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K O D A K

P A R K



E N V I R O N

M E N T A L



A N N U A L

R E P O R T

A special issue of *Update* for our neighbors at Kodak Park



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**PHOTOGRAPHY**

*We are proud to enhance this year's report with the photography of Kodak employees and Kodak Park neighbors. These talented contributors showcase the natural beauty found in our local environment.*

*Front cover photos:  
Upper left and upper right: Steve Brady, Letchworth State Park  
Lower left: Steve Brady, George Eastman House Gardens*

*Lower right: Elizabeth Pixley, Henrietta Field*

**TO OUR KODAK PARK NEIGHBORS**



Kodak Park is undergoing significant change in response to the new realities Kodak faces. These changes are having negative impacts on our people and the Rochester community. Over the long term, though, I'm confident that Kodak Park will continue to play an essential role in the future success of Eastman Kodak Company and be an engine for the local economy.

One thing that will certainly not change is our commitment to corporate citizenship. Although this commitment extends to the entire Rochester community, we recognize a special bond with those of you who live near Kodak Park. We are committed to be a "neighbor of choice."

In pursuit of that goal, we initiated new strategies last year to further reduce and eliminate neighborhood complaints regarding noise, odors and particulates. These strategies, some of which are detailed in this report, build on our long-standing recognition that these issues are very important to you from a neighborhood "quality of life" perspective.

Our overall environmental performance and environmental responsibility are also important elements of our corporate citizenship commitment. More than a year ago, I established a vision of "Zero Incidents and 100% (regulatory) Compliance" for Kodak Park. Since that time, Kodak Park employees have been working to bring this vision closer to reality. Despite the many other challenges we face, all of us at Kodak Park have recognized that we must build on our environmental progress to date.

Significant progress was made during 2003 and is outlined in this report. Particularly gratifying is the recognition we have received from external agencies, including the Stratospheric Ozone Protection Award from the U.S. Environmental Protection Agency (EPA) and the Energy Star Corporate Commitment Award that was presented jointly by the EPA and the U.S. Department of Energy. I salute the people of Kodak Park who made this progress possible.

I also point to our strengthened partnerships with organizations that are working with us to preserve and enhance the environment. During 2003, the Kodak ECO (Environmental Conservation Outreach) Center was dedicated at the Seneca Park Zoo. We also presented a \$500,000 grant to The Nature Conservancy's Central & Western New York Chapter. The grant has supported purchase of environmentally sensitive lands, including a property critical to protecting the watershed for the City of Rochester.

As we move forward into the future, you can be assured that we will continue investing the resources and giving the attention required to further strengthen our environmental performance. A new set of five-year environmental goals will provide a key measure for our future progress.

Ultimately, the most important indicator of our performance is the continuing support of our neighbors. I believe that we will continue to earn and merit your support as we work together to shape the future of our site and our community.

  
Charles C. Barrentine  
Manager, Kodak Rochester Operations

# KODAK PARK

## Our Background

**DESCRIBING KODAK PARK** • Kodak Park (KP) is the largest photographic product manufacturing facility in the world, and the largest industrial complex in the northeast United States. The KP plant site is located on more than 1,300 acres, and stretches for nearly four miles through the City of Rochester and the Town of Greece. Much of KP's 22 miles of fence-line perimeter borders residential neighborhoods. Approximately 13,000 households and 550 businesses are located close enough to KP to be considered plant neighbors.

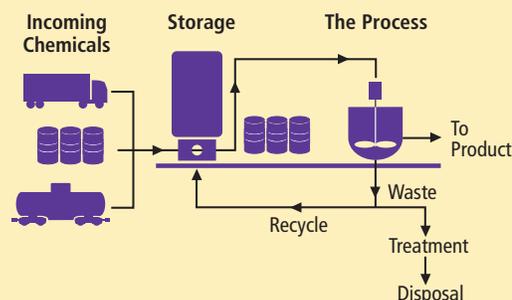
Kodak Park has often been called "A City within a City." It has some 158 manufacturing buildings, nearly 30 miles of roads, two power plants, its own sewer system, and water treatment facilities. KP also operates its own fire department, railroad, and a fleet of some 1,000 vehicles.

A wide variety of photographic films, papers, chemicals, and equipment are produced at Kodak Park. More than 15,000 people are employed in manufacturing operations, and facilities housing the major portion of Kodak's imaging research laboratories. Kodak Park also serves as an industrial park for businesses affiliated or allied with Kodak.

Since 1995, 56 older buildings and other structures have been demolished as part of a revitalization effort at Kodak Park. The most visible activity in 2003 was the demolition of Bldg. 58 at the east end of Kodak Park. This building had been previously used for slitting and packaging motion picture film — an operation that has been consolidated and upgraded in Bldg. 326. This is an example of how KP facilities are being refined and revitalized to support Kodak Park's role as "The Manufacturing, Logistics and Technology Center for the World Leader in Imaging."



### KODAK PARK CHEMICAL OPERATION



**HOW CHEMICALS ARE USED** • Each week, hundreds of truckloads and railcars of raw materials arrive at Kodak Park. KP's power plants consumed approximately 640,000 tons of coal in 2003—equivalent to 6,500 loaded railcars. KP operations require the use of hundreds of chemicals, in quantities ranging from lab-size containers to full tanker truckloads.

On a daily basis, thousands of gallons of chemicals are transported through many miles of pipelines to operations all over Kodak Park. For the last five years, the amount of solvents recycled has averaged 305 million pounds per year. Although millions of pounds of chemicals are captured and recycled annually, KP also operates its own chemical waste incinerator to allow waste treatment to occur on-site.

The diagram shown above can be used to follow chemicals through the plant from their arrival in trucks, railcars, or drums, through their storage and use in a manufacturing process, to their end use as products. This diagram also shows how waste chemicals are recycled or treated in ways that minimize their impact on the environment.

More than 200 people are employed by KP to work on health, safety and environmental programs. They study laws and regulations from various government authorities, obtain permits and monitor compliance, plan and construct new facilities, and ensure proper operation of our manufacturing and waste treatment facilities.

# ENVIRONMENTAL REGULATION *Overview*

**ENVIRONMENTAL REGULATIONS** • Environmental regulations are a major factor in operating a business like ours that is so heavily involved in handling chemicals. The following is a list of major federal environmental statutes administered by the U.S. Environmental Protection Agency (EPA).

