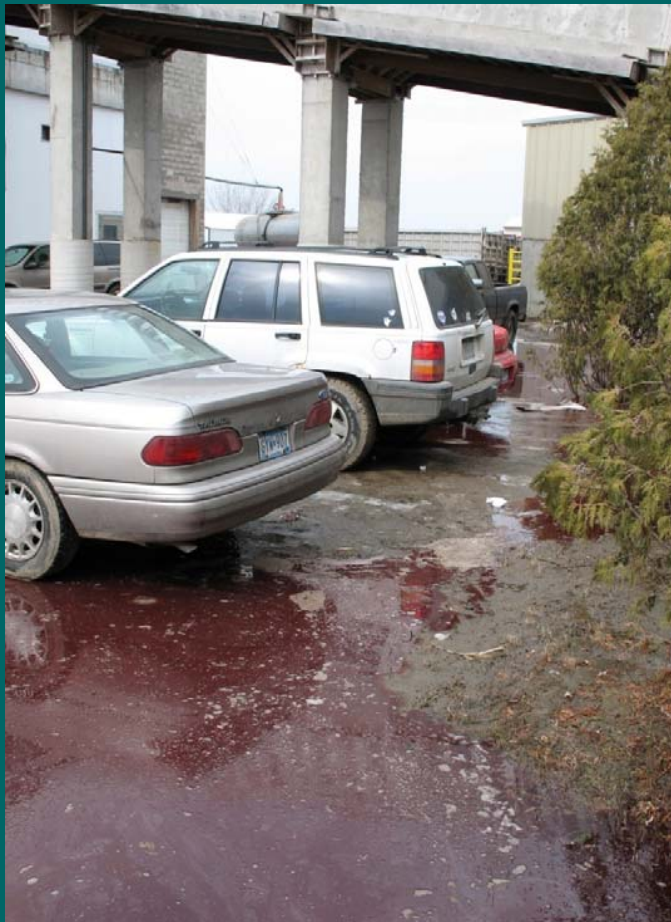
Industrial Sources of Stormwater: Pollutants and Problems

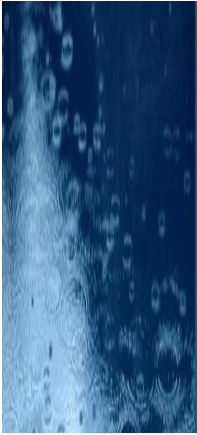
- Stormwater is runoff and drainage from any form of precipitation
- Contributes water pollutants
- Added pollutants lower water quality (sediment, metals, organics)





