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Targeting Study Overview

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 **New York State Pollution Prevention Institute**


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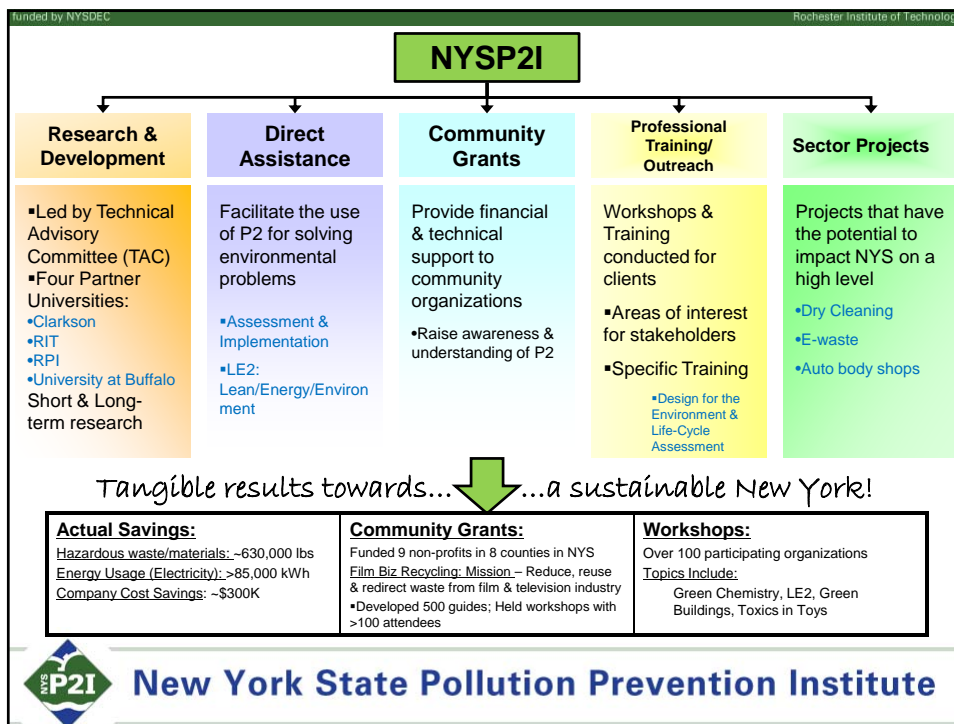
New York State Pollution Prevention Institute (NYSP2I)

Vision:
The vision of the NYS P2I is to foster the transformation and development of sustainable businesses and organizations in New York State in a collaborative program committed to making the State a leader in environmental stewardship.

Mission:
The mission of the Institute is to provide a high-impact, comprehensive and integrated program of technology research development and diffusion, outreach, training and education aimed at making New York State more sustainable for workers, the public, the environment and the economy through:

- reductions in toxic chemical use
- reductions in emissions to the environment and waste generation
- the efficient use of raw materials, energy and water

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Purpose of Targeting Model

1. Identification of high priority sectors that are:
 - a. Significant contributors to the New York State economy
 - b. Generate large quantities of toxic and hazardous wastes
2. Ensure optimal use of state funds and NYSP2I resources
3. Ensure NYSP2I has the broadest impact possible on industry in NY State

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Methodology: NAICS

North American Industrial Classification System

# of digits	Example	Description	Example
XX	31-33	Industry Sector (20 broad sectors)	Manufacturing
XXX	321	Industry Sub sector (21 in manufacturing)	Wood Product Manufacturing
XXXX	3211	Industry Group	Sawmills and Wood Preservation
XXXXX	32111	Industry	Sawmills and Wood Preservation
XXXXXX	321113	U.S., Canadian, or Mexican National specific	Sawmills (US)

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Methodology: Structure

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    graph LR
      subgraph DS [Data Sources and Data Sets]
        EPA[US EPA]
        NYSOOL[NYSOOL]
        USCB[US Census Bureau]
        ESD[ESD]
      end

      EPA --> EPAData["1. TRF: Disposal OR S&H: Disposal or Other Releases  
2. TRF: Total Production Related Waste  
3. TRF: PBT Chemicals  
4. TRF: Carcinogens  
5. ERS: Hazardous Waste Generation Data"]
      NYSOOL --> NYSOOLData["1. OCEW: Number of Establishments  
2. OCEW: Number of Employees  
3. OCEW: Total Wages"]
      USCB --> USCBData["1. ASMI: Value Added  
2. Economic Census: Establishments with less than 20 employees"]
      ESD --> ESDData["1. Data from EMSI: Employment Forecast"]

      EPAData --> ER["Environmentally ranked sectors (Table A)"]
      NYSOOLData --> ER
      NYSOOLData --> ERS["Economically ranked sectors (Table B)"]
      USCBData --> ERS
      USCBData --> EI["Employment Forecast (Table C)"]
      ESDData --> EI
      ESDData --> EL["Establishments with less than 20 employees (Table D)"]