- Clean Air Act
- Clean Air Act Amendments of 1990
- Superfund Amendments and Reauthorization Act (SARA)
- Emergency Planning and Community Right to Know Act (EPCRA)
- Clean Water Act
- Resource Conservation and Recovery Act (RCRA)
- Toxic Substances Control Act (TSCA)
- Pollution Prevention Act
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

**THE REGULATORY PROCESS** • The federal government often assigns responsibility to state governments to implement and monitor compliance with federal environmental statutes. New York State has this authority and has developed its own set of laws, regulations, guidelines, and enforcement practices, which are as stringent, and often more stringent, than the federal requirements. The New York State Department of Environmental Conservation (DEC) administers environmental regulations in New York State that address air emissions, wastewater discharges, chemical storage, waste handling and treatment practices, pollution prevention, and many other aspects of operations at Kodak Park.

Throughout each year, our technical staff reviews changes to state and federal regulations to determine new impacts on Kodak Park operations. Efforts in 2003 included negotiations with the DEC regarding the new Title V air permit for Kodak Park and the draft hazardous waste permit for the site. A work plan was also developed to meet federal requirements for completing environmental indicator assessments in and around Kodak Park.

*The following sections of this report describe our environmental performance and compliance with a multitude of regulations that apply to air emissions, water discharges, chemical storage and recycling, conservation and pollution prevention efforts, and waste handling practices. If you have questions or need more detailed information, please contact the Kodak Park Neighborhood Information Center at (585) 722-1707.*

Photos: Elizabeth Pixley, Trillium (left), and Violets and Sweet Woodruff (right)



## POLLUTION PREVENTION HIERARCHY

### Source Reduction

(Highest Priority)

Environmentally-friendly design of new products

Product changes

Source elimination



### Recycling

Reuse

Reclamation



### Treatment

Stabilization

Neutralization

Precipitation

Evaporation

Incineration

Scrubbing



### Disposal

Disposal at a permitted facility

## WASTEWISE MILESTONES

- 1994 Kodak joined WasteWi\$e as a charter member and was recognized for "outstanding contributions"
- 1995 Recognized for its "comprehensive waste reduction program"
- 1997 Becomes a WasteWi\$e senior partner
- 1998 Recognized as a "Program Champion"
- 1999 Recognized as "Partner of the Year"
- 2000 Second award for "Partner of the Year"
- 2001 Third award for "Partner of the Year"
- 2002 Second award for "Program Champion"
- 2003 Kodak is inducted into the WasteWi\$e "Hall of Fame"



# POLLUTION Prevention & Waste Minimization

**SOURCE REDUCTION** • The pollution prevention hierarchy, depicted in the chart on page 4, is the model used to minimize pollution from manufacturing operations at Kodak Park. Source reduction is the highest priority, with recycling, treatment and disposal being less preferred options. Many of the improvements highlighted in this report demonstrate Kodak Park's environmental performance as a result of source reduction initiatives.

**RECYCLING AND REUSE** • Kodak Park has long known the importance of recycling and reuse, with several key raw materials having been recycled for more than 100 years. Recycling and reuse follows source reduction in our pollution prevention hierarchy. In 2003, more than 650 million pounds of scrap materials, including solvents, plastics, wood, metals, and other by-products of manufacturing, were recycled and reused at Kodak Park. In addition, more than 20 million ounces of silver are recovered annually at KP.

**NATIONAL RECOGNITION** • Since becoming a charter member in 1994, Kodak has consistently been recognized for its achievements in *WasteWi\$e*, a voluntary program sponsored by the U.S. Environmental Protection Agency (EPA) that promotes solid waste prevention and recycling initiatives. In 2003, Kodak was inducted into EPA's newly created *WasteWi\$e* "Hall of Fame", the highest honor *WasteWi\$e* partners can achieve. Hall of Fame honors resulted from:

- Achieving a 77 percent return rate in the United States on Kodak one-time-use cameras, making it one of the nation's most recycled consumer products.
- Continued reuse of tons of crushed concrete, asphalt, and brick from demolition projects to build new roads and buildings.

Additional EPA recognition came with the presentation of a 2003 Stratospheric Ozone Protection Award for reducing emissions of ozone-depleting chemicals.

**STATE AND LOCAL RECOGNITION** • In 2003, the Genesee Valley Chapter of the New York State Water Environment Association recognized Kodak Park with the following awards:

- A Pollution Prevention Award was presented to the Rochester Imaging Chemicals organization for a materials substitution project that eliminated 280,000 pounds of chemical waste in a manufacturing process. This same achievement was also recognized with a Pollution Prevention Award from the state organization.
- A Pollution Prevention Award was presented to the Acetate Base Manufacturing Division at Kodak Park for making process changes to allow one million pounds of waste material to be recycled instead of incinerated annually (related article on page 13).
- A Silver Award was presented to Kodak Park for being in compliance with the numerous conditions of its wastewater discharge permit at least 99 percent of the time (see article on page 13).

## RECYCLED & REUSED SCRAP MATERIALS

(millions of pounds)

MATERIAL	2001	2002	2003
Solvents	280	307	283
Boiler ash	132	151	162
Plastic	92	98	102
Construction & demolition debris	32	15	46
Paper	43	25	26
Other recyclables	22	22	23
Other metals	17	15	15
Wood	7	10	15
Silver	1	1	1
<b>TOTAL</b>	<b>626</b>	<b>644</b>	<b>673</b>

# KODAK PARK Environmental Goals

**DOING OUR PART** • By far the largest portion of Kodak's worldwide production of imaging materials is based in Rochester. Building on more than 15 years of progress in strengthening environmental performance, the site has been a key contributor in helping the company achieve the current series of comprehensive, five-year environmental goals for Kodak's worldwide operations.

This section of the report highlights achievements from 1999 through 2003 in three strategic areas:

- Cutting our environmental emissions
- Reducing waste, water, and energy usage from our manufacturing operations, and
- Strengthening our environmental management system.

On a worldwide basis, Kodak was successful in achieving five out of six manufacturing-focused environmental goals established in 1998.

## CORPORATE GOAL PERFORMANCE (1999-2003)

Goal Category	Reduction Target	Actual Reduction
Methylene Chloride	50%	69% (estimated)
30 Priority Chemicals	40%	44% (estimated)
Greenhouse Gas Emissions	20%	17%
Energy Used*	15%	19%
Waste Generated*	25%	47%
Water Used*	15%	36%

\*Indexed to production

The three strategic initiatives provided a framework from which we reported progress. The accompanying charts and descriptions help illustrate the challenges and achievements made at Kodak Park over the previous five years in support of the corporate goals.

**REDUCING EMISSIONS** • The first strategic initiative focused on pollution prevention and source reduction. When measured from a 1997 baseline, Kodak Park achieved the following reductions:

- Emissions of 30 priority chemicals were down by 40%.
- Emissions of methylene chloride were down an additional 68%.
- Greenhouse gas emissions from our power plants were cut by 16%.

