
THE

ENVIRONMENTAL
MANUAL
FOR MUNICIPAL OFFICIALS

Fall 1998

Second Edition

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Sally Dudley
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PREFACE

Municipal boards and commissions, particularly those whose work concerns either land use or public health, are an enormous potential resource in our state's effort to protect the environment. We have not had the full benefit of this resource, however, because many board members are not fully informed on our state's environmental requirements and the ways in which the actions of state agencies affect them.

This *Manual* is written for the more than 20,000 interested, dedicated citizens who serve their communities as members of the governing body, planning board, board of adjustment, environmental commission, historic preservation commission, board of health or municipal utilities authority.

The *Manual* is not intended to be a definitive statement or official interpretation by any state agency as to the law pertaining to environmental protection. Nor is the *Manual* a statement of the policies of the New Jersey Department of Environmental Protection or any other state agency. In dealing with specific situations the reader is encouraged to refer to applicable statutes and regulations and to secure the advice of counsel. To determine the position of the Department in any particular instance, the reader should consult an authorized official of the Department. Hopefully, these essays on municipal power and New Jersey's environmental needs will be useful and engaging for members and staff of local boards and commissions and for other interested citizens as well.

HOW TO USE THIS BOOK

The *Environmental Manual for Municipal Officials* comprises three sections.

Part I presents an overview of some of the major environmental issues facing state and local officials in New Jersey, including air and water pollution; land and wildlife preservation; waste management; control of noise, radiation, toxic substances and pesticides; and the protection of special areas and historic resources.

Part II provides information on several types of municipal boards and commissions, each in a separate chapter containing two sections. The first section describes the laws that establish each municipal body and define its powers and duties, with a focus on environmental functions and responsibilities. The second section examines ways in which each type of board or commission, through its policies and operations, can complement and augment state and federal efforts to protect the environment. (The second section of each chapter relates the powers and duties of each local agency to specific environmental issues. This organization parallels Part III to help in cross-references.)

Part III describes the state laws and regulatory programs for each environmental topic covered in Parts I and II. Each chapter in Part III includes references for further information: citations for state and federal laws and regulations; phone numbers and websites for particular environmental programs; and other written references.

The reader should check each section of the *Manual* in order to examine an issue thoroughly. To find out, for example, what a governing body can do to protect air quality, the reader can look at:

- Part I – “Clean Air” for an overview of the issue;
- Part II – “Governing Body, Section A” for the governing body’s legal responsibilities and duties;
- Part II – “Governing Body, Section B” for ways in which the governing body can protect air quality; and
- Part III – “Clean Air” for a description of the state laws and regulations governing air quality, and references for additional information.

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PART ONE

Introductory Essays on Environmental Topics

ENVIRONMENTAL ISSUES

CLEAN AIR

Air pollution is perhaps the most pervasive and intractable form of pollution. Although the early use of fireplaces and wood burning stoves emitted noxious elements into the atmosphere, air pollution did not begin to become a recognizable community problem until the Industrial Revolution. The rapid emergence of smokestack industries, fossil-fueled power plants, smelters, industrial boilers and steel mills, followed by oil refineries, automobiles and a rapidly growing population accelerated the deterioration of air quality. Beginning in the mid-1900s, state statutes and the federal Clean Air Act initiated regulatory control over many types of emissions, and set technological standards for these “point sources” of air pollution.

These regulatory efforts have resulted in a significant reduction in air pollution; witness the air quality in countries where no such programs are in effect. But tremendous increases in automobile travel have seriously hindered their success. By the 1950s, “sunny” Los Angeles found itself under an almost constant layer of smog. At the time, smog was thought to be a mixture of smoke from industrial sites and fog (hence the term “smog”). But subsequent research revealed that the pollutants were nitrogen oxides and hydrocarbons from car exhaust and other sources. The internal combustion engine that has done so much to liberate Americans is bringing serious health problems to

all metropolitan areas, and threatens to change the planet through global warming and climate change. New Jersey’s 8 million residents travel an average 7,804 vehicle miles per person/per year, for a total of over 62 billion vehicle miles per year.

If we are to stem the deterioration in air quality, we must pay increased attention to the two most problematic areas — transportation and energy production. Fortunately, both are within our control, though changing them will affect lifestyles. The reasons to do so are very compelling; the adverse effects of air pollution range from acute and/or chronic effects on human health to global consequences for the planet’s ecology.

Federal clean air legislation identifies six major pollutants that harm the natural and man-made world and damage human health.

Carbon monoxide (CO), the most universally distributed toxic gas, results from incomplete combustion in autos, industrial facilities and other fuel burning equipment. CO reduces the blood’s ability to carry oxygen to the brain, heart and other organs, leading to fatigue, headache, confusion, decreased muscular coordination and dizziness.

Lead is an air pollutant that has been greatly reduced as a result of clean air efforts. In the 1970s, federal law targeted and eventually eliminated the use (in this country) of leaded gasoline, a prime source of lead in the

air. However, residual lead still contaminates soils in urban areas and other areas of heavy traffic. A phase-out of leaded paints, which were up to 50 percent lead by weight, began in the 1940s, but years of accumulated paint layers in older homes continue to pose a danger to children, and people rehabilitating or restoring old houses. Before the risks of lead ingestion were commonly known, lead was a major component of solders used in plumbing and water coolers. Fortunately, in the United States, construction and manufacturing codes now outlaw these types of uses in new plumbing and products. However, old plumbing systems may still contain lead components. Lead exposure reduces mental ability, damages blood, nerves and organs, and raises blood pressure. Children are especially susceptible; lead can severely retard their mental development.

Nitrogen dioxide is a prime component of smog and acid rain. It results from high temperature combustion such as occurs in motor vehicles and fossil-fueled power plants. It is also a product or by-product of the manufacture of fertilizers and explosives, and of metal cleaning operations. Nitrogen dioxide decreases crop yields, deteriorates paints and fabrics, and combines with water to form nitric acid, a component of acid rain. In humans, it constricts air passages.

Ozone forms when volatile organic substances such as gasoline and other vaporous petroleum products react in sunlight with nitrogen oxides. Ozone in the upper atmosphere is beneficial because it filters out much of the sun's cancer-causing ultraviolet rays. But at ground level, ozone can cause respiratory diseases, headaches, fatigue, and eye, nose and throat irritations. Ozone also can interfere with the body's immune system, cause crop and plant damage, and deteriorate rubber and other materials.

Particulate matter is extremely small, airborne particles of solid waste (ash, soot, smoke), the bulk of which is emitted by industrial operations, incinerators, diesel-fueled vehicles and other combustion facilities. Particulate matter soils clothing and buildings and contributes to metal corrosion. Fine particulates can carry toxic and cancer-causing chemicals into the lungs and are also associated with increased rates of hospital admissions for asthma.

Sulfur dioxide is produced by the combustion of fossil fuels, especially power plants using high sulfur coal or oil, petroleum refineries, smelters, and plants manufacturing

paper and acids. Sulfur dioxide causes acid rain, damages plant life, corrodes metal, destroys books and marble sculpture and reduces visibility. It is an eye, nose and throat irritant, as well.

These pollutants and their related compounds are recognized increasingly as having far-reaching, even global, consequences. Most scientists believe that the phenomena of upper atmosphere ozone depletion and the "greenhouse effect" are altering the earth's climate and livability. The destruction of the ozone layer in the upper atmosphere by chlorofluorocarbons (used as coolants and in the manufacture of certain foams and cleaners) is permitting more solar ultraviolet radiation to reach earth. At the same time, increased atmospheric carbon dioxide traps the sun's heat, warming the planet as if it were a greenhouse. It is likely that this warming will cause global climate changes and rising sea levels as the polar ice caps melt.

New Jersey has been a leader in adopting strict regulations for stationary (industrial) and mobile (vehicular) sources of air pollution. But regulatory measures can go only so far. Changes in our daily habits and behavior, such as participating in carpools, taking public transit and conserving energy at work and in our houses will be necessary.

Municipalities can play an important role in improving air quality. Local land use decisions and proper land use planning and regulation can reduce the number of vehicle miles traveled and, therefore, the amount of ozone and other pollutants generated. In site plan review, some towns require reduced numbers of parking spaces and agreements with developers to provide vanpools and carpools to lessen traffic. In master planning, towns sometimes try to prepare for future growth that will support mass transit. And some site plan ordinances require developers to maximize solar gain by southerly orientation of their structures. Building orientation can reduce heating and cooling costs and, thus, air pollution by up to 15 percent.

Such measures may seem extreme, but they are necessary. According to public opinion polls, people are generally concerned about air quality, and express a willingness to make the required sacrifices. One New Jersey poll showed that 95 percent of the respondents altered their work hours to avoid traffic problems. However, in practice, public response to high occupancy vehicle (HOV) lanes and voluntary carpooling programs has not

been good. Recent federal transportation funding has focused more on mass transit and pedestrian/bicycling improvements than in the past. However, the bulk of funding is still spent on automobile-related facilities, highways are still being widened, and new highways are still being funded. The public needs to understand that the health, financial and quality of life benefits of prudent energy use, efficient transportation, and the continued strict regulation of point sources of air pollution are worth the price of inconvenience and lifestyle modification.

ENVIRONMENTAL QUALITY

Excessive exposure to radiation, noise, pesticides or herbicides endangers health. Federal laws control the use and labeling of pesticides and herbicides, and exposure to radiation. Federal and state laws establish standards for noise, and also require the users of hazardous chemicals to report that use to their employees and the community.

Emergency Preparation and Response

New Jersey, the most densely populated state, is the nation's second leading producer of chemicals. Gasoline, plastics, pesticides and hundreds of other chemical-based products are manufactured and stored here. According to reports by local industries, more than half the state's 566 municipalities have at least one facility within their borders that manufactures, stores or handles one or more hazardous substances in quantities greater than 10,000 pounds.

Because toxic chemicals are so prevalent, firefighters, police and first aid squads responding to an accident may find themselves facing a problem beyond the obvious. In an accident involving the transport, use or storage of hazardous materials, the smallest fire or spill, or the water used to hose it down (running down a storm drain), may present a toxic hazard to emergency workers or the public.

New Jersey laws provide local officials with the support of a state team made up of the Departments of Health, Labor, and Environmental Protection and the State Police. In each municipality, the protection of residents depends on a well-trained, coordinated emergency response team supported by good information and good equipment. This is especially true in an environmental crisis resulting from accidental spills.

Federal and state Right-to-Know laws can help local

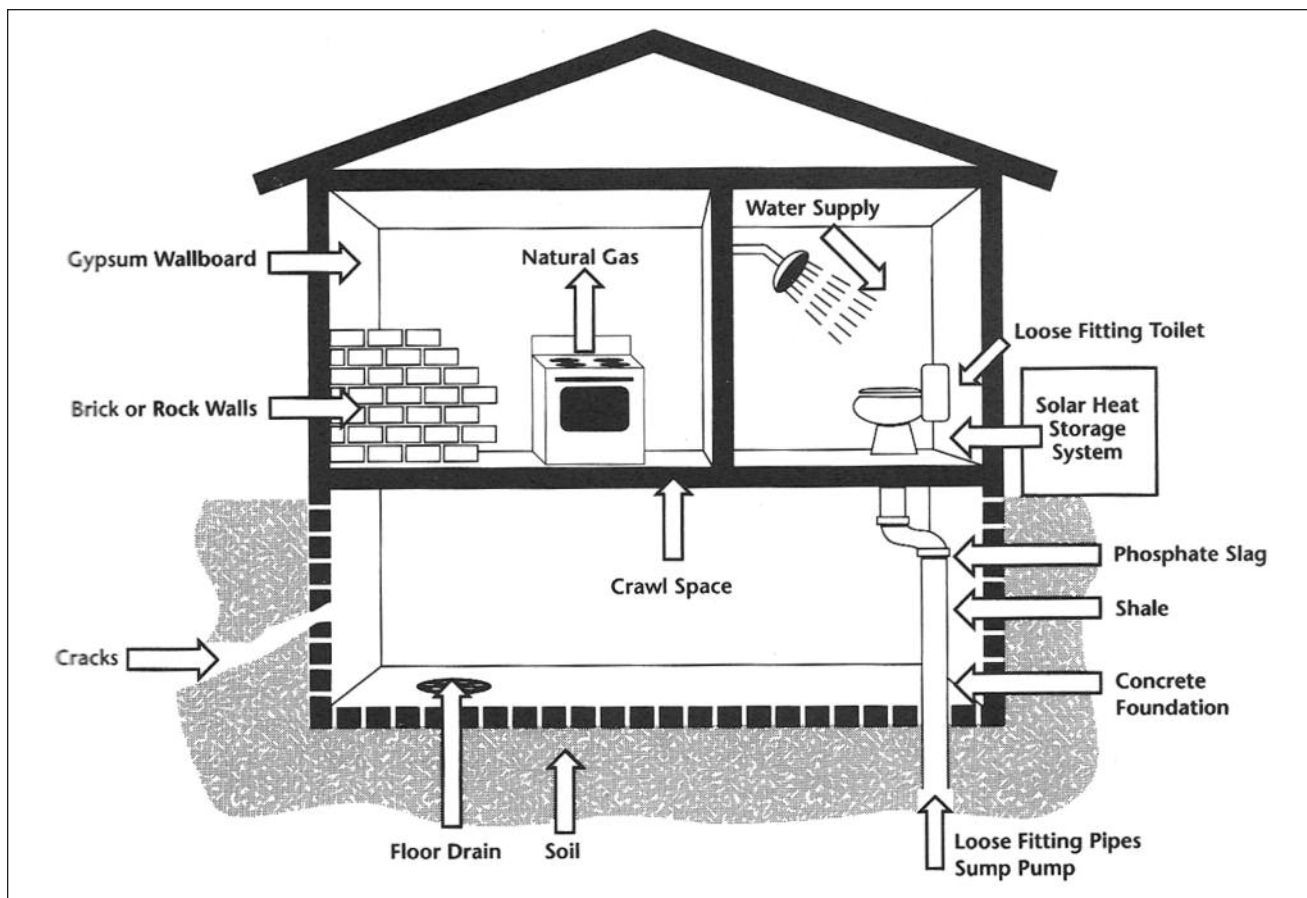
officials and the public know what hazardous chemicals are produced, used or stored in their communities. Local Emergency Planning Committees (LEPC), created under the federal law, have been established in each municipality to collect information about hazardous substances in the community, to use it in the emergency planning process, and to make it available to the public. Information generated under this law is reported directly to the Local Emergency Planning Committee and the DEP. Municipal boards should use this information in planning for emergencies, assessing local health risks, reducing hazards and in land use planning.