Problems can occur

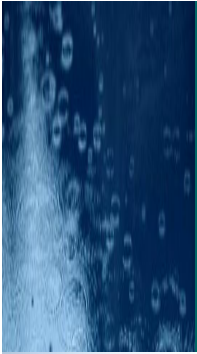
















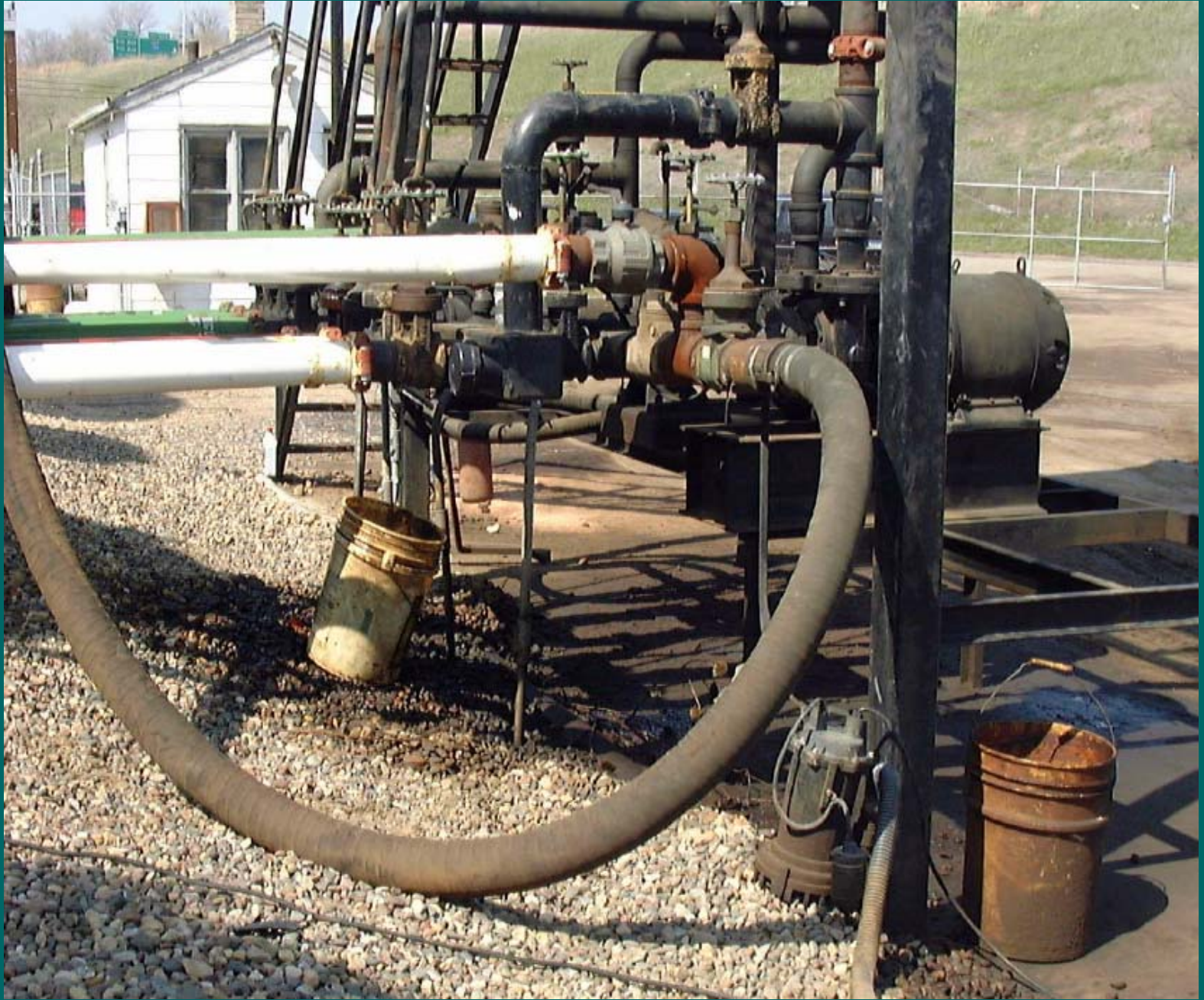




Industrial Sources of Stormwater: Pollutants and Problems

- Increased sediment affects aquatic habitats and fish spawning
- Industrial pollutants attach to sediment
- Minnesota's valuable water resources become degraded







Industrial Sources of Stormwater: Great BMPs

Shelter



Containment

Industrial Sources of Stormwater: Great BMPs



Industrial Stormwater Program

- 1990 - EPA announced Phase I
 - 10 categories of industrial activity require a permit
- 1992 - EPA delegated NPDES permitting authority to MPCA
- 1992 - Phase I industrial stormwater general permit issued
 - reissued in 1997
 - expired in 2002 at the end of a 5 year term



Industrial Stormwater Program: Phase II

1999 - EPA announced Phase II changes to the industrial stormwater program

- No Exposure exclusion was broadened to all ten categories of industrial activity
- Municipally owned industrial facilities having transportation maintenance for certain activities were required to have permit coverage

MPCA Stormwater Program Components

Municipal

	Phase I	Phase II
	Minneapolis & St Paul Municipal Individual Permits	233 General Permits
	Disturbing \geq 5 acres: ~ 900 General Permits per year	Disturbing \geq 1 acre: ~ 2,500 General Permits per year
	10 Categories of Industrial Activity: ~ 1,300 General Permittees covered No Exposure exclusion limited to light industry	~ 1600 current Permittees plus ~2000 anticipated applicants ~ 2000 current No Exposure plus ~2000 anticipated new ~ 200 applicants w/o expired permit coverage

Construction

Industrial

Industrial Stormwater Program: Today

- 2002 - MPCA draft industrial stormwater general permit was not reissued
 - MPCA industrial stormwater permit has remained expired for last seven years
 - Program emphasis has been on construction permit issuance and new MS4 permit issuance
 - Refocusing on Industrial Stormwater Permit

Industrial Stormwater Activity Categories

- Heavy manufacturing
- Light industry
- Mining/oil & gas
- Steam electric power generation
- Transportation Industries
- Hazardous Waste Treatment, Storage & Disposal Facilities
- Landfills, including industrial landfills
- Wastewater Treatment Facilities
- Recycling facilities
- Facilities subject to federal effluent limit guidelines

Note: any publicly owned industrial activity in these categories also requires this permit