## 30 PRIORITY CHEMICALS

Acetaldehyde	Cyclohexane	Ethylene glycol	Isobutanol	Silver compounds
Acetone	Dichloromethane	Ethylene glycol monophenyl ether	Isopropanol	Tetrahydrofuran
Ammonia	1,2-Dichloropropane	Formaldehyde	Manganese compounds	Toluene
n-Butanol	1,4-Dioxane	Heptane	Methanol	Trichloroethylene
Cadmium compounds	Ethanol	Hydrochloric acid	Methyl ethyl ketone	Xylenes
Chromium compounds	Ethyl acetate	Hydrogen fluoride	Methyl isobutyl ketone	Zinc compounds



Kodak Park's failure to meet its greenhouse gas reduction target in 2003, contributed to the company falling short of its corresponding corporate goal.

## PRESERVING NATURAL RESOURCES

At Kodak Park, efforts to preserve natural resources resulted in the following reductions when indexed to site production levels:

- A 38% reduction in manufacturing waste.
- A 5% reduction in energy usage in manufacturing.
- A 28% reduction in water usage.

It should be noted that Kodak Park successfully achieved an absolute energy usage reduction of 16 percent between 1997 and 2003, which helped contribute to meeting the corporate energy reduction goal. However, due to production volume decreases in 2003, the site energy production-indexed measure for the year increased.

## STRENGTHENING OUR MANAGEMENT SYSTEM

The Kodak Rochester Environmental Management System (EMS), registered in 1999 during initial ISO 14001 certification, provides an environmental framework for organizations throughout Rochester, including Kodak Park. The EMS provides common direction and helps ensure compliance with corporate and regulatory requirements, as well as the requirements of ISO 14001. Comprehensive site audits by an independent registrar have found many of Kodak's programs and initiatives to be "best in class."

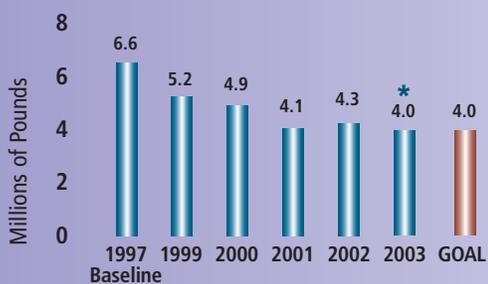
A new set of corporate goals has been established for the next five years (2004 – 2009) that build on the company's long history of environmental progress. We will begin reporting on the new goals next year.



Photo: Cindy Dunne, Daylilies

## REDUCE EMISSIONS

### 30 PRIORITY CHEMICALS — KODAK PARK

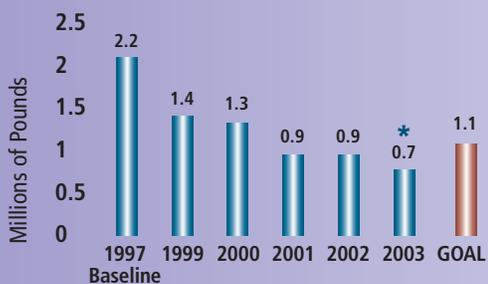


**GOAL:**  
40% reduction in emissions of 30 priority chemicals

**STRATEGY:**  
Source reduction

**PROGRESS:**  
Process and yield improvements in Acetate Film Base Manufacturing, Solvent Coating, Silver Recovery and Utilities

### METHYLENE CHLORIDE — KODAK PARK

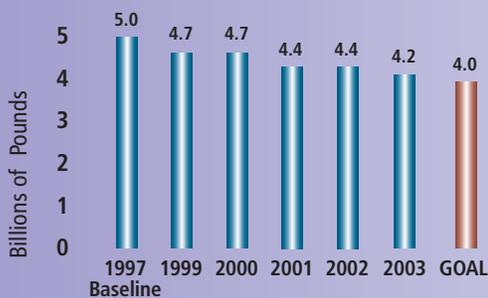


**GOAL:**  
50% reduction in emissions of methylene chloride

**STRATEGY:**  
Source reduction

**PROGRESS:**  
Process and yield improvements in Acetate Film Base Manufacturing

### GREENHOUSE GAS (CO<sub>2</sub>) — KODAK ROCHESTER



**GOAL:**  
20% reduction in emissions of carbon dioxide

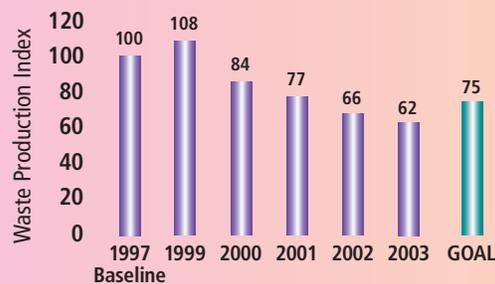
**STRATEGY:**  
Source reduction

**PROGRESS:**  
Site energy reductions and Utilities process improvements

\* Estimated data

## REDUCE NATURAL RESOURCE USE & WASTE

### MANUFACTURING WASTE — KODAK ROCHESTER

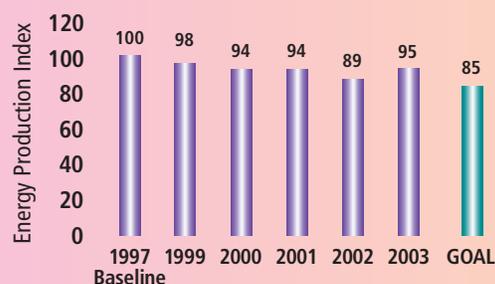


**GOAL:**  
25% reduction in manufacturing waste indexed for production volumes

**STRATEGY:**  
Source reduction and recycling

**PROGRESS:**  
Process improvements and recycling in Synthetic Chemicals and Rochester Paper Flow

### ENERGY CONSERVATION — KODAK ROCHESTER

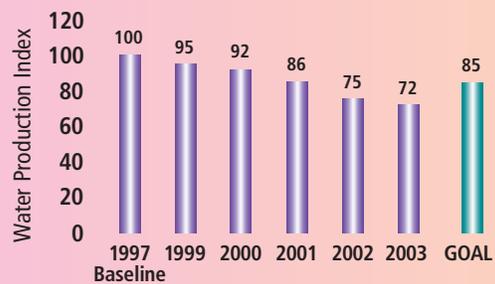


**GOAL:**  
15% reduction in energy usage indexed for production volumes

**STRATEGY:**  
Source reduction

**PROGRESS:**  
Demolition of obsolete and surplus buildings plus operational efficiency projects completed in major manufacturing areas

### WATER USAGE — KODAK PARK



**GOAL:**  
15% reduction in water usage indexed for production volumes

**STRATEGY:**  
Source reduction and reuse

**PROGRESS:**  
Process improvements in Utilities and Synthetic Chemicals

**REDUCING AIR EMISSIONS** • Kodak Park remains committed to reducing chemical air emissions. In recent years, tens of millions of dollars have been invested to reduce these emissions by modifying processes, reformulating products and improving emission controls.