      ER --> FR["Final ranked sector lists (Table E)"]
      ERS --> FR
      EI --> FR
      EL --> FR
  
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Data Normalization

NAICS	Description	Total On- and Off-Site Releases (lbs)	Relative to largest
311	Food Manufacturing	2048105	0.38
312	Beverage and Tobacco Product Manufacturing	1751985	0.32
313	Textile Mills	27455	0.01
314	Textile Product Mills	3486	0.00
316	Leather and Allied Product Manufacturing	8739	0.00
321	Wood Product Manufacturing	28019	0.01
322	Paper Manufacturing	2881261	0.53
323	Printing and Related Support Activities	156914	0.03
324	Petroleum and Coal Products Manufacturing	79255	0.01
325	Chemical Manufacturing	5421661	1.00
326	Plastics and Rubber Products Manufacturing	573422	0.11
327	Nonmetallic Mineral Product Manufacturing	427440	0.08
331	Primary Metal Manufacturing	2348898	0.43
332	Fabricated Metal Product Manufacturing	658122	0.12
333	Machinery Manufacturing	189798	0.04
334	Computer and Electronic Product Manufacturing	2337265	0.43
335	Electrical Equipment, Appliance, and Component Manufacturing	535991	0.10
336	Transportation Equipment Manufacturing	215669	0.04
337	Furniture and Related Product Manufacturing	53321	0.01
339	Miscellaneous Manufacturing	62449	0.01

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Environmental Rankings

NAICS	Description	Toxics Release Inventory (TRI)					Hazardous Waste Gen. (RCRA)	Total
		On and Off Site Releases	Toxicity Weighted On and Off Site Releases	Total Production Related Waste	Carcino-gens	PBT's		
311	Food manufacturing	0.38	0.00	0.07	0.00	0.01	0.00	0.46
312	Beverage and tobacco product manufacturing	0.32	0.00	0.02	0.00	0.00	0.00	0.34
313	Textile mills	0.01	0.00	0.01	0.00	0.00	0.00	0.02
314	Textile product mills	0.00	0.00	0.00	0.01	0.00	0.00	0.01
315	Apparel manufacturing	-	-	-	-	-	0.00	0.00
316	Leather and allied product manufacturing	0.00	0.01	0.00	0.00	0.00	0.00	0.01
321	Wood product manufacturing	0.01	0.00	0.00	0.05	0.00	0.00	0.06
322	Paper manufacturing	0.53	0.22	0.12	0.28	0.15	0.00	1.29
323	Printing and related support activities	0.03	0.00	0.02	0.00	0.00	0.00	0.05
324	Petroleum and coal products manufacturing	0.01	0.03	0.00	0.23	1.00	0.00	1.28
325	Chemical manufacturing	1.00	0.37	0.46	1.00	0.74	0.08	3.65

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Economic Rankings

NAICS	Description	NYS DOL			US Census Bureau	Total
		Number of Establishments	Average Number of Employees	Total Wages	Value Added	
311	Food Manufacturing	0.83	0.70	0.33	0.23	2.09
312	Beverage & Tobacco Product Manufacturing	0.10	0.09	0.09	0.06	0.33
313	Textile Mills	0.15	0.07	0.04	0.01	0.27
314	Textile Product Mills	0.16	0.07	0.04	0.02	0.29
315	Apparel Manufacturing	0.69	0.36	0.21	0.07	1.34
316	Leather and Allied Product Manufacturing	0.06	0.03	0.01	0.00	0.11
321	Wood Product Manufacturing	0.23	0.12	0.05	0.02	0.43
322	Paper Manufacturing	0.14	0.26	0.17	0.08	0.65
323	Printing and Related Support Activities	0.88	0.43	0.24	0.12	1.67
324	Petroleum & Coal Products Manufacturing	0.06	0.03	0.02	0.01	0.12
325	Chemical Manufacturing	0.27	0.64	0.56	1.00	2.48

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Employment Forecast

NAICS	Description	2007 Jobs	2019 Jobs	% Change	Relative Score
311	Food manufacturing	54,897	49,225	-10%	1.00
312	Beverage and tobacco product manufacturing	7,256	6,424	-11%	0.97
313	Textile mills	5,369	3,705	-31%	0.32
314	Textile product mills	5,574	3,914	-30%	0.35
315	Apparel manufacturing	31,184	26,633	-15%	0.84
316	Leather and allied product manufacturing	2,198	1,857	-16%	0.81
321	Wood product manufacturing	11,483	8,064	-30%	0.35
322	Paper manufacturing	19,632	15,294	-22%	0.61
323	Printing and related support activities	36,234	25,846	-29%	0.39
324	Petroleum and coal products manufacturing	2,066	1,548	-25%	0.52
325	Chemical manufacturing	51,066	33,882	-34%	0.23

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Establishments with < 20 employees