Radiation Protection

Electromagnetic radiation is a natural physical phenomenon. The full spectrum of electromagnetic radiation goes from the non-ionizing wavelengths of visible light and microwaves to the ionizing wavelengths of x-rays, Gamma rays and cosmic rays. In addition, the decay of unstable elements such as uranium and radium results in alpha and beta particle radiation. Radiation is emitted from natural and man-made sources. Naturally-occurring uranium gives off radon, a colorless gas. Manmade radiation is produced by nuclear power plants, medical facilities, industry, the military and universities. Whatever the source, ionizing radiation in any form is silent, invisible, tasteless and odorless, but potentially dangerous. Excessive exposure can produce cancer and other injury.

The federal government regulates the nuclear power industry. Exposure to radiation from manmade sources such as x-ray machines is controlled and regulated by the state, which licenses technicians and inspects machines. Radiation also can come from natural sources. Radon, a colorless, odorless gas, is found in all soils at varying concentrations. It moves readily through soils and cracks in rock, and finds its way into homes through basement cracks and joints, earthen floors, and even through wells. Radon is often drawn by a house's slightly lower air pressure, resulting from the use of exhaust fans, the oxygen needs of furnaces, or even the opening of windows on the downwind side. As many as one million New Jersey homes may have elevated levels of radon gas.

The DEP has ranked geographic regions of the state according to their radon risk. The N.J. Department of



Entry Routes for Radon in a House

Community Affairs has established special building standards requiring passive radon systems in new homes and schools in high-risk (Tier One) areas.

Noise Control

Damaging, irritating or otherwise disagreeable sounds are called “noise.” Unique as a pollutant, its incontestable effects on hearing are only gradually being recognized by the public. One no longer has to live in an industrial center to suffer from health-damaging noises. There aren’t many quiet places left. Mountain tops once free of disturbance are afflicted by airplane noise; pastures where you could hear cows munch grass now are high decibel highway corridors. Noise does not recognize political boundaries and often is caused by products — cars, trucks, airplanes — that are not under local regulation.

Excessive noise can cause temporary or permanent

hearing loss (the two most common causes of permanent loss being loud workplaces and rock music), sleep loss and stress, and can generally disrupt social and mental well-being, including causing anxiety. Excessive noise can cause increases in heart and breathing rates and has been shown to aggravate ill health in general. Studies also link excessive noise with heart disease, stress-related effects on fetuses, and learning and concentration problems for young children.

One of the most common results of excessive noise is temporary hearing loss, because after about 15 minutes of steady exposure to too much noise the body’s hearing mechanism stops responding. The duration and severity of hearing loss depends on the pitch of the sound (higher sounds are harder on the ear) and the length of exposure. Discomfort and danger typically begin at 100 decibels, although eight hours of exposure to sounds of approximately 85 decibels can cause hearing loss. An increase of

ten decibels indicates sounds ten times more intense. Typical noise levels:

55 decibels:	a window air conditioner
60 decibels:	conversational speech
75 decibels:	traffic noise
90-95 decibels:	a tractor trailer on road
100 decibels:	a power mower or motorcycle
115 decibels:	a four-piece rock band or a jet taking off

Everyone complains about noise pollution but few do anything about it. All levels of government tend to ignore the environmental degradation caused by unwanted sound. Police and health officers are dispatched to stop sleep-destroying sounds and handle other complaints under authority of nuisance laws and police powers. This is not an effective way to deal with a problem that increasingly creeps into the lives of New Jerseyans. Noise affects health, land values and peace of mind, and can severely damage the quality of life in a community.

State law expressly preserves existing civil and criminal remedies and gives local government, subject to DEP approval, the right to adopt ordinances that impose local noise control standards more stringent than the state's. Except in areas of federal jurisdiction such as product standards for machinery, cars, trucks and airplanes, noise remains a local problem. Local ordinances can control the level of sound and the hours it is permitted in both commercial and residential situations and during construction.

Pesticides Management

Pests — insects, weeds, fungi, rodents and others — seem omnipresent. To control them, we have an arsenal of insecticides, herbicides, fungicides, rodenticides, disinfectants and plant growth regulators. Pesticides have become a common part of life for most Americans. Unfortunately, pesticides can also enter the bodies of non-target organisms (such as humans) through ingestion, inhalation or contact with the skin. Many pesticides are poisonous to humans and can be incapacitating even at low doses. Pesticide exposure may also cause chronic health problems that manifest themselves years after exposure. The constant introduction of new pesticides and chemicals raises questions of new health risks, both from exposure and consumption, and also from

potential interactions between the new chemicals. Some long-lasting pesticides are retained in living tissue, and accumulate in increasing concentrations up through the food chain. Some pesticides are believed to cause cancer, birth defects, miscarriages, or brain and nerve damage.

A large percentage of the pesticides used in this country are used for agriculture. By continually planting single crops in the same soil (mono-cultures), farmers have abandoned many of the “homegrown” techniques that in the past controlled pests and maintained healthy soil. Pesticides often have the unwanted effect of killing beneficial plants, insects or animals as they eradicate target pests. Even worse, many pests have become resistant to pesticides, necessitating applications of greater quantities and different types of pesticides.

Federal laws control the use and labeling of chemical pesticides. State laws control the sale, use and application of federally approved pesticides. The federal Environmental Protection Agency (EPA) preempts all other levels of control by specifying that these materials can be used only under conditions spelled out on the label. These instructions have the weight of law and declare where and how a pesticide can be used. Failure to abide by these constraints is a reportable offence and falls under the jurisdiction of the local board of health. The public assumes that “It’s okay if it’s on the shelf.” However, these often-ignored labels often have stringent requirements for application. Some forbid application near a stream or before a rainstorm. Some require the applicator to wear a protective “moon suit.” Such regulation has reduced, but not removed, the risk from the use of these chemicals.

Local boards can use the permit process to gain information about operators certified to use these chemicals in the community. They can work with the state and the local environmental commission to inform the public and applicators that adherence to permit restrictions will be monitored and enforced. Public information campaigns and supervision of pesticide usage can protect local air quality, drinking water and the general public health.

New Jersey laws direct the Department of Agriculture to provide spray programs against Gypsy moths for municipalities, upon request. County Mosquito Control Commissions have been established and funded with state money to apply pesticides and conduct drainage programs. Both these

programs produce health and environmental effects. It is important for local boards to oversee such efforts, to ensure that residents are given adequate notice and are not inadvertently exposed to harmful materials.

Integrated pest management. An approach called *integrated pest management* (IPM) reduces reliance on chemical pesticides. IPM involves considering the whole range of options, including natural and physical techniques, in selecting the best method for controlling pests, rather than automatically resorting to chemical pesticides. The successful use of IPM requires an understanding of the interactions between soil, climate, plants, animals, insects and microorganisms in the target area. IPM can be used in both agricultural and residential settings, employing techniques such as:

- introduction of natural enemies of pests and/or pest diseases;
- cultural controls like watering, fertilizer, rotation of crops and the use of pest-resistant stocks;
- destruction of pest breeding areas;
- use of mechanical trapping devices; and
- *selective* use of chemical controls, using the least-toxic effective alternative.

IPM has applications beyond agriculture. For example, the pathogen *Bacillae thuringiensis* (B.t.) was used widely to control the Gypsy moth. In lawn care, the introduction of other plants to the mono-culture of grass makes the lawn healthier and reduces the need for pesticides and herbicides. For mosquitoes, monitoring and drainage management can substantially reduce populations. Similarly, the elimination of breeding places and habitat for rats and roaches can help keep their populations under control.

CLEAN WATER

New Jersey is a water-rich state. It enjoys a bounteous rainfall of about 44 inches a year, as compared to a national average of 28. The state's groundwater recharge potential is superior. The source of this critical water supply is a global hydrologic system that is particularly vulnerable and too often damaged by human activities. We recognize that the water supply is finite and that our water is constantly recycled —"what goes around, comes around." But in

practice, we use the system as a waste treatment facility — even the rainwater that replenishes the system is contaminated with acid and toxic chemicals.

New Jersey is an industrial leader with a dense population; this has affected our water resources. By paving over floodplains and springs we have altered river flows and groundwater recharge. The stormwater that cleans off the streets carries salts, oils, rubber, and other detritus and chemicals into the rivers. By changing the face of the land through development and intense agricultural uses we have subjected our streams, lakes and ponds to pollution-laden silt.

State laws restrict in-stream discharges of pollutants, stream encroachments and septic systems. Compliance depends on good engineering and expensive technology. At the local level, every land-use decision has some impact on water resources. Local governments face the fundamental challenge of preventing pollution and thus reducing the financial burden of expensive, after-the-fact, technological solutions.

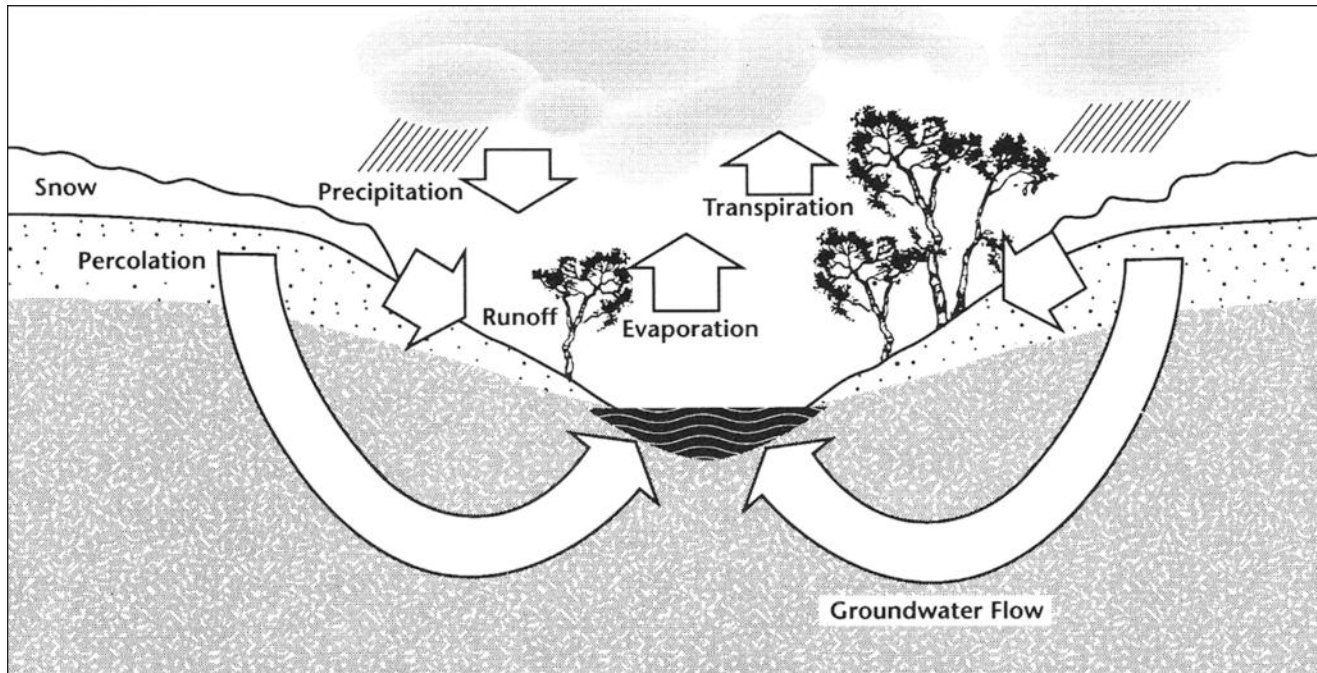
The Hydrologic Cycle

Nature manages earth's finite supply of water through continual recycling in a system called the hydrologic cycle. Water evaporated from oceans and lakes condenses as clouds and returns as precipitation, so that the amount of the earth's water remains constant. Less than one percent of this water is available for human use and consumption. The oceans contain over 97 percent of earth's water, and the remainder is in cold storage, frozen in glaciers and polar caps. The useable one percent is either surface or groundwater. Surface water is drawn from rivers, streams, reservoirs and lakes. Groundwater comes from wells and springs that tap into aquifers, which are porous geologic formations that hold and channel water underground.

Groundwater

Aquifers have geographically definable recharge areas that allow precipitation and surface water to infiltrate. The New Jersey Geological Survey is mapping New Jersey's major aquifer recharge areas. This information will aid programs that protect our future drinking water supplies.

Currently about half New Jersey's residents rely on groundwater for drinking. This groundwater comes from more than 2,500 wells operated by community public water



Hydrologic Cycle

systems, and approximately 316,000 residential and commercial wells. Industry and agriculture also draw from New Jersey's groundwater supplies, but not on the scale of drinking water withdrawals.

Surface Water

The other half of New Jersey's population, primarily in the urban northeast, relies on surface water supplied by streams, reservoirs and, via the Delaware and Raritan Canal, the Delaware River. Surface water is found in rivers, streams, reservoirs and lakes. Each body of water has a "watershed" or "drainage basin," an area that includes all the land over which water flows to reach the body of water. The lines that separate one watershed from another are called "drainage divides."

The laws, regulations and programs that govern water in New Jersey distinguish groundwater from surface water, and water supply from water quality. However, it is important to remember that all water is part of the hydrologic system. If an underground aquifer is overdrawn, it will diminish the base flow of water in a nearby stream, because the stream may have to feed the aquifer instead of the

reverse. Similarly, excessive pumping of coastline aquifers can result in saltwater flow into the aquifer.

If stormwater runoff degrades a stream's water quality, the groundwater may also be affected by the same pollution. Also, if the quality of a water supply is degraded, the quantity of usable water available will necessarily be reduced.