In 2002 (the latest year for which data is available), SARA-reportable air emissions fell to 3.8 million pounds—an 80% reduction since 1987.

Over the last 15 years, annual air emissions of methylene chloride have been reduced by about eight million pounds, and annual air emissions of methanol are down nearly 3.9 million pounds. Chlorofluorocarbon (CFC) air emissions have been significantly reduced over the last 10 years—an accomplishment that contributed to the Environmental Protection Agency decision to present Kodak with the 2003 EPA Stratospheric Ozone Protection Award.

Using natural gas reburn technology, combined with energy conservation efforts, utility boiler emissions have been significantly reduced for nitrogen oxides, sulfur dioxide and hydrochloric acid. In 2003, efforts to reduce the opacity of power plant emissions at Kodak Park continued.

**AMBIENT AIR MONITORING** • Since 1990, 24-hour air samples have been collected at up to seven locations around Kodak Park. About 60 samples are collected per year at each location. Sampling results are shared quarterly with the New York State Department of Environmental Conservation (DEC) and the Department of Health (DOH). All samples are analyzed for methylene chloride, the chemical used in largest volume at Kodak Park.

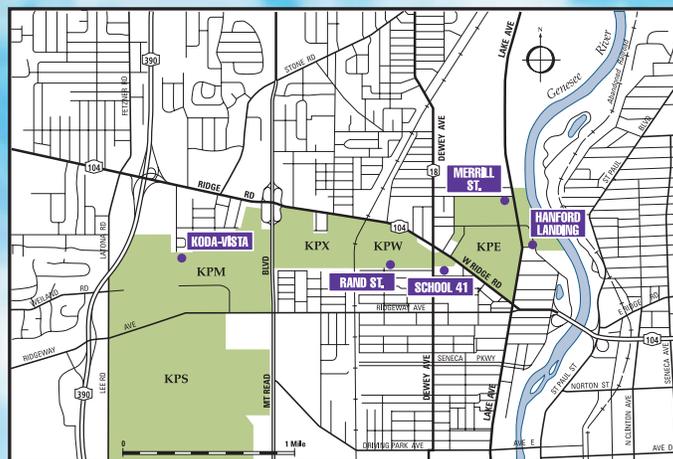
In July 2000, the DEC's Division of Air Resources lowered the annual guideline concentration (AGC) for methylene chloride from 8 parts per billion (ppb) to 0.6 ppb to be consistent with federal guidelines. The DEC uses annual guideline concentrations to evaluate air permits and determine required levels of emission control for air emission sources.

As indicated in the accompanying chart, at each of the air monitoring locations, annual average air concentrations of methylene chloride were below 8 ppb—a concentration that is considered to be protective of human health over a lifetime of continuous exposure.

Methylene chloride air emissions from Kodak Park have been reduced by 89% since 1987, resulting in lower monitored concentrations of this chemical beyond plant boundaries. It is expected that this correlation will continue as Kodak strives to reduce air emissions of methylene chloride even further.

**TITLE V COMPLIANCE** • In February 2003, the DEC issued the first Title V air permit for Kodak Park. This five-year, facility-wide permit contains more than 1,300 pages of conditions and monitoring requirements for 400-plus air emission sources at Kodak Park. Kodak's computer-based Title V compliance assurance system was used to collect nearly 42,000 pieces of compliance data between February 24 and December 31. Kodak Park's compliance with Title V permit conditions in 2003 was approximately 99.6% based on the number of individual assessments performed.

## AMBIENT AIR MONITORING LOCATIONS



## AIR CONCENTRATIONS OF METHYLENE CHLORIDE (parts per billion)

Sampling Location	Annual Average 2003	5-Year Average (1999-2003)
Koda-Vista	3.1	3.0
Rand Street	1.1	1.8
School 41	0.9	1.1
Merrill Street	6.6	6.9
Hanford Landing Road	1.9	3.0

## KODAK PARK SARA REPORTABLE AIR EMISSIONS SUMMARY (>25,000 POUNDS) (in thousands of pounds)

Substance	Baseline Year 1987	2001	2002	Percent Change 2001-2002	Percent Change 1987-2002
Hydrochloric acid	2,300	1,500	1,400	-7	-39
Methylene chloride	8,920	860	940	-9	-89
Sulfuric acid	NR	580	540	-7	NA
Methanol	4,279	400	410	3	-90
Hydrogen fluoride	97	160	160	0	65
1-Methyl-2-pyrrolidone	NR	75	90	20	NA
Ozone	NR	31	58	87	NA
Cyclohexane	303	37	38	3	-87
Chlorine	35	42	31	-26	-11
Toluene	281	40	31	-23	-89
Methyl ethyl ketone	128	32	28	-13	-78

NR=No reportable release NA=Not applicable

**KODAK PARK POWER PLANT EMISSIONS**  
(in millions of pounds)

Emission	1995	1997	1999	2001	2002
Sulfur oxides (SO <sub>x</sub> )	66.5	57.6	52.7	54.6	47.6
Nitrogen oxides (NO <sub>x</sub> )	21.5	15.1	10.9	10.3	9.9
Carbon monoxide (CO)	3.4	3.2	1.5	1.6	1.5
Particulate	2.7	2.3	2.2	1.4	1.3
Volatile organic compounds (VOC)	0.4	0.2	0.2	0.2	0.2

**SARA-REPORTABLE AIR EMISSIONS**



**METHYLENE CHLORIDE AIR EMISSIONS**



**CLEAN**  
*Water*

**INDUSTRIAL WASTEWATER** • Most of the water from manufacturing processes and a large portion of the storm water at Kodak Park is directed to and treated at the King's Landing Wastewater Treatment Plant. This plant, located on the west bank of the Genesee River and east of Kodak Park, treats an average of 24 million gallons of industrial wastewater per day.

Kodak is the only company in Monroe County that operates an industrial wastewater facility with primary and secondary treatment capability. This modern facility utilizes physical, chemical, and biological treatment processes to remove materials in the wastewater coming from Kodak Park.

In 1999, the New York State Department of Environmental Conservation (DEC) issued Kodak a new permit, valid for five years, regulating discharges from the treatment plant. The conditions of this permit limit the type and quantity of materials that can be discharged from the plant and establish strict monitoring requirements to ensure compliance. The DEC approved revisions to this permit late in 2002, involving storm water and cooling water discharges from Kodak Park, and the infrequent treatment of sanitary waste to facilitate sanitary sewer line repairs.