NAICS	Definition	% of Establishments with Less Than 20 Employees	Relative to largest
311	Food Manufacturing	76%	0.87
312	Beverage and Tobacco Product Manufacturing	79%	0.91
313	Textile Mills	82%	0.94
314	Textile Product Mills	80%	0.92
315	Apparel Manufacturing	80%	0.92
316	Leather and Allied Product Manufacturing	81%	0.94
321	Wood Product Manufacturing	77%	0.88
322	Paper Manufacturing	46%	0.53
323	Printing and Related Support Activities	84%	0.96
324	Petroleum and Coal Products Manufacturing	87%	1.00
325	Chemical Manufacturing	59%	0.67

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Top 10 Priority Sectors: 2010-2011

Rank	NAICS	Description	Environmental Ranking	Economic Ranking	Economic Forecast	% of Establishments Under 20 Employees	Total
1	325	Chemical manufacturing	3.65	2.48	0.23	0.67	7.03
2	334	Computer and electronic product manufacturing	2.11	2.70	0.68	0.71	6.20
3	331	Primary metal manufacturing	3.92	0.45	0.00	0.66	5.03
4	332	Fabricated metal product manufacturing	0.88	2.43	0.55	0.84	4.69
5	311	Food manufacturing	0.46	2.09	1.00	0.87	4.43
6	339	Miscellaneous manufacturing	0.10	2.07	0.68	0.96	3.81
7	333	Machinery manufacturing	0.27	1.92	0.84	0.74	3.78
8	326	Plastics and rubber products manufacturing	1.61	0.81	0.55	0.65	3.62
9	327	Nonmetallic mineral product manufacturing	1.32	0.77	0.58	0.80	3.48
10	315	Apparel manufacturing	0.00	1.34	0.84	0.92	3.10

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TRI Data Drill down - Example

Industry	NAICS	Name	Address	City	County	Zip	Chemical	Total On- and Off-Site Releases
325 Chemicals	325992 Photographic Film, Paper, Plate, and Chemical Manufacturing	EASTMAN KODAK CO EASTMAN BUSINESS PARK	1669 LAKE AVE	ROCHESTER	Monroe, NY	14652	NITRATE COMPOUNDS	685403
							HYDROCHLORIC ACID (1995 AND AFTER ACID AEROSOLS' ONLY)	542276
							SULFURIC ACID (1994 AND AFTER ACID AEROSOLS' ONLY)	361421
							METHANOL	157367
							DICHLOROMETHANE	149213
							N-METHYL-2-PYRROLIDONE	117261
							BARIUM COMPOUNDS	75537
							HYDROGEN FLUORIDE	73893
							AMMONIA	64489
							CHROMIUM COMPOUNDS EXCEPT CHROMITE ORE MINES IN THE TRANSVAAL REGION)	20595
							TOLUENE	13079
							LEAD COMPOUNDS	11352.4
							
							
							CARESTREAM HEALTH INC - ISC B-14	1669 LAKE AVENUE, EASTMAN BUSINESS PARK, BUILDING 14
CARESTREAM HEALTH INC ISC B-117	1669 LAKE AVE EASTMAN BUSINESS PARK BUILDING 117	ROCHESTER	Monroe, NY	14652	BARIUM COMPOUNDS	3283		
CHAMPION PHOTOCHEMISTRY INC	1669 LAKE AVE BUILDING 48 MC MC23751	ROCHESTER	Monroe, NY	14652	HYDROQUINONE	2300		
					AMMONIA	40		
					NITRATE COMPOUNDS	0		
					DIETHANGLAMINE	0		
					ETHYLENE GLYCOL	0		
FR CHEMICAL INC	524 S COLUMBUS AVE	MOUNT VERNON	Westchester, NY	10550	HYDROQUINONE	5		
325199 All Other Basic Organic Chemical Manufacturing		ARCH CHEMICALS INC	100 MCKEE RD	ROCHESTER	Monroe, NY	14611	ZINC COMPOUNDS	1174427
							3-(ODO-2-PROPYNYL BUTYL CARBAMATE	11234
							PYRIDINE	7112
							METHANOL	3561
							CHLORINE	1694
							NITRIC ACID	102
							NITRATE COMPOUNDS	0
							ETHYLENE GLYCOL	0
							METHYL ISOBUTYL KETONE	33505
							AMMONIA	3902
							NITRATE COMPOUNDS	2350
							N-BUTYL ALCOHOL	510
							ACRYLONITRILE	500
							ETHYLENE GLYCOL	265
							CHLOROACETIC ACID	10
EPICHLORHYDRIN	0							
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EVANS CHEMETICS LP	228 E MAIN ST	WATERLOO	Seneca, NY	13165	ETHYLENE GLYCOL	33505		
					AMMONIA	3902		
					NITRATE COMPOUNDS	2350		
					N-BUTYL ALCOHOL	510		
					ACRYLONITRILE	500		
					ETHYLENE GLYCOL	265		
					CHLOROACETIC ACID	10		
					EPICHLORHYDRIN	0		
							
							



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