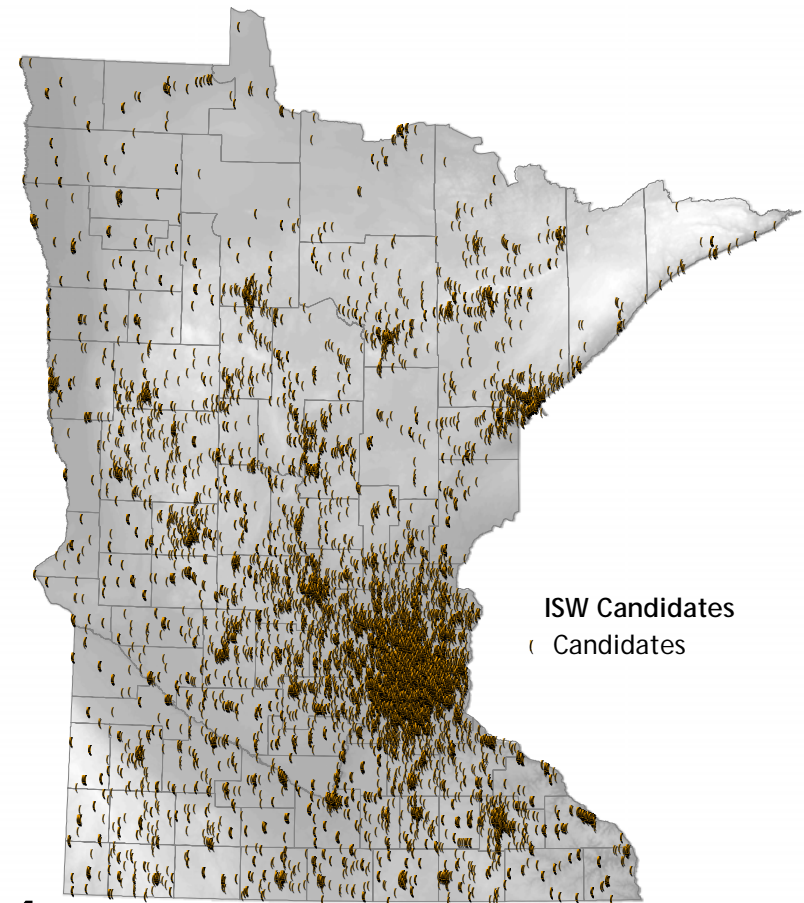
29 Industrial Sectors

Sector A: Timber products	Sector B: Paper and Allied Products	Sector C: Chemical and Allied Products
Sector D: Asphalt Paving & Roofing Materials & Lubricant Manufacturers	Sector E: Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing	Sector F: Primary Metals
Sector G: Metal Mining	Sector H: Coal Mines/Coal Mining-Related Facilities	Sector I: Oil & Gas Extraction and Refining
Sector J: Mineral Mining and Dressing	Sector K: Hazardous Waste Treatment Storage or Disposal	Sector L: Landfills & Land Application Sites
Sector M: Automobile Salvage Yards	Sector N: Scrap Recycling Facilities	Sector O: Steam Electric Generating Facilities
Sector P: Land Transportation	Sector Q: Water Transportation	Sector R: Ship and Boat Building and Repair Yards
Sector S: Air Transportation	Sector T: Treatment Works	Sector U: Food and Kindred Products
Sector V: Textile Mills, Apparel, and Other Fabric Products	Sector W: Furniture and Fixtures	Sector X: Printing and Publishing
Sector Y: Rubber, Misc. Plastic Products, and Misc. Manufacturing Industries	Sector Z: Leather Tanning and Finishing	Sector AA: Fabricated Metal Products
Sector AB: Transportation Equipment, Industrial and Commercial Machinery	Sector AC: Electronic/Electrical Equipment and Components, Photographic and Optical Goods	

Industrial Stormwater Program: Potential Permittees

- ~1600 facilities currently permitted plus ~ 2000 anticipated applicants
- ~2000 facilities currently have No Exposure Certification plus ~ 2000 anticipated new
- ~200 applicants w/o coverage (due to expired permit)

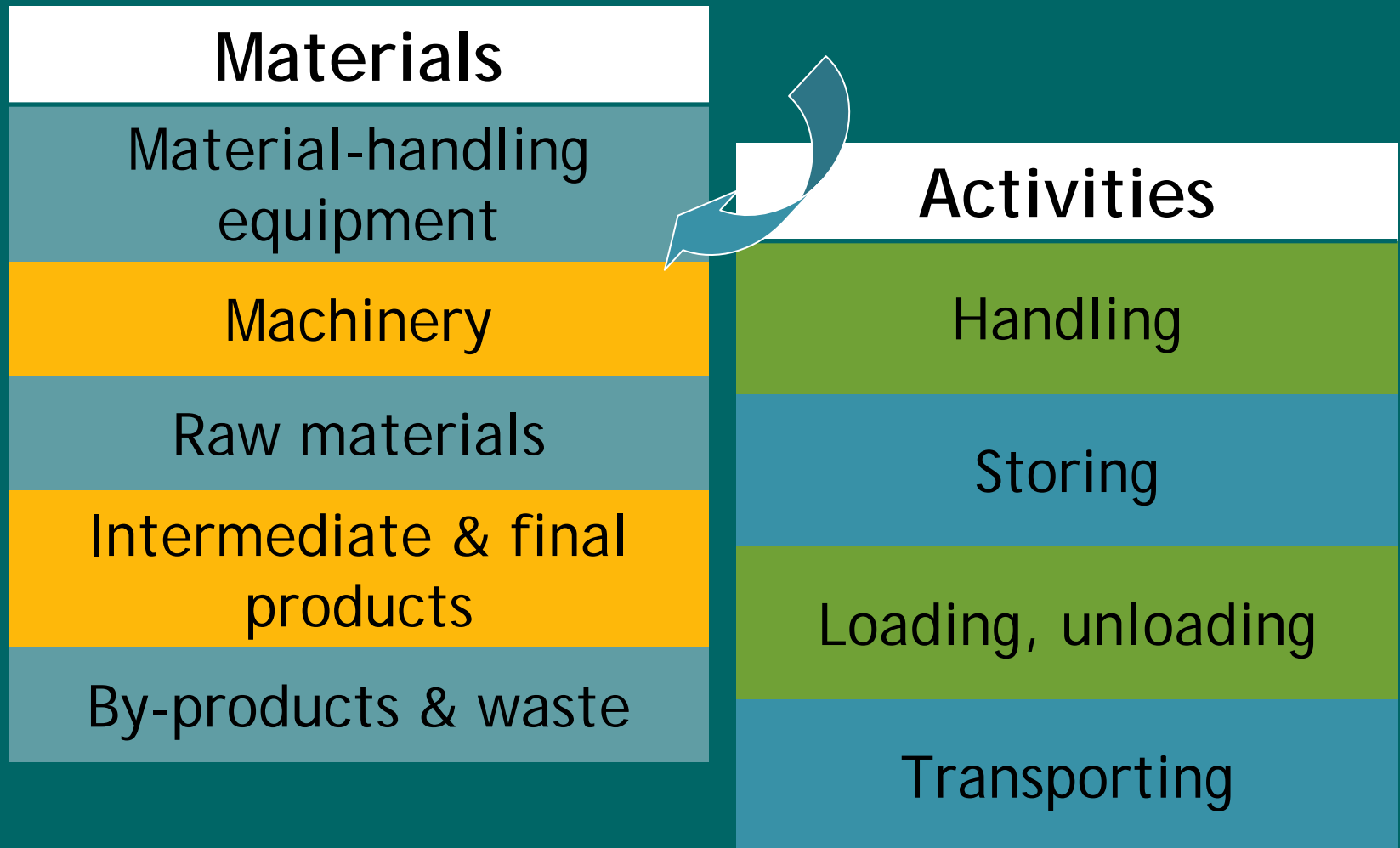
Candidates for the Industrial Stormwater Permit
Based on Dun & Bradstreet data