Results from thousands of analytical tests conducted annually demonstrate our ability to consistently meet the conditions of this permit. In 2003, the Genesee Valley Chapter of the New York State Water Environment Association recognized Kodak Park with an award for being in compliance with the numerous conditions of its wastewater discharge permit at least 99 percent of the time.

The Kodak Park compliance rate in 2003 was greater than 99.9%, with no permit exceedences reported for KP wastewater discharges and only one exceedence reported for storm sewer discharges (see related article on page 13).

**GROUNDWATER** • There are nearly 800 groundwater monitoring wells in Kodak Park and adjacent neighborhoods. Groundwater elevation measurements are collected twice a year from each well to determine groundwater flow direction. In addition, samples are routinely collected from more than 150 of these wells annually to monitor water quality in and around Kodak Park.

Several techniques are being used to contain contaminated groundwater located beneath Kodak Park. There are currently 30 groundwater pumping systems operating at key locations to intercept groundwater before it reaches plant boundaries. Groundwater collected from these systems is pumped into the KP industrial sewer for treatment at the wastewater treatment plant. Annually, Kodak actively removes and treats more than 60 million gallons of groundwater from beneath Kodak Park.



Photo: David Falzarano, Lake Ontario in winter

# TREATMENT & Disposal

## CHEMICAL WASTE

**INCINERATOR** • The Bldg. 218 chemical waste incinerator, located near the railroad crossing on Ridge Road, is a key treatment facility at Kodak Park. The liquid and solid wastes destroyed there are ones that cannot be recycled, reused or recovered. The Bldg. 218 facility utilizes high-temperature incineration to destroy at least 99.99% of organic wastes, converting them to mostly carbon dioxide and water.

This chemical waste incinerator operates under a permit that is required by the federal Resource Conservation and Recovery Act (RCRA).

In 1995, Kodak initiated the process to renew the existing RCRA permit with the U.S. Environmental Protection Agency (EPA). A new operating permit is being negotiated with the New York State Department of Environmental Conservation (DEC). The DEC has issued a draft of this permit for public review and comment.

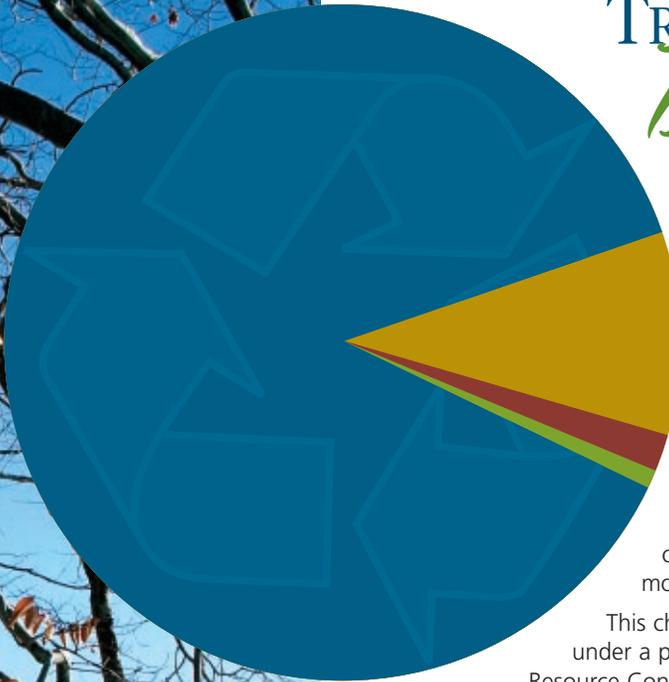
Trial burns have been conducted periodically under the supervision of the DEC and EPA. These tests have demonstrated that the incinerator operates with a destruction and removal efficiency (DRE) of at least 99.99%, during worst case operating conditions, for even the most difficult-to-destroy organic wastes. The EPA, DEC and New York State Department of Health have reviewed extensive risk assessments based on these stringent emissions tests. These agencies have concluded that the Bldg. 218 chemical waste incinerator operates in a manner that is protective of human health.

In 2001, in preparation for new federal regulatory requirements, Kodak completed construction of a multi-million dollar air emission control equipment upgrade at Bldg. 218 to further reduce emissions. Air emission tests conducted during 2002 have confirmed that this upgrade is performing as designed, reducing emissions of particulate, metals and dioxins by 50–80%. Kodak is currently planning to complete new emissions testing in the spring of 2004 to demonstrate compliance with applicable federal and state emission standards.

**MULTIPLE HEARTH INCINERATOR** • The Bldg. 95 multiple hearth incinerator is located at the King's Landing Wastewater Treatment Plant on the west bank of the Genesee River. This unit destroys byproducts generated during the wastewater treatment process.

Air emission tests conducted in 2001, with EPA and DEC oversight, indicate that the overall destruction and removal efficiency of the multiple hearth incinerator is better than (above) the minimum required level of 99.99% for organics. Emissions of particulates, metals and dioxins/furans were also better than (well below) applicable current and pending federal and state emission standards.

Additional testing was conducted in 2002 to demonstrate compliance with new federal emission requirements. A trial burn test report, along with data collected during the additional emissions testing, have been submitted to the EPA and DEC for their review.



### DISPOSITION OF SARA REPORTABLE CHEMICALS AT KODAK PARK

(2002 Data — in pounds)

	<b>In-Process Recycling</b>	> 300 Million
	<b>On-Site Treatment</b>	~ 28.4 Million
	<b>Released to Environment</b>	~ 4.4 Million
	To Air	3.8 Million
	To Water	600,000
	To Land	0
	<b>Off-Site Transfers</b>	< 0.6 Million
	Recycle/Recovery	270,000
	Treatment/Disposal	260,000

Photo: Ron Belczak, Black Creek in winter

# REDUCING Our Impact

**ENERGY CONSERVATION** • Energy is a significant part of Kodak's cost picture. Production of photographic products requires carefully controlled temperature and humidity conditions, so there are massive energy needs at a number of locations around Kodak Park.

Two power plants support these energy needs. The power plants utilize an energy-efficient process called tri-generation to get triple use from the steam they produce. The steam operates the refrigeration equipment, drives electrical generators that supply most of KP's electricity, and also is used to supply heat to manufacturing processes. KP's power plants are operated by Trigen-Cinergy Solutions (TCS), a company with extensive experience in efficient operation of energy facilities.

With energy comprising such a major cost, it makes good business sense to drive energy conservation. Since 1997, Kodak Park has achieved a 16% reduction in energy usage. The amount of energy saved is about equal to the total energy demand of the 13,000 households that are close enough to KP to be considered neighbors. It has also resulted in a reduction of carbon dioxide emissions equivalent to the impact of taking 72,500 cars off the road.