Sources of Pollution

Groundwater is polluted by malfunctioning septic systems, by household hazardous waste (cleaners, bleaches, solvents) poured down the drain, and also by leaking underground storage tanks and untreated hazardous waste disposal sites. The major sources of surface water pollution are municipal and industrial sewage plant discharges and stormwater runoff.

Approximately 1,100 industrial and municipal wastewater dischargers hold permits for piped, or "point source," discharges of pollutants into surface and groundwater. Of even greater concern are the uncounted and unregulated nonpoint sources of pollution — erosion and herbicide contamination from forests, lawns and farm fields; oils and salts from parking lots and roads; discharges from mining or

hazardous waste sites, septic systems, underground tanks and airborne pollutants; and fecal pathogens from dogs, cats, horses and wildlife.

According to the 1994 *N.J. State Water Quality Inventory*, 81 percent of New Jersey's monitored streams and rivers have excessive levels of nutrients and pathogens/bacteria. Other pollutants like toxics, high thermal levels, pH deviations, and organic pesticides are present in many of our surface and groundwater resources.

Point Source Pollution

The federal and state laws presume that a total prohibition of point-source pollutant discharges to state waters is impossible. Therefore, the laws set standards for the level of pollution that may be introduced into each segment of stream and each aquifer according to its designated use. The limited capacity of the hydrologic system to assimilate wastes becomes a factor in establishing the standard, and therefore the degree of treatment required for wastewater before it can be discharged into a water body. State law requires the preparation of areawide water quality management plans (WQMP) and local wastewater management plans (WMP) to help achieve federal and state water quality goals. These goals aim at attaining — at best — fishable, swimmable waters everywhere and — at least — not precluding the existing use of the water, whether for drinking, industry or recreation. In some streams this policy may permit some degradation while in others water quality will be improved. Streams that flow into and through publicly owned refuges, for instance, must be kept pristine; waters that presently support a trout population are judged to be of high quality and must be maintained at that level; waters not used for drinking or recreation can be of lower quality. Under the state regulations, no permit for discharge of treated sewage can be issued unless it is consistent with the applicable wastewater management plan. Local land use planning drives the local WMP. It must be consistent with local zoning.

The WMP should reflect the methods to be used to control the discharge of waste and runoff in the municipality. It will describe which areas are capable of maintaining septic systems for on-site waste disposal and which areas must be serviced by sewage treatment systems.

Nonpoint Source Pollution

There can be no such standards for nonpoint sources. When the rain falls or the snow and ice melt, they carry pollutants to a stream. If the stream corridor has no vegetated buffers, or if a stormwater sewer system collects the water and dumps it directly into the stream, all the pollutants enter the water. Ironically, the stormwater runoff from land development that took advantage of a sewage treatment plant built to prevent conventional pollution may be more damaging than the effluent from the plant itself.

Types of Pollution

Nutrients, such as nitrogen and phosphorus, typically enter streams and lakes via stormwater runoff from farms, lawns, industries and sewage treatment plants. Excessive nutrients in a water body can over-fertilize aquatic vegetation, and the resulting abundance competes for the finite supply of dissolved oxygen. After plants die, they are decomposed by millions of microorganisms that also require oxygen, which further depletes the supply. This process, known as eutrophication, speeds up the natural aging process of a body of water. The water will tend to be discolored, have a bad odor and a decreased diversity of plant and animal life.

Pathogens are disease-causing bacteria and viruses often found in animal and human waste. Exposure to pathogens can cause dysentery, hepatitis, gastroenteritis, parasitic infections, typhoid fever and cholera.

Sediment is soil particles eroded into surface bodies of water. Too much sedimentation inhibits sunlight penetration, kills plant life and affects all life forms in a water body.

Thermal Pollution. A major source of thermal pollution is heated wastewater discharged from industrial and power plants. Aquatic organisms have a low tolerance for temperature changes and are vulnerable to thermal pollution. Also, since water holds less dissolved oxygen at higher temperatures, fish sometimes suffocate when water temperature rises. Thermal pollution of a stream can also result from the seemingly harmless act of stripping its banks of shrubs and trees that formerly shaded and cooled the water.

Toxicants kill or poison organisms through chemical or physical action or by altering the organism's environment. They can be chemicals such as solvents,

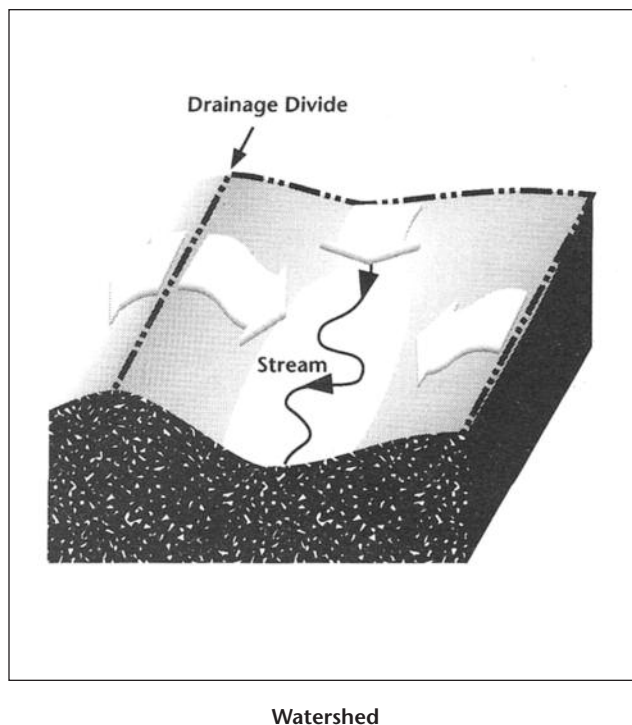
hydrocarbons, pesticides or heavy metals. They come from industrial and commercial sources and from household hazardous waste. Substances such as ammonia, arsenic, cadmium, chromium, lead, mercury, selenium and silver can make water unusable for fishing and swimming, and necessitate costly treatment of drinking water.

Water Supply

Restriction of groundwater recharge areas, excessive withdrawals and pollution have played a large part in changing the hydrology of New Jersey. Covering groundwater recharge areas with non-porous surfaces (such as roads and buildings), pumping beyond the safe yield of an aquifer, and disposing of waste materials in or near an aquifer or recharge area, has reduced the quantity and quality of water entering the ground. This results in changes in the flows of rivers, lowers water tables and contaminates the hydrologic system. Since New Jersey residents are equally dependent on ground and surface water for drinking water, such changes are distressing. Protection and restoration of these flows require innovative planning and regulation. Ultimately, some local governments may need to acquire land to protect their wells, critical groundwater recharge areas and stream corridors.

Who Protects Our Water?

A number of different agencies share the responsibility for protecting ground and surface waters. The DEP sets standards for pollutant levels and issues permits for stream encroachment, discharges and water diversions. The municipal governing body adopts ordinances controlling everything from land use and solid waste collection to street sweeping and vegetation removal. The Soil Conservation District approves required soil and erosion control plans and helps farmers to use best management practices. The municipal engineer designs or approves local infrastructure improvements. The local board of health approves and monitors septic systems. The sewage authority or municipal utilities authority collects and treats sewage. The planning board approves stormwater control systems as a part of site plan approval, and adopts the town's master plan. The zoning officer assures compliance with local land use ordinances. The local construction official and engineer ensure



that plans for the on-site storage and discharge of stormwater runoff comply with local regulations. State, county and local road departments store and use chemicals for ice and weed control. The environmental commission can advise and assist in coordinating all these activities so that common goals can be met.

WASTE MANAGEMENT

Solid Waste

The shell heaps and kitchen middens of the Lenni-Lenape are the earliest examples of our traditional approach to the garbage problem: stack it in great piles and let nature take care of it. Even until very recently, nearly every community in New Jersey had its own town dump. Some larger landfills served an entire region. For example, the marshlands of the Hackensack Meadows became the dumping ground for New York City, as well as for Bergen, Essex, Hudson and Passaic counties. By 1970, state legislators were concerned that we would run out of room for New Jersey's increasingly huge volume of garbage. Worse yet, our accumulated garbage had become a danger, polluting our water and threatening our health.

Many landfills were just holes in the ground for dumping municipal and industrial waste. Water percolated through the layers of mixed garbage and turned into a noxious brown liquid that contaminated or threatened water supplies. During the 1970s and 1980s dozens of old dumps and landfills were closed, some because they were filled to capacity and others because of public protest and environmental restrictions. Many were merely covered with two feet of soil. Several larger regional landfills were properly sealed with a cap, but some older dumps were simply abandoned.

In New Jersey, we must “get rid” of over 16 million tons of waste every year. That comes to an average of over 10 pounds per day for every man, woman and child in the state. New Jersey’s trash picture includes landfills high enough to ski on, garbage hauled out to other states for disposal, and incinerators burning garbage. Most of New Jersey’s non-recycled municipal solid waste is still disposed of in landfills, with approximately one-third shipped out of state. Most of the waste that is landfilled within New Jersey goes to one of 12 remaining large sanitary landfills.

In 1970, the Legislature commissioned the DEP to regulate solid waste disposal. In 1975, the Legislature established a solid waste management system that gave counties the responsibility for solid waste planning. Lawmakers recognized the need to clean up and close old dumps, reduce the waste stream, implement recycling and other resource recovery, and find the best way to dispose of the state’s non-recyclable wastes. New Jersey was the first of all the states to mandate recycling. It also initiated programs for source reduction of wastes and established a commission to carry out hazardous waste facility siting. The DEP has a four-part solid waste strategy: 1) reduce waste in manufacturing, product packaging and consumer habits; 2) separate and recycle, including composting, all reusable materials; 3) reduce volume through incineration, recovering energy in the process; and 4) landfill the residuals.

New Jersey set a statewide goal for recycling to be 60

percent of the total waste stream by 1995. According to the DEP, the state has substantially met that goal. Presently, all counties operate under solid waste management plans that feature recycling and composting along with incineration and/or landfilling. The counties’ recycling activities range from giving guidance to municipal recycling programs to county-wide recycling collection and processing of materials for market.

In the late 1980s, New Jersey legislators adopted a goal of establishing solid waste self-sufficiency; all wastes generated within the state would, ideally, be disposed of within state borders. It was anticipated that increased recycling

and source reduction would diminish the total solid waste stream enough to make this goal attainable. State (DEP) “flow control” over the remaining waste would assure that it was distributed to in-state district (county) landfills and trash-to-energy facilities. In the years that followed, the self-sufficiency goal was not achieved. However, between 1988 and 1994, five New Jersey counties constructed expensive incinerators, on the expectation that the state would continue to pursue solid waste self-sufficiency. A 1994 US Supreme Court decision against

some aspects of flow control has made it likely that a significant portion of New Jersey’s solid waste will continue to be shipped to other states.

There is no “away” for the things we throw away. Even after our trash it is out of sight, buried in a landfill or burned in an incinerator, it still can have environmental effects such as air or water pollution. Landfilled waste does not “disappear” for a very long time. In New Jersey, we have used up much of the readily available space to store waste. The Environmental Protection Agency reports that New Jersey’s landfills will likely be filled up by the year 2004.

Problems stem from both the quantity and the quality of our waste. Today, household wastes still contain medical waste, organic material, hazardous substances, tons of packaging, pesticides, herbicides, paper, glass, paint and metals. There are two problems: how to reduce the volume, and therefore the cost, of disposal, and how to find efficient

In a typical year in the United States, more than 208 million tons of waste — including over two billion razor blades, 246.9 million tires, 1.6 billion pens and 27 million cc’s of liposuctioned human fat — has to be put out of our sight and almost but not quite, out of our thoughts.

ways to dispose of the mess without polluting the water, air and land. The contamination of incinerator ash resulting from improper source separation and pretreatment increases costs and environmental effects.

Waste stream reduction requires active participation by everyone from the corporate boardroom to the condominium kitchen. Manufacturers can rethink production processes to eliminate or reuse waste products. Offices of all sizes can recycle their wastes and provide a market for recycled products. Everyone can help by adhering to source separation routines. Now we recognize the truth of the old saying, “One man’s trash is another man’s treasure.” Is it working? The amount of garbage left at the end of millions of driveways and carted to expensive landfills is gradually decreasing because people throughout New Jersey are recycling papers, bottles and cans and composting leaves and yard waste.

If consumers threaten to stop using products that have no proven reuse potential or are over-packaged, manufacturers will seek remedies. Some experts feel that with concerted public and private effort, waste stream reductions through recycling and source reduction will reach 75 percent. The goal is to create a system in which recycling and waste reduction become more convenient and lucrative than the destruction or permanent storage of materials through incineration and landfilling.

Historically, garbage disposal was strictly a municipal concern. Now, state, county and municipal governments are all part of the solid waste management scene. To rectify the neglect of the past, old landfills must be closed, fitted with leachate collection and treatment systems and capped. The waste management plans of every city, town and village must also conform to county and state regulations. Municipal officials participate in the process; they provide liaison with the public and assist with local information and data. For the most part, they are still responsible for waste pickup.

The multi-million dollar costs of constructing efficient, environmentally safe solid waste facilities require a regional approach to the garbage crisis. Garbage has become “solid waste,” and managing it is the work of scientists and engineers. Recycling, once an option for the environmentally-concerned, is now every resident’s man-

date. And waste-reduction strategies, aimed at eliminating waste through manufacturing and packaging efficiencies, have assumed top priority.

Hazardous Waste and Contaminated Sites

Throughout history, hazards have been associated with the improper disposal of waste. In medieval cities, the hazards ranged from a pedestrian’s risk of being hit by household waste dumped from a kitchen window to the far graver risk of disease spread through open sewers. The Industrial Revolution brought new hazards – increasingly polluted air and water, industrial diseases, cancers and respiratory illnesses.