1

0 20 40 60 80 100 Miles
0 40 80 120 160 Kilometers

Permittees' Regulated Industrial Materials and Activities



Some Industrial Materials and Activities Not Required to be Addressed

- Containers and tanks sealed and free from deterioration
- Adequately maintained vehicles & their storage
- Completely covered/plugged dumpsters
- Materials that are stored outside that do not contaminate stormwater
- Office buildings and parking lots



Draft Industrial Stormwater General Permit Requires:



- Contaminant prevention & discharge controls including permanent stormwater controls
- Control measures structural and non-structural Best Management Practices, facility self-inspections, maintenance, training, etc.
- Site-specific Stormwater Pollution Prevention Plan
- Monitoring stormwater discharges

Stakeholder Outreach

- Since late 2006

Internal and external stakeholder work group meetings

Outreach and education events

- Presentations
- Webcasts, training (MPCA, USEPA)
- Newsletter articles
- Email program updates (listserv)
- Website will include monitoring video, monitoring manual and a BMP Guidebook

Results to date

- Reached 20,000 individuals
- Permit revisions based on stakeholder feedback



Draft Permit Changes

- Multi-Sector permit which has sector-specific content
- Stormwater discharge monitoring requirements
- Permit conditions to protect discharges to impaired waters
- Permit conditions that prevent degradation and protect discharges to high value waters

Monitoring: Why the Expired Permit Language Needs to Change

- Monitoring provides assurance that stormwater control measures are managed so that impacts are reduced and water quality standards are met
 - Minnesota: one of 4 states currently not requiring monitoring
 - Minnesota: the only Region 5 state not requiring monitoring
 - Sept 2008 - EPA issued a Multi-Sector General Permit that requires monitoring and applies in Minnesota on Tribal Land

Benchmark Monitoring

**Year 1: Implement Control Measures,
Prepare for Monitoring**

**Year 2: One Sample Each Quarter,
Per Monitoring Point**

**Pass
Benchmark**

**DONE
For
Permit
Term**

**If Do Not Pass
Benchmark**

**Year 3:
Improve
Control
Measures**

**Year 4:
One
Sample
Each
Quarter Per
Monitoring
Point**

**If Do Not
Pass,
Improve,
Monitor,
May Get
Individual
Permit**

Pollutants Required to Be Monitored

- Sector specific pollutant examples
 - TSS
 - Metals
- 4 sectors, only TSS
- 13 sectors, 3 or fewer parameters



Examples

Iron

Copper

Aluminum

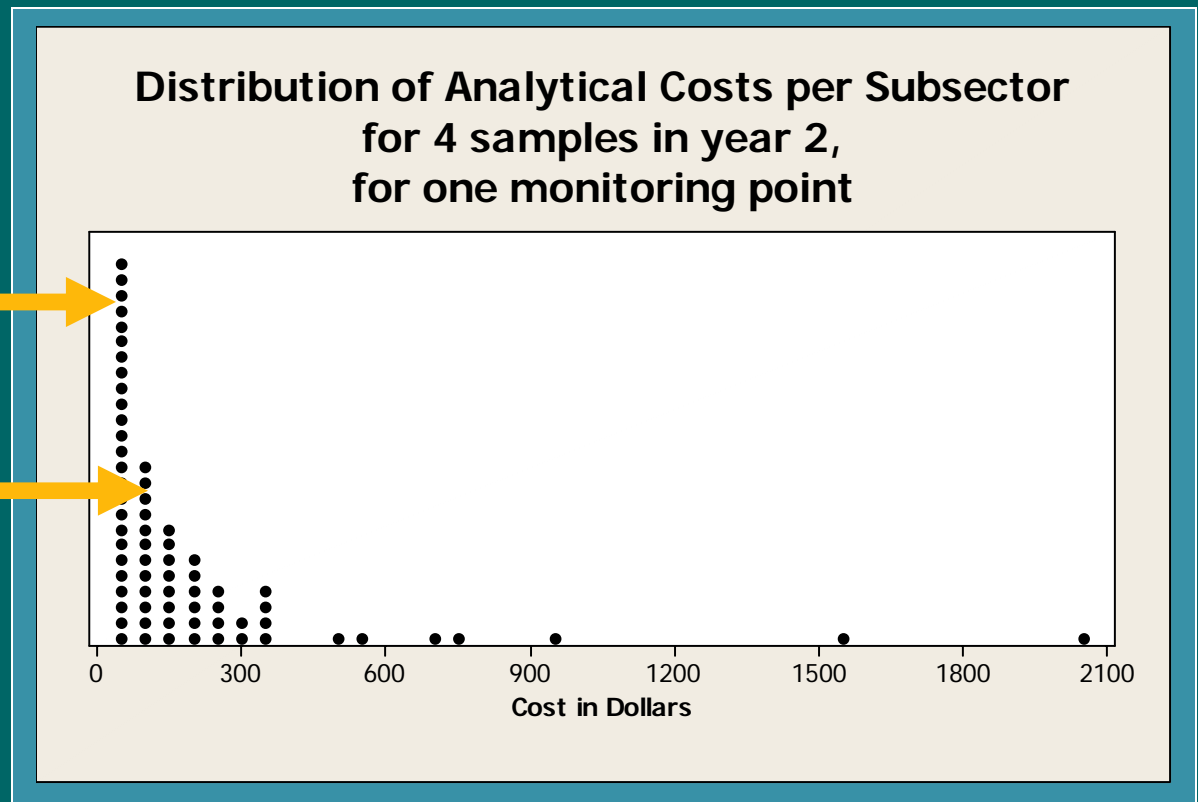
Zinc

Distribution of Analytical Costs per Subsector for 4 Samples in Year 2

Analytical Costs for Half of the Subsectors (77% of potential Permittees) in Year 2 for one monitoring point will be \$105 or less