Key energy reduction strategies have included consolidation of manufacturing space, manufacturing waste reduction, energy-efficient lighting and investment in more energy-efficient motors and equipment.

**ENERGY STAR RECOGNIZES KODAK** • The U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE) jointly sponsor a program called Energy Star to encourage energy conservation. Many consumers are familiar with the Energy Star logo that is used to designate products meeting energy-efficient standards.

Kodak has long produced equipment products that meet Energy Star efficiency guidelines. In 2001, the company enrolled in a new Energy Star partnership program that enables companies to benchmark and improve their overall energy performance. In 2003, Kodak received the Energy Star Corporate Commitment Award, the highest honor a company can receive for practicing and promoting energy efficiency. In 2004, Kodak was again honored — this time with the Energy Star Leadership in Energy Management Award.



**INDUSTRIAL SEWER INTEGRITY** • Since 1994, Kodak Park has been involved in a multi-year program to inspect, repair, and upgrade much of the 28 miles of industrial sewer lines running underneath the site.

In 2003, Kodak completed a \$16.9 million, five-year, Initial Release Prevention Program (IRPP), which involved inspecting and improving 660 industrial sewer structures at KP.

Kodak is using durable polyurethane resins, leak-proof liners, or, when necessary, constructing new structures to improve the integrity of KP's industrial sewer system. These sewer upgrades continue to further reduce the likelihood of future environmental releases from Kodak Park.

## CLEAN-UP EFFORTS

The Kodak Park Corrective Action Program (KPCAP) was implemented several years ago as a way to systematically address the numerous groundwater monitoring and cleanup requirements stipulated in many state and federal environmental regulations.

It has three key elements:

1. Facility investigations determine groundwater and soil conditions, and the nature and extent of contamination in an area.
2. Corrective measures studies are conducted to investigate clean-up options and determine if remedial measures should be implemented to contain groundwater or soil contamination.
3. This information is then used to develop and implement identified corrective measures.



Photo: Steve Brady, Letchworth State Park

Significant KPCAP activities in 2003 included:

- New York State Department of Environmental Conservation (DEC) approval of final corrective measures for Bldgs. 301 and 329 in the KPM section of KP (south of the KodaVista neighborhood), and for the Weiland Road Landfill and the property encompassing the King's Landing Wastewater Treatment Plant.
- Installation of a new interim remedial measure at the northwest corner of Kodak parking lot 40 (east of Lake Avenue and south of Keehl Street).
- Facility investigations at Bldgs. 502 and 605 in the KPS section of KP (south of Ridgeway Avenue), at Bldg. 214 in the northern portion of KPX (east of Mount Read Boulevard), and for 15 ungrouped solid waste management units across Kodak Park.

## *New approach yields fewer impacts on Kodak Park neighbors*

Two teams formed in 2003 are taking a different look at neighborhood concerns and are using “lean thinking” principles to identify and eliminate potential sources of neighborhood impacts and enhance the neighborhood complaint response process.

“This is an active process focused on preventing community impacts rather than reacting to concerns after they are brought to our attention by plant neighbors,” noted David Strong, manager of Neighborhood Relations.

Both teams are involving managers of key operations in efforts to reduce noise, odor and particulate impacts beyond plant boundaries. The first team was formed in the spring for the KPM section of the site — the area located between Mt. Read Boulevard and Route 390, south of the KodaVista Neighborhood. The KPM team was instrumental in achieving an 84% reduction in noise concerns and a 56% reduction in odor concerns from neighbors living near that area of Kodak Park.



*Members of the KPM Community Impact Reduction Team*

The second team was formed in the fall for the KPW section of KP — south of Ridge Road between Dewey Avenue and the railroad tracks. This team has successfully eliminated the elusive source of a musty odor that had been frequently detected along Ridge Road West.

“We are working hard to take ownership as a team for any impacts,” said Dave Coulter, manager of Solvent and Recovery.



*Members of the KPW Community Impact Reduction Team*

Kurt Carlson, manager of the Polymer Department of Estar Manufacturing, noted that it was very beneficial to get to know other managers of neighboring operations at the site. “We really didn’t know each other for the most part, since many of our operations tend to be pretty compartmentalized or unrelated,” he said.

The teams also took walks through adjacent neighborhoods, an activity that provided team members with a fresh perspective and heightened sensitivities to the sights and sounds of their operations from a neighbor’s point of view.

“The KPM team came away with an appreciation for KodaVista as a beautiful, quiet neighborhood,” said Carlson. “We were accompanied by some of the neighborhood leaders, and we got to meet some of the families in the neighborhood, so the neighborhood is not just addresses and street names to us now.”

Carlson said that this sensitivity now extends throughout his department, where some operating procedures were changed to help minimize the potential for odor concerns.

All involved point to the team as an outgrowth of Kodak’s commitment to corporate citizenship.

“We truly want to be good neighbors and to be perceived that way by the community,” said Coulter. “We take pride in what we do here at Kodak Park, and our reputation is an important part of that.”

## *Edge trim recycling program trims waste in Acetate Base Manufacturing*

The tiny strips are only a fraction of an inch wide, but they add up to more than a million pounds of waste a year.

A fraction of an inch must be trimmed from the edges of each giant roll of acetate film base produced at Kodak Park to be used in making consumer, professional and motion picture films at Kodak plants around the world.

Until last year, that million-plus pounds of annual edge trim waste was shipped to an off-site energy recovery facility for incineration. Because of the high purity required in the photographic manufacturing process, there were concerns based on previous experience that the material would cause contamination if it were reused.

However, as part of its environmental goals program, Kodak in 1997 had committed to a 25% reduction in manufacturing waste over five years. While recycling and recovery had been long established principles of manufacturing at Kodak Park, every opportunity is being looked at with fresh eyes.

In Acetate Base Manufacturing, a cross-functional team was set up to investigate a viable process to recover the edge trim material. The team utilized the improvement tools of the Kodak Operating System — a production system that seeks to eliminate all forms of waste.

A long investigation and evaluation process stretching over more than two years was required to assure that existing manufacturing processes could accommodate the recycled material with minimal adjustments. The “clean and green” full go-ahead was achieved by mid-year of 2003 and the recycling program was fully implemented.

The program is proving beneficial to Kodak's bottom line, as well as to the environment. It will save Kodak more than \$1 million annually in the purchase of cellulose acetate, a raw material produced from wood and plant fibers. The cellulose acetate is mixed with solvents, primarily methylene chloride, to form a liquid with the consistency of warm honey that is cast on highly polished wheels to make film base.