The Chemical Revolution of the 20th century brought “better living” and many useful new products to consumer, builder, farmer and pharmacist. It also resulted in an explosive growth of new chemicals — more than 65,000 used in the United States, with 1,000 new chemical substances introduced each year. Of course, whatever enters the market as a new product must exit, at some point, as waste. Public awareness of deleterious side effects of new chemical products began in 1968 when Rachel Carson’s *Silent Spring* exposed the hazards of DDT. After that, the hazards of toxic waste seeping into local water supplies from improperly managed industrial sites or dumps made headlines in local and national news.

The dictionary definition of hazardous waste, “an unwanted substance marked by danger or risk,” seems like too mild a description for the kind of fearful materials found lying around our environment. This state has led the country in trying to rid itself of, or at least to isolate, these environmental time bombs.

As the home of thriving pharmaceutical and chemical industries, New Jersey is a major producer of hazardous waste — more than one million tons annually. The Garden State also has the greatest number of contaminated sites on the federal government’s National Priority (Superfund) List. However, New Jersey is also a recognized leader in remedial action to clean up abandoned sites, as well as in planning and managing hazardous waste disposal. Before industrial properties in New Jersey can be sold or transferred, they must have a clean bill of health from the DEP. Also, all hazardous wastes transported in the state are

tracked through a hazardous waste manifest system. Numerous other federal and state laws endeavor to control, clean up and dispose of hazardous substances. Each of these laws requires a different level of participation from state, county and local health officials.

Encouragingly, the 1990s have seen the successful introduction of “pollution prevention” efforts. Such programs endeavor to reduce the quantity and toxicity of hazardous materials used by industry, thereby reducing the quantity of hazardous wastes that are produced, and also the risks of air and water contamination resulting from spills and leaks.

HISTORIC RESOURCES

New Jersey’s rich and varied heritage lives on in its buildings, artifacts, historic sites and landscapes. Reminders from our past date back over more than 300 years to artifacts of the Lenni-Lenape Indians. Numerous battlefields and historic homes recall the state’s significant role in the Revolutionary War. Canals and railroads illustrate how New Jersey has been the site of incredible activity and a laboratory of change. Indications remain of the diverse social issues and cultural trends that developed because of the state’s location on the nation’s eastern corridor.

Historically, New Jersey’s cultures have been as varied as its geology. The southern coastal plain with its beautiful brick buildings is as different from the substantial stone Dutch manses of the northeast as the highlands farms of the northwest are from the Pinelands berry culture. The location of historic landmarks depends greatly on an area’s natural attributes. For example, archaeological discoveries of Native American campsites are often made in floodplains and next to springs. Historic sites appear near trails and transportation networks or in areas of important farmland resources.

New Jersey’s historic resources are symbols of the past that provide each generation with the living connection to New Jersey history. They provide an aesthetically pleasing sense of place and a sense of continuity from generation to generation. Often, they become the catalyst or centerpiece for urban revival.

Historic preservation is not confined to museums and museum houses. Local historic sites include structures and

landmarks, of course, but they also include districts, scenic valleys and other significant areas. Sites may also be worthy of preservation if they are associated with historical events or people, have particular architectural or artistic value, are grouped in identifiable districts, or embody important archaeological information.

Federal, state and local governments have for a long time preserved individual historic properties through acquisition for public use as museums or parkland. However, government purchase of every historic property is neither possible nor desirable. In 1930, Charleston, South Carolina pioneered the concept of preserving large areas of the city through zoning regulation of historic districts.

In 1966 the federal government established the National Register of Historic Places as a measure of protection for listed and eligible districts and individual sites. New Jersey moved quickly to establish a parallel State Register. These Registers offer only partial protection; an effective preservation program requires reinforcement at the local level.

The federal and state governments have established a variety of historic protection programs, available to communities seeking to preserve historic resources. These include:

- government review of projects affecting an officially designated historic site or district,
- tax benefits for preservation and restoration,
- grants for surveys, restoration and main street revitalization programs,
- education on the importance of preservation,
- planning and design guidelines,
- acquisition of significant properties.

Federal and state laws make it possible for local governments to play an important role in identifying and protecting historic resources. Land use planning and regulation can govern the use of historic sites and the land around them. Local governments have the power to adopt historic district ordinances that establish special zoning requirements for structures in these areas. It is important that local agencies have information on important historic sites and that land uses are planned to buffer and protect them.

LAND AND WILDLIFE

*The law locks up the man or woman
who steals the goose from off the common;
but the greater villain the law lets loose
who steals the common from the goose.*

— Mother Goose rhyme

New Jersey has a topography that ranges from mountainous highland to sandy plain, with wide differences in soil, geology and climate. New Jersey has a blend of northern and southern plant and animal communities because of its latitude and position on the Atlantic coast. The state also has many areas of great scenic beauty, and a wide variety of types of open space — forests, hills, meadows, coastal areas, wetlands.

Over past generations, however, many of our natural resources have been depleted or destroyed. Much open space has been forever lost. Many species of plants and animals have become endangered. Erosion and flooding have degraded soil and water resources.

As the state has become more developed, the marginal land that was once thought too difficult to build on has become valuable real estate because modern engineering can overcome many of the problems of construction in wetlands, on steep slopes, and in stream corridors and floodways. However, building on these environmentally sensitive areas increases the potential for erosion, flooding, decreases in groundwater recharge, pollution of lakes and rivers, and loss of important plant and animal habitats.

Clean water and clean air are basic to survival, as are farmland for food production, open space for recreation and the maintenance of biological diversity. Trees and vegetation provide natural treatment and cleansing for polluted air. Vegetated barriers buffer streams and recharge areas preserve water quality. Large contiguous areas of undisturbed lands support biological diversity and protection for the gene pool. Open spaces provide essential opportunities for recreation and relaxation. Wetlands are the most biologically productive areas in the natural system. They also clean up stormwater, recharge the water table, and offer protection from flooding.

Despite the introduction of environmental laws and regulations, environmental problems have proved to be complex. Parks are set aside and then damaged by overuse. Streams, though “protected,” are contaminated by agricultural chemicals and urban stormwater. We are outraged at the negligence evident in highly publicized oil spills, but at home we allow paving over the recharge areas of aquifers that provide our drinking water. Nonetheless, the public consciousness has been awakening. The public is often ahead of elected officials in its desire to protect the environment and to develop an ethic or body of principles to govern human actions in relation to the natural community. Humanity has long since agreed that murder for gain is unethical behavior; now it is time to decide that polluting a stream is unethical and unacceptable. In the long run, it will be uneconomical, as well.

How will we avoid the “Tragedy of the Commons” — the ultimate overuse and destruction of our parks, rivers, land and air? The answer is that we must develop a land use ethic, plan land use carefully, and carry out the plan(s) through regulation and acquisition. All levels of government and private organizations have worked at buying, protecting and regulating open spaces. Municipalities control land use. The state has programs that provide grants and loans for land acquisition, and also regulates critical areas of open space such as the coastal area and the Pinelands. State programs also provide tax exemption incentives for landowners to preserve their properties. The DEP provides technical assistance for landowners and local officials. The state, counties, municipalities and non-profit organizations acquire and maintain park lands. Collectively, these activities serve the public interest, now and for the future.

The state has established many laws and programs, supplemented by local environmental and land use ordinances, to preserve and protect natural resources. These resources must first be identified through means such as animal and plant surveys, delineation of wetlands and floodplains, and definition of steep slopes. This information is often contained in an environmental resource inventory which describes environmental conditions throughout a community. Protection can then be accomplished by land use regulation of environmentally sensitive

areas like wetlands and floodplains, open space acquisition, and appropriate land and resource management programs for plants, wildlife, woodlands, fisheries, parks, and environmentally sensitive areas.

SPECIAL PROTECTION AREAS

Because many environmental problems and concerns extend beyond municipal boundaries, planning and land use regulation at the regional level are sometimes necessary. In four very different areas of New Jersey the state Legislature has withdrawn some of the grant of land use regulation it made previously to local municipalities. In these areas, threats to some of New Jersey's most unique and important natural resources prompted the state to enact laws to preserve the regions' assets. At present, such laws protect four major regions of New Jersey:

- the coastal zone — to protect 1,376 square miles of fragile coastal area;
- the Pinelands — to protect unique natural resources of forests, wetlands and drinking water of 52 municipalities;
- the Hackensack Meadowlands — to reverse environmental degradation, manage wetlands and stimulate planned development in portions of 14 municipalities covering 21,000 acres;
- the Delaware and Raritan Canal — to preserve the historic and natural setting, provide recreation and scenic resources and protect the water supply in the canal's 400 square mile watershed.

In each case the state has established a regional commission (or in the case of the coastal area, a program within DEP) with certain powers to guide or control development in the region. Each commission works with municipalities in its region to create and implement a plan for regional development and environmental protection.

For each of the four regions, the planning and growth-management goals are different. The regional commissions or agencies have designed master plans and policies based

on the current uses of the land, its natural resources, and projected economic, social and environmental needs. These master plans have mapped regions for certain kinds of uses and growth. In some cases they have also planned for land acquisition.

The regional commissions have various ways of ensuring that development complies with their master plans and the regulations stemming from them. They can:

- encourage municipalities to bring their own master plans and ordinances into agreement with the regional plan;
- review municipal decisions;
- supersede the municipal decision-making process;
- offer advice to the municipalities; and
- require permits for certain types of development.

To accomplish regional goals, some commissions can acquire land in the region, or recommend that the state acquire it.

Regional planning efforts generally reinforce local goals and provide a legal framework for local land use planning. In each of these regional situations local planning and review continues, albeit in a regional framework. The disadvantages of a two-layer review are outweighed by the advantage of knowing what the town next door is going to approve. Another advantage of uniformity of standards is the assurance that other agencies or the courts will seldom overturn local decisions.

Governing bodies and planning boards in these special protection areas have a special responsibility to participate in the regional efforts. To serve the public interest, they should provide input during the planning process and then develop locally applicable ordinances that meet the regional planning goals. The results will be cohesive, neighborly land use control mechanisms that exercise local options while preventing the exploitation of local and state resources. Application and review procedures can be streamlined, and applicants will have a predictable set of standards to address.

PART TWO

Municipal Boards and Commissions

This part of the *Manual* looks at seven selected municipal boards and commissions in two ways:

First, it describes and comments upon the state laws that establish these agencies and give them their powers and duties. Emphasis is given to the environmental aspects of their assignments. There are excerpts from the laws, and enough references so that readers can, if they choose, delve into the statutes themselves, and some of the court cases that interpret their meaning.

The second section examines ways in which each municipal agency, through its policies and operations, can complement and augment state and federal efforts to assure the protection of air, water, historic resources, land, wildlife, and special protection areas. It looks at the obligations and opportunities that these municipal boards and commissions have to protect and improve the environment of their community.

The policy and operations sections on the planning board and zoning board of adjustment have been combined because the environmental consequences of their actions have so much in common.

Chapter 2

THE LOCAL GOVERNING BODY

Section A

THE LAW

INTRODUCTION

New Jersey provides for a variety of local governing body entities and forms.¹ This *Manual* uses “governing body” to mean the local legislative body with general law-making authority whose members are directly elected by the voters of the municipality. These include such forms as mayor-council, council-manager, committee and commission.

It is important to distinguish the **form** of municipal government from the **type** of municipal government. The form of government is determined by statute and describes the municipality’s internal organization. The type, as set forth in the formal title of the municipality, was generally determined when the municipality first incorporated and may have no particular significance in later years. For example, a municipality of the township type, that is, which has “Township” in its title, may be organized under one of the forms of government authorized by the Optional Municipal Charter Law, commonly referred to as the Faulkner Act, N.J.S.A. 40:69A-1 *et seq.*

GENERAL POLICE POWERS OF MUNICIPALITIES

New Jersey is known as a strong “home rule state.” Under state law and the State Constitution, municipal governments have very broad police powers (the power to legislate in the common good) to protect local citizens. For example, the New Jersey statutes (N.J.S.A. 40:48-2) provide that:

[any] municipality may make, amend, repeal and enforce such other ordinances, regulations, rules and by-laws not contrary to the laws of this state or of the United States, as it may deem necessary and proper for the good government, order and protection of persons and property, and for the preservation of the public health, safety and welfare...

The 1917 Home Rule Act² was later supplemented by the Optional Municipal Charter Law³, which provided for various forms of self-governance while restating to future interpreters and judges the broad police powers jurisdiction of municipal government:

The general grant of municipal power...is intended to confer *the greatest power of local self-government consistent with the Constitution of this State*. Any specific enumeration of municipal powers contained in this act or in any other general law shall not be construed in any way to limit the general description

of power contained [herein]... All grants of municipal power to municipalities...shall be liberally construed, as required by the Constitution of this State, in favor of the municipality⁴ (emphasis added).

POLICE POWERS PROTECTING THE LOCAL ENVIRONMENT

The Home Rule Act gives municipalities the power to establish and direct local agencies to regulate in the public interest. However, no local act is valid if it conflicts with state or federal law or is preempted by these higher authorities.⁵ Thus, municipalities:

- may condemn private property for any public purpose;⁶
- have a general power to “prescribe and define...all officers and employees” of the community, whether local building inspectors or a shade tree commission;⁷
- may pass laws to prevent vice, drunkenness and immorality;
- regulate the ringing of bells and prevent disturbing noises;
- regulate or prohibit swimming or bathing;
- generally regulate explosives, chimneys and boilers, firearms and fireworks, soft coal, excavations, bulkheads and other structures, along with a variety of other examples of local police controls.⁸

Much of the above has a Victorian ring, as befits its turn-of-the-century origins. But the legislative message remains clear: *Unless specifically limited or necessarily prohibited by state law or federal action*, New Jersey municipalities can legislate on any subject as needed to protect the local citizenry and its environment. Further, they may legislate more restrictive standards and controls than are imposed at the state level — unless state action preempts local action either explicitly or through “necessary implication.” (For instance, if the state has mandated permissible pollution levels for a river, a municipality on that river cannot mandate lower levels on its section of river.)

In recent years, the state has increasingly preempted the authority of local officials in environmental matters.