TSS Only, \$54

TSS & one metal or TSS & pH, \$105





Monitoring Waivers

- Some sectors may reduce benchmark monitoring through:
 - designed infiltration treatment on site that reduces stormwater discharge to surface water
 - installation of an appropriately sized treatment pond on site

Impaired Waters: Why and How the Permit Language Needs to Change

Pre-TMDL

- MPCA must ensure that industrial stormwater discharges are not causing or contributing to an impairment
- Through the draft permit, implementation of control measures (including BMPs) is the mechanism to reduce pollutant concentrations such that water quality standards are met

Impaired Waters: Why and How the Permit Language Needs to Change

Post-TMDL

- The expired permit does not have any reference to requirements for discharges to impaired waters with an approved TMDL
- Through the draft permit, in addition to permit required monitoring and management of control measures, a facility is required to comply with the approved TMDL

Nondegradation: Why and How the Permit Language Needs to Change

- Existing expired permit does not address nondegradation
- For facilities subject to nondegradation requirements, through this draft permit, Permittees must achieve
 - No Exposure or
 - Install control measures designed to protect water quality to prevent degradation

How the Permit Will Address Nondegradation



- Will have screening questions to determine if a facility has exposure areas likely to exceed a nondegradation threshold for new and expanding facilities
- Added requirements for situations where a higher level of water quality protection is appropriate: Outstanding Resource Value Waters, wetlands, trout streams, etc.

Industrial Stormwater Program Implementation



Online tools

Stormwater Program for Industrial Activity - Minnesota Pollution Control Agency - Windows Internet Explorer

http://www.pca.state.mn.us/water/stormwater/stormwater-i.html

Steps to Industrial Stormwater Compliance

Step 1	Identify your facility — do you need a permit? (Pre-application) Learn about the proposed permit requirements! Do you need a permit? Learn about who is required to apply for the Industrial Stormwater Permit and to learn about the proposed permit requirements.
Step 2	Consider pollution prevention opportunities (Pre-application) Are you required to have an Industrial Stormwater permit but have all significant materials indoors or under cover? Learn how you can apply for the No Exposure Exclusion, a 5-year exemption from permit requirements. Also, learn about other Pollution Prevention opportunities that may save you both time and money while helping the environment.
Step 3	Assess for pollutants, sources of contaminated stormwater (Pre-application) This step will provide helpful information about general pollutants to assess at your facility, now that you know you need a permit. This step also provides future sector-specific pollutant requirements.
Step 4	Gather application materials before applying (Pre-application) There are a number of things you need to have before applying for the permit (such as latitude/longitude information, what bodies of water your facility is near, facility contact information, etc). This step will give you an understanding about what materials you should have ready BEFORE applying for the permit.
Step 5	Create Stormwater Pollution Prevention Plan (SWPPP), choose Best Management Practices (BMP's) (Pre-application) The heart of the Industrial Stormwater Permit is the Stormwater Pollution Prevention Plan and the Best Management Practices you implement at your facility. This step will guide you to the SWPPP requirements and help you choose the appropriate BMP's at your facility.
Step 6	Apply for permit/No Exposure (Pre-application) It's time to apply for the permit or to certify for No Exposure. Click on this step for links to the forms. In the future, the application process will be available entirely electronically.
Step 7	Follow permit/sector requirements (All years) In the future, each facility will be identified by a sector name/letter. Each sector will have sector specific requirements, including which pollutants to monitor for, which BMP's they must install, and specific areas to assess for pollutants. Learn about permit and sector-specific requirements.
Step 8	Install BMP's, train employees (Year 1) This step will provide information on how to install the BMP's you chose for your facility, and information about the permit.

Industrial Stormwater "Chemical and Allied Products" - Windows Internet Explorer

http://www.pca.state.mn.us/streams/industrial_stormwater_chemical_products/rnh.htm

Minnesota Pollution Control Agency

Industrial Stormwater "Chemical and Allied Products"

Player Fullscreen Video Thumbnail View

Overview

- History
- General requirements
- SWPPP
- BMPs
- Monitoring
- Impaired Waters
- Non-Degradation
- No Exposure Exclusion

Event Information | Chapters | Email | Download

Event Title:
Industrial Stormwater "Chemical and Allied Products"

Event Date:
7/31/2008 9:05:46 AM

Event Speaker:

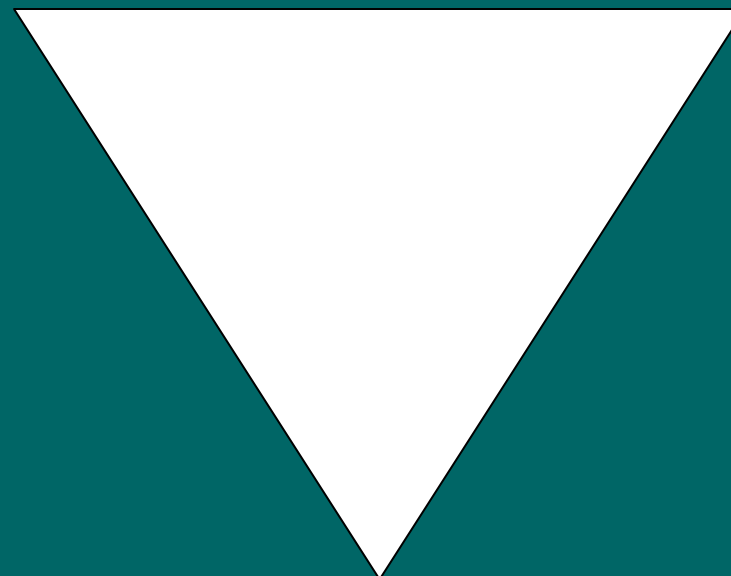
Done, but with errors on page.