In the environmental impact reduction ledger, there are a couple of major gains, in addition to the conservation of natural resources through recycling of the acetate material. When the acetate waste was burned, it produced more than one million pounds annually of carbon dioxide, a greenhouse gas. In addition, there were significant emissions associated with the diesel trucks required to transport the waste to the energy recovery facility.



*Members of the Acetate Edge Reuse Kaizen Team*



*Members of the King's Landing Compliance Team*

## *Treatment plant achieves perfect record in 2003*

It's hard to be perfect over the course of a year when there are several thousand opportunities for an error.

But that's exactly the record achieved by the team operating the Kodak Park wastewater treatment plant at King's Landing during 2003. Permitted discharge limits from the plant are set by the New York State Department of Environmental Conservation and have been significantly tightened over the years.

The plant operating team annually conducts several thousand tests to monitor compliance with the discharge limits. Any monitoring test with results in excess of the limits is deemed an “exceedence” of the discharge permit. Extra tests beyond the required ones are also performed when there is any suspicion of a possible exceedence.

Because of the complexity of KP operations, operational issues at the treatment plant, and the stringent limits set in the discharge permit, it is typical to have several exceedences in a year. Often these exceedences have occurred in connection with periods of intense rainfall runoff that significantly increase the plant's influent.

The number of exceedences from the plant has generally trended downward in recent years, despite the fact that permit discharge limits have been significantly tightened. Much of the progress is due to heightened awareness and care by users of the KP industrial sewer.

The plant can readily handle routine discharges with a high degree of treatment efficiency. However, process upsets or spills to the sewer can reduce the efficiency and cause an exceedence. So operating units at Kodak Park have worked diligently to eliminate these incidents, and when they do occur, to inform the treatment plant. With adequate notice of an unusual discharge, the treatment plant personnel can take special measures to avoid an exceedence.

Treatment plant staff go to great lengths to pay attention to all the little technical details that make operation of an industrial wastewater treatment plant a very complex process. Things such as sludge settling quality, oxygen use and phosphorus concentrations may not be exciting, but those are the details that made perfection possible in 2003.

# RESPONDING To Community Concerns

**HOW ARE WE DOING?** • For more than ten years, Kodak Park plant neighbors have been asked to provide feedback to Kodak regarding awareness of KP community programs and services, their view of KP environmental performance, their overall perception of KP, and the role of KP in the community. The information gathered is used to help measure the effectiveness of community outreach activities at Kodak Park.

Results from the written and telephone surveys conducted in 2003 indicate that most plant neighbors have a favorable opinion of operations at Kodak Park. Approximately two-thirds of the people surveyed (66%) had a positive perception of Kodak Park and felt that way because of the positive economic and employment benefits resulting from Kodak Rochester operations. Also contributing to positive perceptions were the company's efforts to communicate with the public and be a responsible environmental steward. Negative perceptions of Kodak Park were largely based on concerns regarding environmental performance, as well as the loss of jobs in the Rochester area.

## of A DECADE of Progress

### 1994

A seven-year, \$25 million program is completed to **eliminate all electrical transformers containing PCBs**, a type of coolant identified as a major environmental threat if leaked or spilled.

Kodak Park's **Neighborhood Information Center** receives local and national recognition for its neighborhood relations and environmental communications efforts.

Acetate Film Base Manufacturing operations achieve **99% control of methylene chloride emissions** through a combination of source reduction and control initiatives, helping Kodak Park achieve an overall 63% reduction of emissions of this chemical.

Kodak joins EPA's **WasteWiSe** program as a charter member and receives recognition for "outstanding contributions."

### 1995

Kodak is recognized by the EPA with an **"Environmental Champion" Award** for its voluntary initiative in reducing air emissions of targeted chemicals.

### 1996

The Synthetic Chemicals department installs a new form of air emissions control called **Bioton**, which uses microorganisms to treat organic air emissions from its operations.

### 1997

The **Kings Landing Wastewater Treatment Plant** completes its 30th year of operation. It has been regularly upgraded to meet ever-strengthening discharge standards set under its state operating permit.

### 1998

A \$15 million **Regenerative Thermal Oxidizer** begins operation and demonstrates significant reductions in air emissions from KP's Solvent Coating operations.

### 1999

Kodak announces comprehensive **corporate environmental goals**, setting aggressive targets to further reduce environmental emissions, waste, water usage, and energy consumption in world-wide manufacturing operations.

### TELEPHONE SURVEY RESPONSES

On a scale of 1 to 10 where 1 is unacceptable and 10 is the best it could be, please rate Kodak Park on the following:

Control of:	Year 2003 Responses	1992-2003 Range of Responses
Water Pollution	6.3	5.5 - 6.6
Air Pollution	5.4	5.1 - 6.2
Noise	8.0	6.9 - 8.0
Particulate	5.9	5.4 - 6.5
Odors	5.6	4.8 - 6.0

When asked to rate KP environmental performance:

- 84% of survey respondents indicated that Kodak Park has improved its control of pollution in recent years.
- 76% agreed that Kodak works hard to keep its pollution to a minimum.
- 73% of respondents indicated that Kodak Park protects the health and safety of people living in the community.
- 93% said that Kodak's environmental performance is the same or better than other U.S. companies.

**SETTLEMENTS** • In June 2003, Kodak agreed to pay a \$210,000 fine to the New York State Department of Environmental Conservation (DEC) for alleged violations of hazardous waste management regulations. In July 2003, Kodak agreed to pay a \$4,500 fine to the U.S. Environmental Protection Agency (EPA) for an alleged failure to submit a timely report for trichloroethylene usage for reporting year 1998. In July 2003, Kodak agreed to

*"We will invest the resources required to meet our commitment to continually improve our environmental performance."*

pay a \$39,000 fine to DEC for alleged violations dating back to 1999 resulting from effluent discharges from the King's Landing Wastewater Treatment Plant. In December 2003, Kodak paid a \$200,000 penalty to the DEC for alleged violations of the Clean Air Act Amendments of 1990 and the DEC Title V permit program. Kodak also agreed to complete an additional environmental improvement project on one of the boilers at the Bldg. 31 power plant to further reduce sulfur dioxide emissions.

**PROGRAM AND SERVICES** • Probably the most visible way Kodak Park communicates with the community is through its *Update* newsletter. Four times a year this publication is sent to approximately 13,500 plant neighbors and more than 15,000 KP employees in an effort to keep people informed about developments at Kodak Park.

The Neighborhood Information Center (NIC), located near the west end of the Bldg. 28 lobby at 200 West Ridge Road, has been in operation for more than 15 years and is open to anyone seeking information about Kodak Park-related issues. Knowledgeable staff members are available to assist visitors between 8:00 a.m. and 5:00 p.m., Monday through Friday.