AN EXAMPLE OF STATE PREEMPTION: SOLID WASTE REGULATION

Solid waste is an example of state preemption of much local action. The Solid Waste Management Act⁹ prevents municipalities from adopting more stringent rules on dumps or sanitary landfills than the state does, regardless of the public health effects of improperly controlled waste and traditional deference to local controls.¹⁰ (Doubtless, a principal concern was that each town might use its police powers to exclude solid waste operations — the “not in my backyard” (NIMBY) syndrome — thereby frustrating state or regional efforts to site facilities or provide efficient solid waste regulation.)

Even regulation of specific pollutants such as PCBs has been held preempted by state law in sweeping terms that challenge the continued validity of the concept of separate local mandates: “It is enough to recognize that PCBs are hazardous waste, hazardous waste is solid waste and our Supreme Court has held that the Legislature has deprived municipalities of the authority to *legislate in the field of solid waste management*”¹¹ (emphasis added). In short, if the pollutant can be characterized as “solid waste,” these decisions bar local action not expressly permitted through an approved county solid waste plan.¹² Therefore, much of the traditional law of “nuisance”¹³ seems jeopardized. Similarly, in matters of air pollution, which includes particulate matter, a form of solid waste temporarily suspended by air currents, state law severely limits local prerogatives to enact and enforce more stringent ordinances.¹⁴

The issue of preemption has also arisen in the context of recycling facilities. In *Tp. of Howell v. Fred McDowell*¹⁵, the Appellate Division held that a Class B recycling center that was included in the County Solid Waste Management Plan and approved by the DEP was not subject to municipal land use regulations.

MICROWAVE TOWERS

Issues concerning the safety of microwave towers have also been the subject of attention at the local level. *New Brunswick v. Old Bridge*¹⁶ was a case that involved the reversal and remanding of a municipal planning board denial of a height variance and site plan for a radio transmission tower. The court found that the board, on remand, should limit its consideration to zoning issues. The Radia-

tion Protection Act, N.J.S.A. 26:2D-1 *et seq.*, preempted the issues relating to electromagnetic, microwave or radio emissions.

NOISE POLLUTION CONTROL

Noise control is one of the most traditional areas of local regulation and enforcement.¹⁷ The Noise Control Act of 1971¹⁸ largely preserves local regulation, subject to an important caveat. Section 21 of the Act states: “No existing civil or criminal remedy now or hereafter available to any person shall be superseded.”¹⁹ More specifically:

No ordinances or resolutions of any governing body of a municipality or county or board of health which establish specific standards for the level or duration of community noise more stringent than this act or any code, rules, regulations or orders...shall be superseded. Nothing [herein]...shall preclude the right of any governing body of a municipality or county board of health, *subject to the approval of the [DEP]*, to adopt ordinances, resolutions or regulations which establish specific standards for the level or duration of community noise more stringent than this act or any code, rules or regulations promulgated pursuant thereto²⁰ (emphasis added).

Pre-existing local noise ordinances are preserved but new, more strict enactments require DEP approval. To date, the DEP has not adopted volume limitations on stationary emergency signaling devices such as those used to alert persons engaged in fire-fighting²¹ but it has adopted sound limits on industrial, commercial, public service or community service facilities.²²

ACQUISITION OF OPEN SPACE

Since at least 1917, every municipal governing body has had the power to “acquire, lay out, improve, embellish and maintain within and without the municipality such public parks, squares, open spaces, playgrounds, beaches, waterfronts and places for public resort and recreation” as it may choose.²³ A town may “acquire in fee or less estate and by gift, devise, purchase or condemnation, any real estate, improved or unimproved, or interest therein, within or without the municipality, suitable” for recreation.²⁴ Likewise, by ordinance, municipalities may impose and enforce local rules and regulations including the lease of

concession for commercial development and use of part of such acquired park or open space properties.²⁵

However, public property cannot be leased out in order to divest the public of its rights to use and enjoy the land or facilities, even if paid for by residents, where that use is protected by state law or the Constitution. In *Van Ness v. Borough of Deal*, the Supreme Court invoked the public trust doctrine to strike down rules excluding non-residents from access to the beachfront, even though the town had purchased the land in question and built a resort-type recreation area on reclaimed beachfront.²⁶

Green Acres. In addition to a municipality’s historically longstanding power to establish parks and playgrounds,²⁷ a 1971 statute, N.J.S.A. 40A:12-5(a), provides additional authority for acquisition of open space lands “by purchase, gift, lease...or installment agreement.” New Jersey’s Green Acres program enables towns to acquire property using matching grants and loans from the state. To fund the local share of the purchase, the governing body may incur indebtedness through the sale of bonds. A local government may also, by referendum, establish an open space tax to provide funds for open space preservation. (As of 1998, 16 counties and more than 90 municipalities in New Jersey had established an open space tax.) As a rule, open space purchases should be made in concert with the master plan. However, if an attractive site faces imminent development, the Green Acres rules allow the municipal government to act to preserve the land immediately, without prior review by the planning board through the elaborate master plan revision process, before it is lost.

SHADE TREE PROTECTION

Municipalities have a longstanding power, dating to at least 1878,²⁸ to establish autonomous shade tree commissions of up to seven members,²⁹ with powers to adopt ordinances regulating the “planting, care and control of shade and ornamental trees and shrubbery upon and in the streets, highways, public places, parks and parkways of the municipality, except State highways, unless the [Department of Transportation] shall assent thereto and except county highways, parks and parkways in counties...having a county shade tree commission...”³⁰

The commission may “move or require the removal of

any tree, or part thereof, dangerous to public safety” and “administer treatment to, or remove, any tree situate upon private property which is believed to harbour [sic] a disease or insects readily communicable to neighboring healthy trees.”³¹ The commission may impose the costs of planting ornamental or shade trees or removing dangerous trees, “in accordance with uniform rules and regulations....[as] a charge upon the real estate in front of which such tree or trees shall be planted or removed.”³² The commission must notify property owners of the commission meeting at which such proposed activities will be considered.³³ Similarly, anyone, including the state, intending to cause “interference with or injury to a highway shade tree” must ask for the consent of the shade tree commission within whose jurisdiction the tree is located.³⁴ As part of its mission to protect landscaping, the commission may “prescribe a fine for the violation of its ordinances in an amount not exceeding \$1,500 for each violation.”³⁵

ALIGNMENT AND REGULATION OF ROADS

The local roadway system has continuing and momentous effects on the local and even on the regional environment. A decision to “vacate” a street — closing the road to the public and permitting a private landowner to build upon it or otherwise to fence it off to the public — also may affect the local environment in diverse ways.

One of the most prominent municipal powers under the direct control of elected officials is the placement, alignment and naming of local roads and streets. Specifically, each such body may make, amend, repeal and enforce ordinances to:

- a. Ascertain and establish the boundaries of all streets...and public places in the municipality, and prevent and remove all encroachments [upon them]....;
- b. Establish, change the grade of or vacate any public street,...or any part thereof [including]...any square, place or park, or any part thereof, dedicated to public use...; [and]
- g. Prevent persons from depositing, throwing, spilling or dumping dirt, ashes or other material upon any street or highway....³⁶

BEACH EROSION CONTROL

Any beachfront municipality — defined as one “which borders on tidal waters”³⁷ — is expressly empowered to pass, by referendum, an ordinance creating a beach erosion control district limited to lands that are or may be threatened by flooding from advancing seawaters. Once established, the district, through an elected Beach Erosion Control Commission, has the power to borrow money and incur indebtedness (issue revenue bonds) up to \$150,000³⁸ to plan and carry out beach control projects including the acquisition of lands and property, or construction or improvement of jetties, bulkheads, or other facilities. The commission may “match” funds from other sources for the construction of beach erosion control projects.

STREET LIGHTING

By ordinance, each governing body may “cause the streets, highways, parks and public places...to be lighted, and [to] erect and maintain on and in such streets...parks and public places, all proper poles” as needed.³⁹ Lighting may seem like an aesthetic, rather than an environmental, matter. But poorly planned, excessive, or inefficient outdoor lighting can lead to a loss of rural character and pose safety problems (glare reduces driving visibility), as well as nuisance and energy waste problems. Artificial lighting has been observed to confound the natural habits of some migrating birds and night-feeding wildlife. The 1996 N.J. Light Pollution Study Commission’s Report recommended that the state provide guidelines for local light pollution ordinances. Municipal officials can act to establish environmentally-sensitive lighting in public areas and, through ordinance(s) and the site plan approval process, can require it for any new construction.

WATER SUPPLY

Local power *and responsibility* over water supply remain strong. State law allows a municipality to acquire, construct or operate a water supply facility.⁴⁰ The municipality also may issue bonds for water supply purposes, such as the purchase or construction of waterworks to supply and purify water.⁴¹ The governing body is also authorized to exercise any other powers necessary or incidental to accomplishing the purposes of the County and Municipal Water Supply

Act.⁴² However, if a municipality markets water or water supply services to residents of other municipalities, the municipal operation becomes a “public utility” subject to the jurisdiction of the Board of Public Utilities (BPU).⁴³

Water for Fire Protection The availability of sufficient water for fire protection is a concern of local planning agencies and governing officials, whether water is supplied by a municipal waterworks or by a public utility company. However, any extension of water supply facilities — lines, mains, construction of storage tanks and reservoirs — has environmental consequences and should be coordinated with local zoning and the master plan. Such expansion not only affects the water resource, but also may induce (or at least facilitate) development.

Municipal efforts to promote water conservation (for example, installing low-flow toilets or shower heads) must conform with the State Uniform Construction Code.⁴⁴ As a result of a State Supreme Court decision⁴⁵ finding that water utilities may be liable for fire damage where insufficient water pressure or capacity was a contributing factor, water utilities have an interest in promoting water conservation.

GOVERNING BODIES AS PLAINTIFF ENFORCING ENVIRONMENTAL LAWS

Municipalities can defend their safety and environmental interests by suing polluters. The Environmental Rights Act (ERA)⁴⁶ allows any “person” to sue any other “person” to “enforce, or to restrain the violation of, any statute, regulation or ordinance which is designed to prevent or minimize pollution, impairment or destruction of the environment.”⁴⁷ The term “person” includes “any political subdivision of the state and any agency or instrumentality of the state or of any political subdivision of the State.”⁴⁸ Therefore, it seems that not only can a municipality or any of its agencies invoke the ERA, it also can be sued under the ERA — for instance by another municipality or its residents.

In *Borough of Kenilworth v. Dept. of Transportation*⁴⁹, the city sought to restrain the widening of the Garden State Parkway, citing the proposed “relocation of a segment of a stream which lies within...Kenilworth.”⁵⁰ It is noteworthy that although the court ruled against Kenilworth’s substantive claims, it did concede the city’s right to bring the action.

Under the ERA, municipal plaintiffs enjoy certain preferences. Generally, plaintiffs must provide 30-day “notice of intent” to the governing body of the municipality in which the alleged [pollution] has, or is likely to occur. Municipal plaintiffs need not provide such notice, which enables a community to intervene quickly in cases that may affect its inhabitants.⁵¹ The court may require defendants to pay attorneys’ fees of prevailing plaintiffs, apparently including local agencies or councils; municipal defendants also may be required to pay attorneys’ fees of a prevailing party.⁵²

GENERAL POWERS OVER LAND USE AND DEVELOPMENT

The Municipal Land Use Law (MLUL), N.J.S.A. 40:55D-1 *et seq.*, delegates land use powers to governing bodies and their land use agencies. To exercise each power, municipalities must adopt an ordinance according to rules spelled out in the statute.

The following land use powers, granted to municipalities through the MLUL, have manifold environmental effects.

The Power to Adopt a Subdivision Control and Site Plan Ordinance

A town has authority to require “approval of subdivision plats by...the planning board as a condition for the filing of such plats with the county recording officer and approval of site plans by...the planning board as a condition for the issuance of a permit for any development,” N.J.S.A. 40:55D-37. (An important exception to this broad power is an exemption from site plan review for subdivisions or lot applications for detached one or two dwelling-unit buildings.)

A subdivision is “the division of a lot, tract or parcel of land into two or more [separate] lots, tracts, parcels or other divisions of land for sale or development.”⁵³ A “plat” is the plan and map for a subdivision proposal, also called a site plan. Subdivision and site-plan controls are the basic means used by the planning board, the municipality’s chief land use agency, to regulate large-scale development, case-by-case.

The Municipal Land Use Law dictates what a municipal governing body *must* include in its subdivision and site

plan ordinance(s), including provisions for ensuring adequate streets, water supply, drainage, utilities, shade trees, soil conservation (during excavation) and conformity with the zoning ordinance (*N.J.S.A. 40:55D-38 and 41*). Municipalities have discretion to go beyond the mandated features; “discretionary” elements for site plan and subdivision review ordinances are listed in *N.J.S.A. 40:55D-39 and 40*, and include provisions for off-tract improvements necessitated by a subdivision or land development. (See Chapter 3.)

The Power to Require Developer “Contributions” for Off-tract Infrastructure Improvements

The local governing body may adopt an ordinance that authorizes the planning board to require, as a condition of subdivision or site plan approval, contributions from developers for off-tract improvements necessitated by the proposed development. The planning board may compel a developer to pay his “pro-rata share of the cost of providing only reasonable and necessary street improvements and water, sewerage and drainage facilities, and easements therefor, located outside the property limits of the subdivision or development but necessitated or required by construction or improvements within such subdivision or development.”⁵⁴ This type of ordinance can protect a municipality from some of the adverse economic consequences of development.

Contributions may not be exacted on a purely *ad hoc* basis or negotiated in a vacuum; they must be based on the existing plan for development of the community and the estimated costs of the infrastructure as allocated to each prospective development. After preliminary approval, the assessed amount becomes a vested right of the applicant.

A town must base its cost assessments on municipal regulations that accord with the circulation plan and utility service plan elements of the master plan, *N.J.S.A. 40:55D-28(b) (4) and (5)*. Obviously, these planning documents must be adopted prior to the imposition of infrastructure fees. Local regulations must include fair and reasonable standards for determining “the proportionate or pro-rata amount of the cost of such facilities that shall be borne by each developer or owner within a related and common area, which standards shall not be altered subsequent to preliminary approval.”⁵⁵

The complexities of this process are reflected in the case law. In the leading case on the topic, the State Supreme Court struck down a comprehensive cost-allocation system. *New Jersey Builders Association v. Mayor and Tp. Committee of Bernards Tp.*⁵⁶ invalidated the imposition of pro-rata costs on a developer for his share of a long-term, \$20 million road improvement plan. The court reasoned that state law permits only off-tract exactions for infrastructure “the need for which arose as a *direct* consequence of the *particular* subdivision or development under review”⁵⁷ (emphasis added).