Step by step
compliance
assistance on
MPCA website

Webcast on MPCA
website

C&E Efforts and Implementation

- Overarching program compliance goals: Compliance is the goal. Efforts should progress in an inverted pyramid (effort) relationship for newer programs, like ISW.
-
- Web based assistance and guidance
- No exposure and P2 outreach
- Permit applications on line
- Permit outreach efforts
- Developing compliance checklists
- Developing partner programs
- Matrix other C/E programs
- Evaluate program and permit data
- Geographic evaluation of sites and priorities
- Automated responses
- Review compliance status
- Site inspections
- Enforcement evaluation
- Active enforcement



C&E Steps

- Pre application on line tools for permit holders; Phone tree for FAQ, web casts, program basics including steps to comply.
- No exposure informational events and P2 outreach tools; P2 factsheets, compliance calendar, guidance on BMPs links to other resources.
- Application on line. Includes smart form technology to limit errors, line by line assistance and instructions.
- Compliance monitoring of sites to determine if they applied for/received permit coverage.
- Check other program data systems to see whether other program interests have or need permits.

Focus on Compliance Assistance and then Enforcement

- Review structural and non structural BMP effectiveness based on geo-regions, watersheds, or by industrial activities.
- Automated notices on compliance data and comparisons to sites (similar to the CDT project for point source program, what we call “the big report”).

Enforcement

- Sites without permits
- send a request for information letter (RFI) to the owner/operator requesting a response
- For sites that have received an RFI and have not applied for permit coverage but can obtain no exposure, issue a Letter of Warning
- No permit, enforcement response would be brought to the enforcement forum for individual consideration and follow up.

Strategy

- Review annual reports completeness, areas or practices of concern review content.
 - Reports that are submitted incomplete will be investigated further
- Compliance monitoring of Stormwater Monitoring Report submittals. This activity will be delayed since SWMR submittals are not required until beginning of year two of coverage.
 - Checking for abnormalities, lacking responses and areas of concern.
- Compliance monitoring of Discharge Monitoring Report submittals.
 - Documentation from DMRs that discharge of treated stormwater is not meeting effluent limits established for the treatment system installed on the site.

Inspection Activities (i.e. Targeting)

- Information has not been completed on application for coverage
- Complaint on site or discharge
- Information that discharges not protective of waters
- Not submitting DMRs
- Not submitting SWMRs
- Coordination with other PCA or partner programs
- Review no exposure accuracy
- Periodic sampling conducted for verification efforts of SWMR and DMR or treatment effectiveness.





Industrial Stormwater Program

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Thank you for your
questions!



Contingency Slides Follow

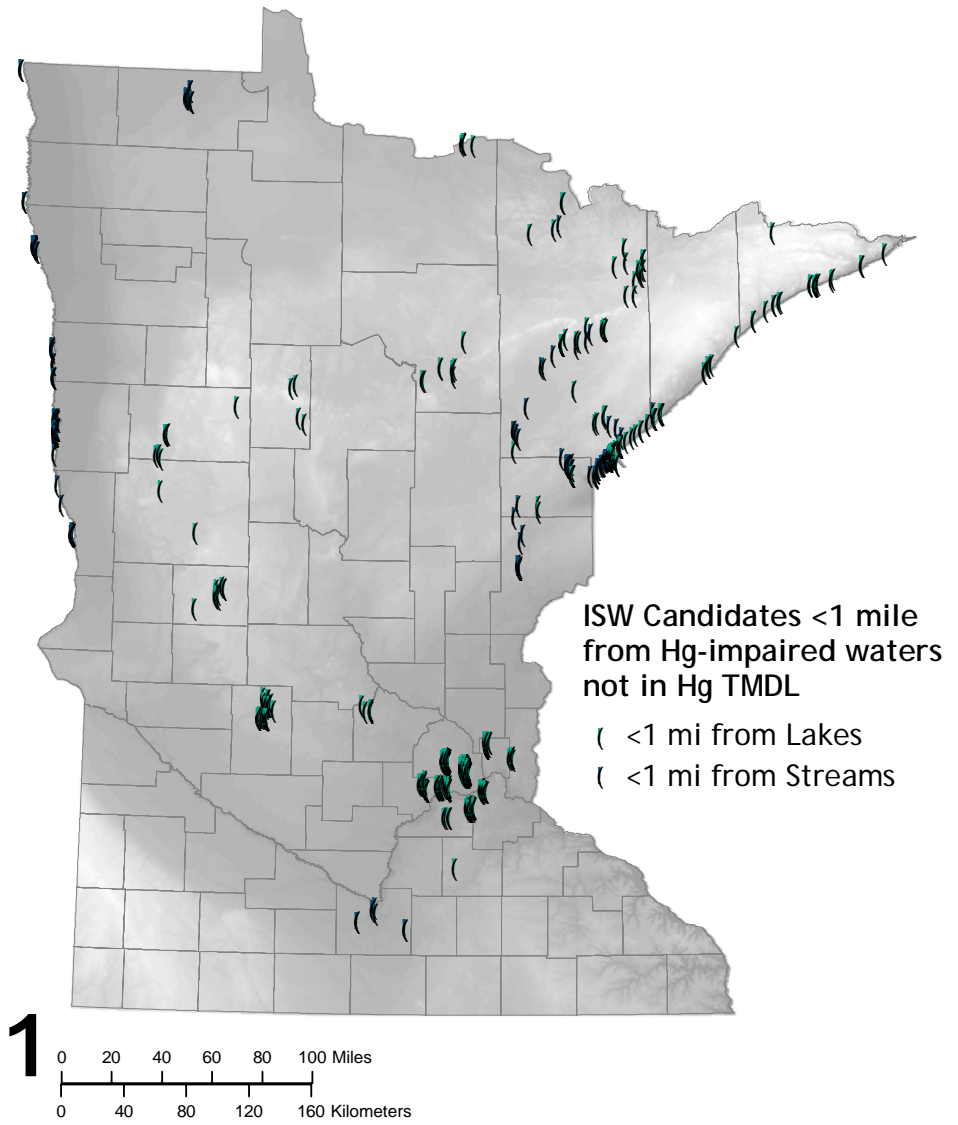
- These slides will be placed in a separate file of contingency slides