Plant neighbors who wish to express a concern about plant operations can call the KP Environmental Concerns Line at 477-4500. This phone number is available 24 hours a day, every day of the year.

Kodak Park proudly sponsors a Community Advisory Council (CAC) with members representing local government, school districts, plant neighbors, and special interest groups. The CAC continues to meet monthly to improve the exchange of information between KP and the community. KP representatives also meet twice a month with members of specific neighborhoods adjacent to the plant. These meetings usually involve in-depth discussions of issues raised by the neighbors as well as topics suggested by plant personnel.

**COMMUNITY SUPPORT AND OUTREACH** •

Support of community events offers Kodak Park employees an opportunity each year to personally demonstrate their commitment to the environment and develop an understanding of local issues. In 2003, employees participated in many community outreach events including environmental fairs, student projects and interviews, and school workshops and presentations.

In May, Kodak was honored by Monroe County with the naming of the new Kodak ECO (Environmental Conservation Outreach) Center at the Seneca Park Zoo. The center serves as a conservation hub at the zoo and houses the zoo's only classroom, which is used to educate thousands of children annually. In June, Kodak presented the Nature Conservancy's Central and Western New York Chapter with a \$500,000 gift in support of local, regional, and international conservation projects.

**COMMITMENT** • Manufacturing operations can impact plant neighbors in a variety of ways. Kodak Park remains committed to addressing the concerns of plant neighbors and anticipating how projects within KP might affect neighborhoods adjacent to the plant. Calls from plant neighbors are investigated through the Neighborhood Complaint Response Program. Each call is investigated thoroughly and investigation results are shared with the neighbor and plant management.

In 2003, two community impact reduction teams were formed to more effectively address concerns from adjacent neighborhoods. Team efforts were initially focused on odor and noise issues and yielded significant results by using a collaborative approach to resolve neighborhood concerns emphasizing the identification and elimination of potential impacts before they become a problem for plant neighbors (see article on page 12).

<p>—</p> <p>Kodak completes its <b>Value Protection Program (VPP)</b>, a ten-year commitment to restore normal real estate conditions to areas around Kodak Park.</p> <p>—</p> <p>Kodak Park achieves <b>ISO 14001 registration</b>, gaining international recognition for its environmental management system.</p>	<p><b>2000</b></p> <p>Work begins on <b>upgrades to the Bldg. 218 air emission control equipment</b> designed to meet new, lower air emission (MACT) standards.</p> <p>—</p> <p>Kodak partners with EPA in a trial to apply the <b>Pollution Prevention Framework (P2 Framework)</b> to early product development under EPA's <b>Project XL Program</b>.</p> <p>—</p> <p>Phase 1 of Kodak Park's <b>CFC Reduction Program</b> is completed resulting in a <b>92% decrease in emissions of CFC's</b> from Kodak Park since 1993.</p>	<p><b>2001</b></p> <p>A \$12 million upgrade is completed and <b>operations begin at Bldg. 218 with new air emission control equipment</b> designed to meet new, lower air emission (MACT) standards.</p> <p>—</p> <p>Kodak assembles a panel of leading independent scientists to serve on a <b>Pollution Prevention Advisory Panel</b> as consultants on issues related to the company's environmental performance.</p>	<p><b>2002</b></p> <p>Kodak Park reports a <b>90% reduction in air emissions of methylene chloride</b>.</p> <p>—</p> <p>A comprehensive 3rd-party site audit <b>renews Kodak Rochester's ISO 14001 registration</b>, with many programs and initiatives recognized as "best in class."</p>	<p><b>2003</b></p> <p>Kodak receives a <b>Stratospheric Ozone Protection Award</b> for its efforts to reduce emissions of ozone depleting chemicals.</p> <p>—</p> <p>Kodak receives an <b>Energy Star Corporate Commitment Award</b> for leadership in practicing and promoting energy efficiency.</p>	<p>—</p> <p>Kodak is inducted into EPA's <b>WasteWiSe "Hall of Fame"</b> for many years of outstanding waste reduction results.</p> <p>—</p> <p>Reporting period ends for first set of <b>corporate environmental goals (1999-2003)</b>.</p>
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Photo: Steve Brady, Stony Brook State Park

Issue 2, April 2004

# Update

Eastman Kodak Company  
343 State Street  
Rochester, New York 14650

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Neighborhood Information Center (585) 722-1707  
Christopher Veronda, Update Editor (585) 722-9627  
Fred Scott, Update Technical Editor (585) 722-1662  
Cynthia Ames, Update Technical Editor (585) 722-1770  
Kodak Park Environmental Concerns Line (585) 477-4500

[www.kodak.com/go/hse](http://www.kodak.com/go/hse)

## KODAK PARK COMMUNITY ADVISORY COUNCIL

### Mission Statement

The Kodak Park Community Advisory Council seeks to improve the exchange of information between Kodak Park and the community by reflecting constituents' present and future interests, so that Kodak Park operates in a way that is responsive to the needs of the community.

### Community Members

- Bob Buesing, Koda-Vista Neighborhood Association
- Jim Cloonan, Member-at-Large
- Dan Coyne, Maplewood Neighborhood Association
- Ralph DeStephano, Greece Central School District
- Charlotte Fraser, League of Women Voters
- Mark Gregor, City of Rochester
- Rob Hochstetler, Trigen-Cinergy Solutions
- Ann Howard, Rochester Institute of Technology
- Bob Jones, Center for Environmental Information
- Kate Kendell, Irondequoit PTA
- Greg Mason, Neighbors Building Neighborhoods, Sector 2
- Greg Merrick, Town of Irondequoit
- Elizabeth Pixley, Monroe Community College
- Mike Schifano, Monroe County Division of Pure Waters
- Larry Sorel, Seneca Park Zoo
- Linda Storti, Rochester City School District, School #41
- Max Streibel, Town of Greece

### Kodak Members

- Cindy Ames
- John Richardson
- Fred Scott
- Dave Strong
- Scott Summers
- Chris Veronda

## KODAK ROCHESTER HEALTH, SAFETY, AND ENVIRONMENT POLICY

*In Kodak Rochester, we are committed to health, safety, and environmental excellence through:*

- *Compliance with regulations and corporate initiatives,*
- *Prevention of pollution,*
- *Providing a safe and healthful workplace, and*
- *Continual improvement of HSE performance.*

*HSE measures are integral components of our performance-based culture and business strategies. Continual improvement is achieved through leadership and personal responsibility, adherence to Kodak Values, effective training and communication, and ongoing performance feedback.*



**Picturing a Better Environment**