This decision is cited to support the view that planning boards may assess builders only the costs of off-tract improvements directly necessitated or required by a project. Drawing the line between “direct” and “indirect” is not easy. Moreover, in footnote 5 of its decision, the Court seemed to back off from this broad view:

We add one important qualification. By our decision we do not purport to determine the limits of specific applications of *N.J.S.A. 40:55D-42*, nor do we exclude its possible application to a street, water, sewerage, or drainage facility affecting *all or substantially all* of a municipality if the *direct causal relationship* between the development and the need or the improvement is *demonstrated* (emphasis added).

Bernards Township may have lost its case because the record failed to establish a direct link between the specific development and its contribution to overall municipal-wide costs.

Allocation of the pro-rata costs of long-term capital improvement plans is vital to mitigating the environmental harms associated with growth. It may still be possible to assign each separate development a percentage share of overall costs if a direct causal link between the off-site impacts of the development and the need for the infrastructure or “improvements” is demonstrated. But this reading of the case also may be questioned. The court’s concluding comments must be weighed:

It is indisputable that subdivisions and development applications, in addition to their *direct* impact on municipal facilities in the surrounding area, have a *cumulative* and wide-ranging impact on the *entire community*. We cannot fault the logic or the foresight that induces a municipality such as Bernards Township to consider the long-term impact of permit-

ted development on municipal resources and public facilities. *But as yet the Legislature has not delegated to municipalities the far-reaching power to depart from traditionally authorized methods of financing public facilities* so as to allocate the cost of substantial public projects among new developments on the basis of their anticipated impact⁵⁸ (emphasis added).

Because this issue is uncertain and the stakes are large, litigation, or the threat of it, is commonplace. However, three principles can be stated:

- A municipal plan to prorate contributions for off-site improvements must make a strong case for the direct impact of each development project on the total cost.
- The town must demonstrate that the need for the particular infrastructure improvements results from the pending development.
- The method of cost allocation must be well supported in the evidentiary record through credible testimony and reports by experts.

Otherwise, even though this kind of plan benefits local taxpayers and is a rational land-use planning technique, it may be shot down in court.

The benefits of a contributions ordinance outweigh the effort to adopt and support it. Without these fees from developers, the cost of supplying the infrastructure needed to protect the environment can overwhelm local budgets and the will of the community to pay the full bill. With the reduction of federal and state public works money, there are few other sources of funding. If growth is to pay for itself and not overwhelm local transportation, water and sewage treatment capacity, and if growth is permitted to go forward only as it pays for itself substantially, if not fully, it is an important task of local governing bodies to legislate a legally-defensible means of imposing these fees. (It would also help if the legislature acts to clear up the uncertainty.)

In fact, the absence of this type of ordinance can reduce growth. If a town cannot finance a new sewage treatment plant, it may down-zone permitted growth to reduce pressure on existing facilities. Or the DEP may impose a moratorium on sewer or potable water hook-ups.⁵⁹

THE “OFFICIAL MAP”

A local governing body may choose to adopt an official map of the municipality. This map “shall reflect the appropriate provisions of any municipal master plan,” unless an absolute majority of the governing body votes otherwise. (In that case, the town officials must spell out the reason(s) in the minutes when adopting the official map.⁶⁰) The official map shows the “location and width of streets and public drainage ways and the extent of flood control basins and public areas, whether or not such areas are improved, unimproved, or in actual physical existence”⁶¹ (emphasis added). Complete and accurate mapping of those potentially critical public areas is important because they can be used to limit development, at least temporarily. “For purpose of preserving the integrity of the official map...no permit shall be issued for any building or structure in the bed [of] any street or public drainage way, flood control basin or public area [which has been] reserved” on the map⁶² (emphasis added).

This section of the MLUL has some teeth. For example, in *Barsel v. Woodbridge Tp.*⁶³ the Court held that the board of adjustment had no power to approve a parking area within an unpaved road that was duly located on the official map.⁶⁴ The official map not only depicts future public areas and infrastructure within a community but also can help preserve the land needed to accommodate those public uses in the future. In effect, the MLUL lets a municipality impose a limited moratorium on private action inconsistent with designated public purposes. This power is subject to the right of any affected land owner to receive “just compensation for actual loss found to be caused by [any] temporary reservation and deprivation of use”⁶⁵ (emphasis added).

The Power to Adopt an Ordinance to Require Open Space Management Organizations for Planned Unit Developments

Standards for an “open space organization” that would manage the private common open space in a planned unit development (PUD) or other cluster development are set forth in *N.J.S.A. 40:55D-43*.⁶⁶ The MLUL’s definition of planned developments has been expanded to include projects consisting of noncontiguous acreage. This should encourage more innovative approaches for these developments.

THE ZONING ORDINANCE

Procedure: Each governing body “may adopt or amend a zoning ordinance relating to the nature and extent of the uses of land and of buildings and structures thereon.”⁶⁷ This zoning power is tied to detailed preliminary planning; the town may not pass a zoning ordinance until the planning board “has adopted the *land use plan element* and the *housing plan element* of a master plan.” The ordinance “shall be drawn with reasonable consideration to the character of *each district* and its *peculiar suitability* for particular uses and to encourage the *most appropriate use of land*”⁶⁸ (emphasis added). The ordinance must follow a general rule of uniformity within each zoning district for “each class or kind of buildings or other structures or uses of land, including [PUD’s]...but the regulations in one district may differ from those in other districts.” The act specifically bars the adoption or amendment of any ordinance by initiative or referendum. However, property owners comprising 20 percent or more of the land within 200 feet of any proposed zoning district amendment or revision may file a formal protest by petition; thereafter, a two-thirds vote of local officials is necessary to adopt the ordinance.⁶⁹ Any proposed zoning ordinance or modification must first be referred to the planning board for its recommendation, as set forth in N.J.S.A. 40:55D-64 and 55D-26.

Content: The discretionary contents of a municipal zoning ordinance are outlined in N.J.S.A. 40:55D-65. They include the following environmentally relevant powers:

- a. Limit and restrict buildings and structures to specified districts...and regulate the *nature and extent of the use of land* for trade, industry, residence, *open space* or other purposes;
- b. Regulate...buildings and other structures, the percentage of lot or development area that may be occupied by structures; *lot sizes* and dimensions;... floor area ratios and other ratios and *regulatory techniques governing the intensity of land use* and the provision of adequate light and air, including but not limited to the potential for *utilization of renewable energy sources*;
- c. Provide districts for planned developments [including]...standards governing the type and *density or intensity of land use* in a planned development...;
- d. Establish...reasonable standards of performance and standards for the provision of *adequate physical improvements* including, but not limited to, off-street parking and loading areas, marginal access roads and roadways, other circulation facilities and *water, sewerage and drainage facilities*...;
- e. Designate and regulate areas subject to *flooding* (1) pursuant to [the Flood Hazard Area Control Act, N.J.S.A. 58:16A-55 *et seq.*] or (2) as otherwise necessary *in the absence of appropriate floodway regulations* [by the Flood Hazard Area Control Act]...; and

In N.J.S.A. 40:55D-65.1:

Designate and regulate *historic sites or historic districts* and provide design criteria and guidelines therefor. Designation and regulation pursuant to this subsection shall be in addition to such designation and regulation as the zoning ordinance may otherwise require (emphasis added).

Additional or “miscellaneous” zoning provisions are found in N.J.S.A. 40:55D-66 prohibiting discrimination in zoning between public and private nonprofit day schools or against group homes or other homes for “children who are members of families by reason of their relationship by blood, marriage or adoption, and foster children placed with such families....” See also, N.J.S.A. 40:55D-66.1 concerning community residences for the developmentally disabled, victims of domestic violence, or persons with head injuries, prohibiting discrimination against them in any “residential districts” of a municipal zoning plan.

While N.J.S.A. 40:55D-62 and 55D-2 are the basic sections of the MLUL on zoning, including environmental concerns, they must be understood in the context of *Southern Burlington County NAACP v. Tp. of Mt. Laurel (Mount Laurel II)*⁷⁰. The following section will acquaint the reader with the environmental aspects of Mt. Laurel II as it relates to the adoption of a zoning ordinance.

Mount Laurel II: The Challenge to Protect the Environment While Promoting Lower-Income Housing

On January 20, 1983 the New Jersey Supreme Court handed down its *Mount Laurel II* decision, ruling that every municipality has a continuing duty to provide a “realistic opportunity” for the construction of its “fair share” of the region’s need for housing for persons of low and moderate income.⁷¹ Virtually every governing body has had to reconsider its development regulations in order to comply with that ruling. The Court warned that the judiciary must not stand by while “poor people [are] forever zoned out of substantial areas of the state, not because housing could not be built for them but because they are not wanted; [or] poor people forced to live in urban slums forever not because suburbia, developing rural areas, fully developed residential sections, seashore resorts, and other attractive locations could not accommodate them, but simply because they are not wanted.”⁷²

Local officials are challenged to implement the *Mount Laurel II* goals of remedying decades of “urban slum” conditions without permitting high-density development in areas that are constrained by ecological, historic, environmental or farmland considerations, and lack adequate infrastructure for such development. How can governing bodies protect open space and limit growth to the capacity of sewers, roads, water lines and other public facilities while promoting new lower-income housing?

Mount Laurel II has an environmental dimension that should prevent courts from striking down environmentally sound zoning to promote more housing opportunities. As Chief Justice Wilentz wrote at the outset of the opinion: “Builders may not be able to build just where they want — our parks, farms, and conservation areas are not a land bank for housing speculators.”⁷³ Indeed, it was the Court’s concern for sound land use planning that prompted it to adopt the 1980 State Development Guide Plan (SDGP) as the means to determine which municipalities have a constitutional duty to accommodate high-density, regional housing. As Chief Justice Wilentz wrote, “the [SDGP]’s delineation of growth areas will in most cases conclusively determine the existence and location for the imposition of the *Mount Laurel* obligations.”⁷⁴

When the state Department of Community Affairs (DCA) prepared the SDGP it intended it to serve as a purely advisory tool for “the long-term development and capital improvement program for the future...development of the state.”⁷⁵ Nonetheless, the Court noted that the SDGP was firmly based on planning and environmental principles and adopted it to reduce the burden of litigation. Guided by the SDGP, *Mount Laurel* courts could fashion environmentally sensitive remedies to lower income housing needs in the shortest possible time.⁷⁶

The SDGP divided the state into “conservation areas,” “agricultural areas,” “limited growth areas,” and “growth areas.” *Mount Laurel* housing quotas largely depend upon how much of a municipality fits within each category. In the companion case of *Caputo v. Chester Tp.*⁷⁷, the Court showed how the SDGP could act as a shield against development in a township entirely located within a limited growth area — just as the *Mount Laurel* doctrine would act as a sword to promote growth in growth-area communities. The Court reviewed the environmental sensitivities of the area and held that, in light of the DCA’s designation, Chester had no regional fair share obligation, and that no “builder’s remedy” (court-ordered approval of a large-scale development that includes up to 20 percent lower-income housing) would be appropriate. In another companion case, *Glenview Development Corp. v. Franklin*⁷⁸, the Court ruled that the lack of growth-supporting infrastructure in an area designated as largely rural by the SDGP, exempted it from a regional fair share. Other cases decided as part of the *Mt. Laurel II* opinion, *Round Valley v. Clinton*⁷⁹, and *Urban League of Essex County v. Mahwah Tp.*⁸⁰, confirmed the Court’s determination that *Mount Laurel* litigation should not override valid land use and environmental factors, if properly documented.

Extensive litigation since 1983 confirms the view that where there are substantial and well-documented important environmental, infrastructure and other planning constraints, a governing body need not rezone critical open space to allow for large-scale development, provided the municipality satisfies its basic *Mount Laurel* obligations to remedy housing deficiencies for its indigenous poor.⁸¹

The State Planning Act⁸², intended to replace the SDGP, and the Affordable Housing Act, which established

the Council on Affordable Housing (COAH), provides new tools for municipalities seeking to preserve the environment while complying with the Supreme Court doctrines.⁸³ The Affordable Housing Act also provides a limited moratorium on builders' remedies for *Mount Laurel* projects, later upheld in *Hills Development Corp. v. Bernards Tp.*⁸⁴

The Power to Establish Joint Planning Boards and Zoning Boards of Adjustment

Municipalities may unite to review land use development by combining their planning boards and boards of adjustment and by employing "joint building official[s], joint zoning officer[s] or other officials responsible for [land use functions]," N.J.S.A. 40:55D-77 through 88. Municipalities also may merge these duties with the "board of chosen freeholders of any county or counties in which such municipalities are located or of any adjoining county or counties."⁸⁵

Since regional boards have all the duties and powers of local planning boards, this seldom-used technique makes regional planning a practical reality.⁸⁶ "The governing bod[ies]....may delegate to the regional planning board, *any or all* of the powers and duties of a [regular] board" (emphasis added). Thus, the governing bodies might limit the scope of their joint board to reviewing regional projects or proposed developments along shared highways or boundaries.

The Power and Duty to Engage in "General Reexamination" of Local Master Plans and Development Regulations

At least once every six years each governing body "shall...provide for a general reexamination of its master plan and development regulations by the planning board."⁸⁷ In times and places of rapid development, public officials may invoke this power more often to purge stale plans and policies, and to assure that planning keeps pace with development and other changes. Environmental aspects of this reexamination include mandatory reviews and reports on the following:

- a. The major problems and objectives relating to land development....

- b. The extent to which such problems...have been reduced or have increased [since the last examination]....
- c. The extent [of] significant changes in the assumptions, policies and objectives forming the basis for the master plan or development regulations...with particular regard to the density and distribution of population and land uses, housing conditions, circulation, *conservation of natural resources, energy conservation, collection, disposition and recycling of designated recyclable materials, and changes in state, county and municipal policies and objectives* (emphasis added).
- d. The specific changes recommended for the master plan or development regulations, if any.