Monitoring: How the Permit Language Will Change

- *Year 1:* Stormwater Pollution Prevention Plan completed before applying for permit, install any structural controls, prepare for monitoring
- *Year 2:* Monitor stormwater discharges for effectiveness of stormwater control measures 4 times
- *Year 3:* If monitoring passes, monitoring complete; if not, adapt stormwater control measures
- *Year 4:* Repeat monitoring for any pollutant not passed
- *Year 5:* If monitoring triggers follow up action in year 4, adapt controls, continue to monitor, MPCA will evaluate need for individual permit

~950 potential
ISW
permittees
are in
proximity to
waters
excluded from
the Hg TMDL

ISW Candidates within 1 mile of mercury-impaired waters excluded from the Mercury TMDL



Mercury Minimization

- Requires assessing the facility for sources of mercury exposed to stormwater
- A mercury minimization plan, including appropriate disposal, will be required if mercury sources are found to be exposed to stormwater

Example Scenario

- Sector A (Timber Products)
wood preserving, cutting timber,
pulpwood, mills, mobile home
manufacturing

- Beaver Creek
(Impaired)

Subsector SIC 2491 Wood Preserving

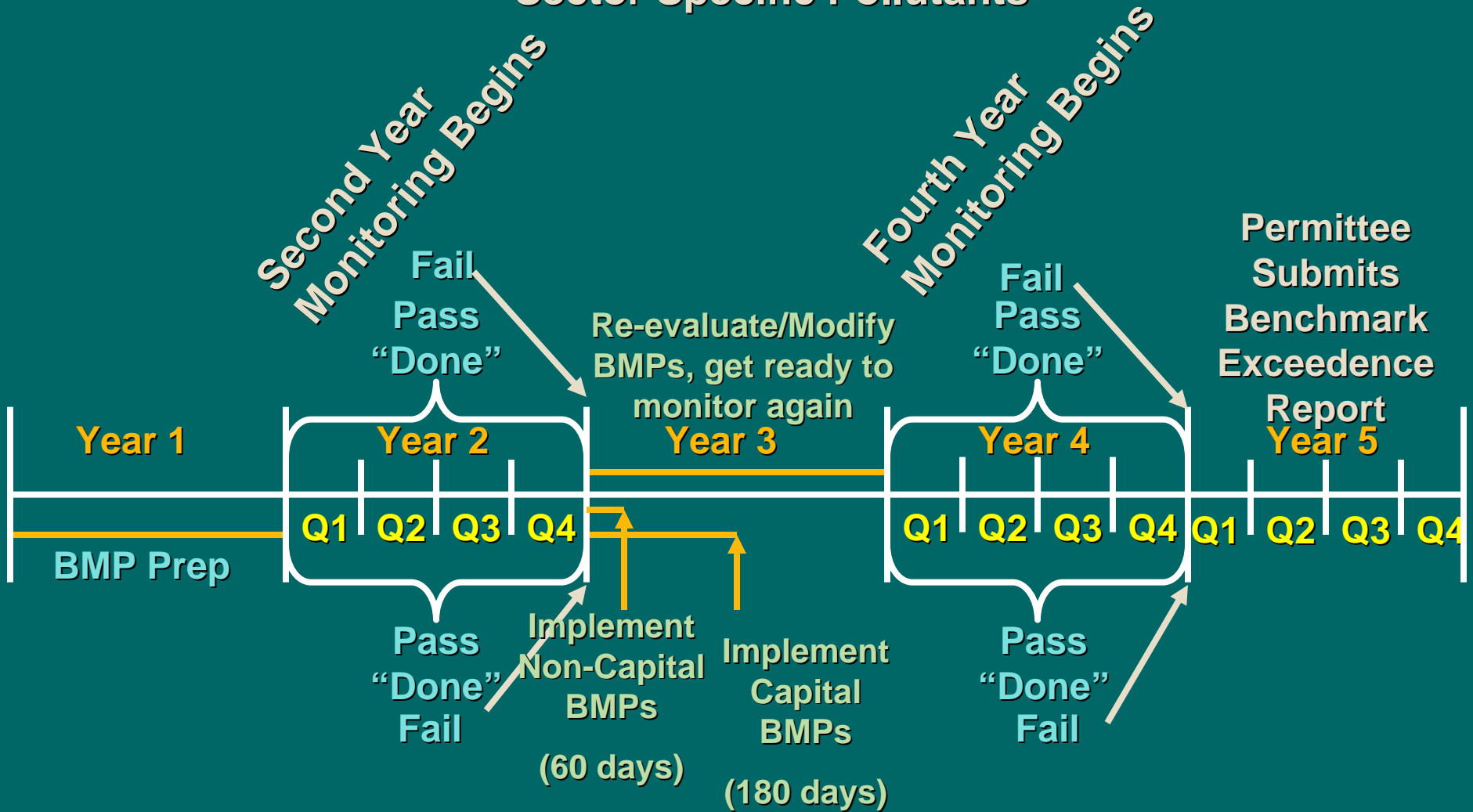
Sector Specific Pollutants

- TSS
- Arsenic
- Copper
- Chromium
- Phenols

Pollutants of Impairment

- Turbidity - TSS
- Fecal Coliform - E.coli

Monitoring No Discharge To Impaired Waters Sector Specific Pollutants



Discharge Within One Mile Of Impaired Water (No TMDL)
Pollutants of Impairment

Non-Degradation (91 Acres)

Cumulative
Threshold
Acres

Post 1988

New Facility 75 Acres

Non-Deg
Does Not
Apply

New Facility 100 Acres

Non-Deg
Applies

Pre-1988

Post-1988

Expanding Facility 65 Acres

10 Acres

Non-Deg
Does Not
Apply

35 Acres

Expanding Facility 75 Acres

20 Acres

75 Acres

Non-Deg
Applies

MPCA Recommendation to Address MNG49 Facilities

- MPCA will be able to address most of the concerns and interests we have talked about previously with the Aggregate, Asphalt and Concrete Associations, but not immediately
- With the reissuance of MNG49, facilities will retain multisite option under this one permit, and will have concrete wastewater and stormwater added for SIC 3271, 3272, 3273
- The reissuance of MNG49 will contain comparable conditions to the MSGP, including benchmark monitoring

MPCA Recommendation to Address MNG49 Facilities

- SIC's and the activities that MNG49 currently covers will remain unchanged for now
- If all of a facility's activities are included in the MNG49 applicability, the facility will not need the MSGP and will delay monitoring
- MSGP will offer industrial stormwater discharge coverage for all of the SICs in Sectors D, E and J, for facilities that do not meet the applicability of MNG49 for stormwater
- Some facilities that have industrial activities not covered by MNG49 would need both MNG49 and the MSGP until MNG49 is reissued

MNG49 Coverage Expansion

- Use MNG49 to address discharges from all stormwater and wastewater activities under these SIC codes:
3271, 3272, 3273, 1411, 1422,
1423, 1429, 1442, 2951
- MNG49 will become a process wastewater, dewatering, stormwater permit

<p>MNG 49</p>	<p>1411 - mining/quarrying of dimension stone 1422 - mining/quarrying of crushed/broken limestone 1423 - mining/quarrying of crushed/broken granite 1429 - mining/quarrying of NEC 1442 - sand and gravel pits and dredges used for construction 2951 - manufacturing asphalt and tar paving mixtures; and paving blocks made of asphalt</p>
<p>Sector D</p>	<p>2951 - manufacturing asphalt and tar paving mixtures; and paving blocks of asphalt 2952 - manufacturing, from purchased materials, asphalt and saturated felts in roll/shingle form 2992 - blending, compounding, and re-refining lubricating oils and greases(non-petrol based) 2999 - manufacturing packaged fuel, powdered fuel, and other products of petroleum and coal, not elsewhere classified</p>
<p>Sector E</p>	<p>3251 - brick and structural clay tile 3253 - ceramic wall and floor tile 3255 - clay firebrick and other heat resisting clay products 3259 - clay sewer pipe and structural clay products, not elsewhere classified 3261 - 3269 - china/earthenware/pottery <i>3271 - concrete building block and brick from a combination of cement and aggregate</i> <i>3272 - concrete products, except block and brick, from a combination of cement and aggregate</i> <i>3273 - portland cement concrete manufactured and delivered to a purchaser in a plastic and unhardened state</i> 3274 - quicklime, hydrated lime, and "dead-burned" dolomite from limestone, dolomite shells, or other substances 3275 - plaster, plasterboard, and other products composed wholly or chiefly of gypsum, except articles of plaster of paris and papier-mache. 3211 - flat glass 3221 - glass containers 3229 - glassware NEC 3231 - glass products from purchased glass 3241 - hydraulic cement 3281 - cutting, shaping, and finishing granite, marble, limestone, slate, and other stone for building and miscellaneous uses 3291 - 3299 - Abrasives/Asbestos/Non-metallic minerals</p>
<p>Sector J</p>	<p>1422 - 1429 - mining/quarrying 1442 - sand and gravel pits and dredges used for construction 1446 - sand pits and dredges, sand for uses other than construction, such as glassmaking, molding, and abrasives 1411 - mining/quarrying of dimension stone 1455 - mining, milling kaolin/ball clay 1459 - mining/milling clay, ceramic, or refractory minerals, not elsewhere classified 1474 - mining/milling natural potassium, sodium, or boron compounds 1475 - mining, milling, drying, calcining, sintering phosphate rock, including apatite 1479 - mining/milling chemical or fertilizer mineral raw materials, not elsewhere classified</p>