The Power to Adopt Development Moratoria

When development pressures appear to exceed the capacity of local controls, officials may be urged to adopt a development moratorium until planning and infrastructure can catch up with growth. But N.J.S.A. 40:55D-90 bars any moratorium for the purpose of preparing "a master plan and development regulations," presumably including any revisions. A moratorium is permitted only "on the basis of a *written opinion* by a qualified health professional that a *clear imminent danger* to the health of the inhabitants of the municipality exists," and is limited to six months⁸⁸ (emphasis added). Thus, a moratorium can be prompted by development pressures *if* it is clearly health-based *and* dangerous to local residents. (In the summer of 1987, Princeton Borough officials adopted a development moratorium in response to a declaration of emergency from the regional health officer, stating that low water pressure and volume in fire hydrants, caused by growth exceeding the capacity of the water company's infrastructure, threatened fire-fighting ability. The moratorium was not challenged in court.)

The Power and Duty to Adopt Stormwater Management Plans

One serious environmental consequence of poorly-planned development is stormwater runoff — water flowing from roads, driveways, roofs and other impervious surfaces onto

lower elevation areas. The statutes direct every municipality to adopt “a stormwater management plan and a stormwater control ordinance or ordinances to implement said plan.” A stormwater management plan must be designed:

- a. to reduce flood damage;...
- c. to reduce *soil erosion* from any development or construction project;...
- e. to induce *water recharge* into the ground where practical;
- f. *to prevent to the greatest extent feasible, an increase in nonpoint pollution;*
- g. *to maintain the integrity of stream channels for their biological functions, as well as for drainage* (emphasis added).⁸⁹

Hence, the duty to control stormwater carries with it the responsibility to protect water resources. Nonpoint source pollution often exceeds pollution discharged through point sources. The state DEP closely regulates point-source pollution, while nonpoint sources are generally not subject to review. This section of MLUL dictates a strong local focus on preventing and remedying these environmental problems.

For Further Information

Written references:

New Jersey Zoning and Land Use Administration, by William M. Cox, Gann Books, Newark, NJ 07102

Copies of the *Municipal Land Use Law*, available from the New Jersey Planning Officials, P.O. Box 7113, Watchung, New Jersey, 07060.

Section B

POLICIES AND OPERATIONS

The officials who are elected to govern a municipality enact laws, appoint the members of town boards and commissions, levy and collect taxes, pay the bills and implement an assortment of state statutes. Their main job is to enforce local rules. They are the town's mothers and fathers: the residents expect them to keep the town safe, ensure its orderly growth, and provide whatever services the citizens need and are willing to finance.

The governing body sets the municipal agenda. If preservation of the historic and environmental attributes of the town are important to the officials and the people who elect them, protection will be carried out as a matter of course. If protecting such resources is seen as the responsibility of “others” or if it is secondary to low taxes, ratables and growth opportunities, preservation will suffer.

Local officials, faced with the pressure of annual budget crunches and the prospect of elections every few years, may find it difficult to focus on the long-term

impacts of land use decisions. Stormwater control is a good example. To protect residents from flooding and to prevent pollution from stormwater runoff, governing bodies may seize upon traditional structural solutions such as sewer systems and treatment plants. These facilities may provide a quick fix, but are costly to build, and require perpetual maintenance. A more cost-effective solution might be public purchase of property for use as a natural stormwater detention area. But to officials faced with today's election and today's taxpayer, the long-range solution may be less obvious or appealing.

Meeting the goals of local environmental and cultural protection requires a mix of psychology, brute force, political courage and, most importantly, leadership. No governing body can or should regulate every move by every citizen. However, by setting a good example, and through community education, the governing body can establish a local ethic that may take shape in support for appropriate regulation.

Through its policies and actions, the governing body sets the environmental tone in a community. For instance, allowing the road department to dump materials in stream corridors is a poor example to set for landowners who are required to protect the same resource. A municipality that “saves” money by directing untreated stormwater to the nearest river can suffer the ultimate retribution when an upstream community does the same. Conversely, a municipality that uses recycled paper and collects office paper for recycling from municipal offices sets a good example for residents who are required to separate their own recyclable materials. By demonstrating environmental behaviors in the community, the governing body can gain cooperation from residents and help them develop an understanding of the importance of protecting critical resources.

As a “home rule” state, New Jersey gives local governments authority to enact laws to protect the health and safety of citizens and their environment. These local laws are valid unless they conflict with federal or state laws. Generally, local standards and controls are stricter than state or federal regulations.

In order to achieve uniformity of certain standards, the state preempts some elements of local authority. For instance, the Residential Site Improvement Standards, authorized by the Legislature and adopted by the N.J. Department of Community Affairs in 1996 (*N.J.A.C. 5:21-1.1 et seq.*), superseded all municipal ordinances regarding standards for streets and parking, water supply, sanitary sewers, and stormwater management in new residential development. In some cases the state has also chosen to supersede local authority in order to protect an important state resource. For example, there is direct state regulation of land use in critical areas such as the Pinelands, coastal areas and wetlands.

Some statewide initiatives begin at the local level. Mandatory recycling, which originated primarily in voluntary citizen action, is one.

Responsibilities

The municipal governing body has at least six responsibilities related to protecting local and state resources and providing a clean environment and adequate open space. In New Jersey, municipal governing bodies perform the following functions:

- adopt and enforce local ordinances as authorized by state enabling laws;
- establish and appoint members to the local board of health, planning board, board of adjustment, environmental commission, historic preservation commission, shade tree commission, recreation and park commissions, and the municipal utilities authority;
- appoint and supervise local police, public works departments, construction officials and other administrative personnel including the municipal attorney and engineer;
- adopt operating and capital budgets and set the tax rate;
- purchase materials, from stationery to road maintenance equipment;
- build and maintain the local infrastructure, including roads, parks and recreation facilities, and in some cases, the sewer plant and water supply.

Building a Team

To ensure a clean local environment and a good quality of life, the municipal governing body needs to establish a responsive network of appointed officials, fund these citizen boards adequately and follow their advice. Each of these boards is part of a network of county and state organizations that provides education and training for local groups and gives the municipality broad access to sources of information and expert assistance.

Except for the board of health’s specialized ordinances and some rules made by the municipal utilities authority, the governing body enacts and enforces all local laws. Each of the following boards and commissions has a key position on the municipal environmental protection team.

The **board of health**, supported by its own ordinances and a qualified and properly funded staff, responds to crises such as water pollution emergencies, oversees the day-to-day health of the community and its residents, and advises elected officials on health-related concerns.

The **environmental commission** provides the governing body with a municipal environmental resource inventory (ERI), public liaison, advice and communication

with the state and county environmental agencies. Through the environmental commission, all branches of local government can access the public and private environmental network for advice and assistance. The environmental commission is notified of most public or private activities for which state (DEP) permit applications have been submitted. The commission can:

- obtain grants and other funding for acquisition of open space and parks;
- act as a watchdog in the enforcement of state environmental laws and for contaminated site cleanups;
- inform and educate residents and act as an information conduit between the public and elected officials;
- help implement environmental preservation and enforcement programs to forestall costly future remedial action.

The *planning board* and the *board of adjustment*, with their staff and consultant experts, plan land use and enforce review procedures to avoid expensive degradation of community resources. In a real way the economic and environmental future of the municipality is in their hands.

The duties of *recreation commissions*, *park commissions*, *shade tree commissions* and *historic preservation commissions* relate to the quality of life in the municipality. Their policies and actions can protect local natural and cultural resources from destruction by state, federal and private activities.

Municipal Utilities Authorities (MUAs), autonomous bodies established by the governing body, enable a town to fund and construct local infrastructure. Their ability to borrow funds, charge user fees and provide needed services (such as sewage treatment or potable water) without direct charge to taxpayers gives these organizations a vital role in local environmental protection.

The *Local Emergency Planning Committee (LEPC)* identifies facilities and transportation routes that handle hazardous substances and establishes procedures to deal with accidents and spills. The committee's collection of data on hazardous substances used in the municipality can be useful in land use planning, emergency preparation and response, and pollution prevention programs.

THE ENVIRONMENTAL AGENDA

Clean Air

It is not possible for local officials to assure clean air for local residents. Airsheds can encompass parts of many states, and pollution tends to blow into or out of town. One town's ratable may create its neighbor's air pollution; the spillover is regional and does not recognize political boundaries. The 1995 amendments to the N.J. Air Pollution Control Act effectively eliminated the authority of municipalities to pass new local air quality ordinances; air quality regulation is currently the domain of state and federal agencies, with enforcement assistance from authorized county health agencies.

However, local elected officials can take important steps to prevent increases in unhealthful air. In this era of dependence on the automobile, every local land use decision is an air quality decision. Each projected development forces local decision makers to consider factors ranging from how many trees will be lost to how many traffic jams and vehicle miles will be generated. Municipal officials can take important local "clean air" actions such as locating commercial zones and high-density housing near public transportation, reducing parking and providing incentives for carpooling.

Environmental Quality

Emergency Preparation and Response – The municipal governing body must ensure that the local emergency rescue team — firefighters, police and first-aiders — is in place and prepared with adequate plans and equipment to respond to emergencies involving hazardous substances. Even in towns having no facilities that use or store hazardous chemicals, officials must be prepared to deal with spills or fires resulting from accidents on local roads and railways.

The Emergency Planning and Community Right to Know Act of 1986, also known as Title III of the Superfund Amendments and Reauthorization Act (SARA), and the New Jersey Worker and Community Right to Know Act of 1983 enable communities to gather data on every hazardous chemical stored or used in the municipality. This information, compiled by the Local Emergency Planning Committee (LEPC), should be made publicly available and should be understood by all members of the official family.

Radiation – Protection from radon, a naturally occurring gas, depends on voluntary action by each homeowner. The DEP's Radiation Protection Element answers questions about radon testing and remediation, and also keeps a list of state-certified businesses that provide remediation services. The local governing body should ensure that citizens know about the need for radon testing, and know how to contact the DEP for information.

Noise Control – Subject to DEP approval, governing bodies may adopt noise control ordinances that impose more stringent performance standards for commercial, residential and construction activities than those established by state law. In addition, when adopting or reviewing land use (zoning) ordinances, the governing body should assure that only appropriate land developments will be permitted to locate near noise generators. For example, towns with lands abutting interstate highways should avoid high-density residential uses near these corridors because noise barricades are expensive and have limited effectiveness. Zoning ordinances should contain performance standards for levels and timing of sound emissions permitted in each zone, and require vegetated buffer strips for residential areas.

Pesticide Management – Governing officials can take the lead in proper use of pesticides. They can instruct public works departments doing road work, parks maintenance and street tree spraying to consult with the local environmental commission, board of health and DEP before using pesticides and herbicides on public property. The local water supply and the health of residents may be at stake.

The governing body also can work with the environmental commission and the board of health to inform the community of needed precautions for safe pesticide and herbicide use, and of alternate methods of pest control.

Clean Water

Local governments have important responsibilities in protecting ground and surface water from point and nonpoint sources of pollution. Municipal officials can control land use to protect streams, aquifer recharge areas and well heads from nonpoint sources of pollution. Land use ordinances can:

- require pollutant removal from stormwater runoff;
- mandate vegetated buffers in stream corridors;
- restrict vegetation removal on steep slopes; and
- require strict adherence to agricultural best management practices.

One way to protect both ground and surface water from pollution is to prevent land use (building) densities in non-sewered areas from exceeding the capacity of the local soils to absorb and filter wastewater from septic systems.

Sewage treatment plant discharges, even from the best built plant, will have some impact on the natural systems, which have a finite capacity to assimilate pollutants without harm. The governing body, either directly or through representation on a utility authority, can exercise control over these operations.

Municipal facilities equipped with effective nonpoint source pollution control mechanisms serve as models for all applicants and residents. Town governments can also reduce nonpoint source pollution by:

- minimizing the use of road chemicals and using proper storage techniques;
- initiating a regular program of municipal street sweeping;
- avoiding the use of pesticides and herbicides through integrated pest management; and
- properly disposing of leftover materials.

Such cost-effective measures of reducing nonpoint source pollution should be brought to the attention of every municipal employee and resident.

The DEP must notify local governments of applications for permits to discharge into area surface or groundwaters, or to affect flood levels. Permit applications that require local notification include the New Jersey Pollution Discharge Elimination System (NJPDDES) permits, stream encroachment permits and wetlands permits. These notifications are an important early warning of impending action by applicants and the DEP, and provide an opportunity for local comment on the application. Unfortunately, notifications are often misplaced or misunderstood. These notices should be reviewed carefully by the governing body, the planning board, the board of

health, the environmental commission and the town's professional advisors, because the projected activity may have secondary effects that are not evident to the reviewers in Trenton. The simplest stream encroachment permit application may presage actions that will destroy wetlands or pollute a stream.

Waste Management

Under state law (*N.J.S.A. 13:1E-1 et seq.*) counties have the responsibility for assuring an adequate solid waste management system. However, elected officials at all levels can promote waste reduction and disposal programs. Local officials can work with the appropriate agencies and contractors to provide adequate and proper means of waste disposal to homeowners and businesses so that there is no excuse for illegal, irresponsible disposal. For example, a municipality can:

- use money from the Clean Communities Program to run a roadside litter cleanup patrol;
- promote recycling through community education;
- provide regular pickup of rubbish so that non-recyclable articles are disposed of properly;
- provide chipping services to recycle branches and prunings from spring and fall cleanup;
- provide leaf removal in the fall.

The state says local governments must adopt a mandatory recycling ordinance to require reduction of the waste volume at the source — the home or business. To make the program work, the recycling coordinator, the environmental commission, the local police department, the board of health and the planning board must function as a team.

The effort to properly dispose of *hazardous* materials begins with cleaning the local waste stream by separating out batteries, used oil, paint cans, household chemicals, pesticides and herbicides. Elected and appointed officials can enlist the aid of the county and all local commissions and boards to educate the public and to implement and enforce a hazardous materials collection program in the community.

The disposal of vegetative wastes (leaves, grass, clippings, etc.) is a local responsibility — part education, part

action. Municipal programs range from requiring backyard composting to providing curbside collection and composting at DEP-approved sites. A creative municipality might establish a cooperative arrangement with local farmers who are willing to use yard wastes for mulch. This type of program, approved by the DEP and the Department of Agriculture, creates a partnership between those who need the organic matter to enrich the soils and those to whom the leaves are an inconvenience. A municipality can also educate its residents on the wisdom of using a mulching lawnmower and leaving the cut grass on the lawn (rather than raking it up) to act as a natural fertilizer.

All these actions — policing illegal dumping, providing public education and a proper collection system — make municipal officials a responsible part of the state, county and local effort to provide New Jersey with a safe, progressive solid waste disposal system.

Planning for solid waste disposal is carried out at the county level by the freeholders and their solid waste advisory committees. Every county has at least one existing or projected transfer station, landfill, incinerator and/or recycling processing facility. Local officials can have input into the development of their county's solid waste management plan.

Historic Resources

State and federal laws provide towns with the legal tools for preserving historic and cultural sites. To foster an interest in and preservation of a town's cultural heritage, the municipal governing body may encourage the planning board to include a historic preservation element in the master plan. The governing body may also create and support a historic preservation commission and establish a historic preservation district(s). These steps can result in a continuing public discussion of how the municipality can maintain its character and neighborhoods during the pursuit of growth.

Even before the governing body decides to create a historic preservation commission, it can initiate surveys and applications for National and State Register status. Citizen committees, appointed by the municipal body, have often done the necessary research on which to base applications and local preservation ordinances.

Land and Wildlife

In the *Mount Laurel* zoning decision, the Supreme Court of New Jersey said, “The state controls the use of the land and the government that controls this land represents everyone.” We know that the survival of man on the planet depends on natural resources like water, air and soil, and that the natural resource base and the quality of life depend on responsible use of land. The recognition of the interdependence of these systems and the need to “represent everyone” is a challenge to governing officials who make local land use decisions.

Almost all control over local land use is in the hands of elected municipal officials. The Municipal Land Use Law (MLUL) allows the municipal governing body to appoint a planning board, which is authorized to plan and implement land use ordinances adopted by the governing body. The governing body also supervises and controls the zoning officer and the state-licensed construction official, the local regulatory officers for land use and construction. The municipal treasurer collects and controls fees levied in the land use regulatory process. The tax assessor, appointed by the governing body, determines whether or not lands qualify for farmland assessment or reduced assessment due to environmental constraints. The governing body also directly controls the construction and maintenance of local infrastructure, such as sewers and roads, operations that are exempt from local land use regulation.

Regulation of land use can protect local resources, but only up to a point. Clearly there are instances when long-term objectives might dictate acquisition, or even the condemnation and acquisition, of whole or partial interest in a property. One useful option is land banking, in which a municipality buys a property and then resells it with deed restrictions to assure that it is developed in the interests of the community.

Park, recreation and environmental commissions are important advisory groups for land acquisition, but the governing body ultimately makes the decisions. The Green

Acres program offers grants and loans to help local governments buy whole or partial interest in open space for recreation or conservation. Land acquisition programs should be included in the long-term planning strategies outlined in the municipal master plan.

Special Protection Areas

In four very different areas of New Jersey the state legislature has withdrawn some of the grant of land use regulation that it gave to local municipalities. In these areas, economic and environmental problems (and solutions) crossed municipal boundaries, so the legislature created

regional agencies to provide a framework for local land use decisions. The planning and growth management goals are different for each of the four regions, which are the Hackensack Meadowlands, the coastal area, the Pinelands, and the Delaware & Raritan Canal watershed.

In each of these regional situations, local planning and review continues, but in a regional framework. The disadvantages of a two-layer review are outweighed by the advantage of knowing what the town next door is

going to approve. Another advantage of uniformity of standards is the assurance that other agencies or the courts will seldom overturn local decisions.

The Hackensack Meadowlands Development Commission (HMDC) is charged with the orderly development and redevelopment of the portions of 14 municipalities that make up the Meadowlands district. The commission has a detailed system for the planning and regulation of development in the 21,000-acre area. It includes mechanisms for intermunicipal tax sharing.

In New Jersey’s coastal areas, the DEP carries out final review of *all* development projects within the beach and dune zone, and of most other significant development projects beyond the dunes. The DEP can veto a municipally-approved development, but does not have the power to initiate or approve developments unless already permitted at the local level.

As long ago as 1949, Aldo Leopold proposed that human conduct should be guided by the ecologist’s concept of a biotic community. He wrote in the *Sand County Almanac*: “A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends to do otherwise.”

The Pinelands Commission must certify that the land use regulations of the municipalities covered by the Pinelands Protection Act conform to the Commission's Comprehensive Management Plan. The Commission reviews development proposals that do not conform to these certified ordinances, or that are of regional importance.

The Delaware and Raritan Canal Commission reviews all applications for development in the watershed of the canal. These reviews, and the Commission's power to reject or modify proposed projects, are based solely on the poten-

tial for negative impact(s) of development on the park or the water quality in the canal.

For Further Information

Contacts:

New Jersey State League of Municipalities, 609-695-3481

Website:

New Jersey State League of Municipalities,
<http://www.njslom.com>

1. See *e.g.*, N.J.S.A. 40A:60-1 *et seq.* (borough form); 40A:63-1 (township form); 40:70-1 *et seq.* (commission form) and 40:69A-1 *et seq.* (optional municipal charter forms).
2. L. 1917, c. 152.
3. N.J.S.A. 40:69A-1 *et seq.*
4. N.J.S.A. 40:69A-30.
5. For the sources of municipal police powers, see, generally, Pane, "Local Government Law," N.J. *Prac.*, Secs. 1-30 and the New Jersey Constitution, Art. IV, Sec. 7, Para. 11: "The provisions of this Constitution and of any law concerning municipal corporations...shall be liberally construed in their favor. The powers of...municipal[ities] shall include not only those granted in express terms but also those of necessary or fair implication, or incident to the powers expressly conferred, or essential thereto, and not inconsistent with or prohibited by this Constitution or by law."
6. N.J. *Const.*, Art. IV, Sec. 6, Para. 3; see also the Eminent Domain Act, N.J.S.A. 20:3-1 *et seq.*
7. N.J.S.A. 40:48-1(3).
8. *Id.* at (4) to (30).
9. N.J.S.A. 13:1E-1 *et seq.*
10. Municipal regulation of solid waste has been construed in several leading cases, such as *Southern Ocean Landfill Inc. v. Mayor and Council of Ocean Tp.*, 64 N.J. 190 (1974), which first enunciated the preemption doctrine as applied to municipal control over solid waste, and *Ringlieb v. Parsippany-Troy Hills Tp.*, 59 N.J. 348 (1971), barring municipalities from demanding separate penalties from acts sanctioned by the state; but see also *Pleasure Bay Apartments v. City of Long Branch*, 66 N.J. 79 (1974) which reiterated the old view that municipal power and responsibility for the collection and disposal of solid waste remains intact following passage of state laws on the same topic.
11. *Rollins Environmental Services v. Logan Tp.*, 209 N.J. Super. 556, 559 (App. Div. 1986), reversing 199 N.J. Super. 70 (Law Div. 1984) holding to the contrary.
12. See *e.g.*, N.J.S.A. 13:1E-21, providing for county or "district" solid waste plans subject to state DEP concurrence.
13. See *e.g.*, N.J.S.A. 40:72-3b, permitting any municipality to pass ordinances regarding the "declaration, prevention and summary abatement of nuisances."
14. N.J.S.A. 26:2C-22; see also Moran, *General Administrative Law*, 9 Rutgers Law Rev. 40 (1954).
15. 300 N.J. Super. 491 (App. Div. 1997).
16. 270 N.J. Super. 122 (Law Div. 1993).
17. See n. 7, *supra*, and text.
18. L. 1971, c. 418, N.J.S.A. 13:1G-1 *et seq.*
19. *Id.* at 1G-21.
20. *Id.* at Para 2.
21. N.J.A.C. 7:29-1.3.
22. *Id.* at 29-1.2.
23. N.J.S.A. 40:61-1.
24. *Id.* How a municipality receives a "gift" of land has been a bone of frequent contention. Thus, a gift or "dedication" of land must be formally accepted before it becomes effective. *Brookdale Park Homes v. Bridgewater Tp.*, 115 N.J. Super. 489 (Ch. Div. 1971) and *State DOT v. Birch*, 115 N.J. Super. 457 (App. Div. 1971). Also, where a town receives a gift subject to "restrictive covenants," it must comply or risk the reversion of the land to the grantor or his heirs. *Lander v. Village of South Orange*, 58 N.J. 509 (1971).
25. *Id.*
26. 139 N.J. Super. 83 (Ch. Div. 1975), reversed on other grounds, 145 N.J. Super. 368 (App. Div.), reversed in part, 78 N.J. 174 (1978).
27. See N.J.S.A. 40:61-1 *et seq.*, and discussion of same in the text, *supra*.
28. See *Avis v. Vineland*, 56 N.J.L. 474 (Sup. Ct. 1894).
29. N.J.S.A. 40:64-1, as amended by L. 1984, c. 164.
30. *Id.*
31. N.J.S.A. 40:64-5.
32. *Id.* at 64-8.
33. *Id.* at 64-9.
34. *Id.* at 64-10.
35. *Id.* at 64-12.
36. *Id.*
37. N.J.S.A. 40:68-27.
38. N.J.S.A. 40:68-42.
39. N.J.S.A. 40:67-13.
40. N.J.S.A. 40A:31-1 *et seq.*, the County and Municipal Water Supply Act.
41. See N.J.S.A. 40A:31-5.

42. N.J.S.A. 40A:31-5.h.
43. See generally, N.J.S.A. 48:2-13 and 2-16, broadly defining “public utility” and certain illustrative cases: *Morris Tp. v. Town of Morristown*, 49 N.J. 194 (1967) and *Petition of South Lakewood Water Co.*, 61 N.J. 230 (1972). See also, N.J.S.A. 40A:31-4.
44. N.J.S.A. 52:27D-119 *et seq.*, State Uniform Construction Code Act.
45. See *Weinberg v. Dinger*, 106 N.J. 469 (1987).
46. N.J.S.A. 2A:35A-1 *et seq.*
47. *Id.* at 35A-4a.
48. N.J.S.A. 2A:35A-3a.
49. 151 N.J. *Super.* 322 (App. Div. 1977).
50. *Id.* at 326.
51. N.J.S.A. 2A:35A-11.
52. *Id.* at 35A-10, but currently capped at \$50,000.
53. N.J.S.A. 40:55D-7.
54. N.J.S.A. 40:55D-42.
55. *Id.*
56. 108 N.J. 223 (1986).
57. *Id.* at 237.
58. *Id.* at 237-38.
59. N.J.A.C. 7:14A-22.17 *et seq.* (pertains to sewer connection bans).
60. N.J.S.A. 40:55D-32.
61. *Id.*
62. N.J.S.A. 40:55D-34.
63. 189 N.J. *Super.* 75 (App. Div. 1983).
64. *Id.* at 80. Judge Pressler construed the MLUL as “preclud[ing] a board of adjustment from according *private rights in a public right-of-way* or, indeed, from otherwise modifying the use of a public right-of-way.” *Id.* at 81 (emphasis added).
65. N.J.S.A. 40:55D-44, para.2.
66. This section should be read alongside N.J.S.A. 40:55D-45, which spells out the “findings” required for planning board approval of any PUD permitted by local ordinance. These standards include such important environmental features as a finding that the PUD is “consistent” with the overall zoning ordinance adopted under N.J.S.A. 40:55D-65c; that “the proposals for maintenance and conservation of the common open space are reliable, and the amount, location and purpose of the common open space are adequate”; that “...the amenities of light and air, recreation and visual enjoyment are adequate”; and that the PUD will cause “no unreasonably adverse impact upon the area...” N.J.S.A. 40:55D-45(a)-(d). All of these findings are made by the planning board.
67. N.J.S.A. 40:55D-62(a). See also, 55D-65 and -66 (discretionary and “miscellaneous” contents of a zoning ordinance).
68. N.J.S.A. 40:55D-62(a), para. 2.
69. N.J.S.A. 40:55D-63.
70. 92 N.J. 158 (1983).
71. *South. Burl. Cty. NAACP v. Tp. of Mt. Laurel*, 92 N.J. 158, 205 (1983) at 204-05.
72. *Id.* at 209.
73. 92 N.J. at 211 (one of many strong defenses for environmental planning).
74. *Id.* at 246-47.
75. N.J.S.A. 13:1B-15.52 (repealed). The State Planning Act, N.J.S.A. 52:18A-196 *et seq.*, provided for the establishment of the State Planning Commission and the preparation of a State Development and Redevelopment Plan.
76. *Id.* at 236.
77. 92 N.J. at 316.
78. 92 N.J. at 316-321.
79. 92 N.J. at 329.
80. 92 N.J. at 339.
81. See e.g., *Orgo Farms & Greenhouses, Inc. v. Colt's Neck Tp.*, 192 N.J. *Super.* 599 (Law Div. 1983); *J.W. Field Co. v. Franklin Tp.*, 206 N.J. *Super.* 165 (Law Div. 1985); and *AMG Realty Co. v. Warren Tp.*, 207 N.J. *Super.* 388 (Law Div. 1984).
82. N.J.S.A. 52:18A-196, *et seq.*
83. N.J.S.A. 52:27D-328.
84. 103 N.J. 1 (1986). (For further analysis of the environmental side of *Mount Laurel*, see Licata and Licata, “The Environmental Implications of Mount Laurel,” 15 *Rutgers Law Rev.* 627 (1984).
85. *Id.*
86. N.J.S.A. 40:55D-84.
87. N.J.S.A. 40:55D-89.
88. N.J.S.A. 40:55D-90b.
89. N.J.S.A. 40:55D-95.

THE PLANNING BOARD AND ZONING BOARD OF ADJUSTMENT

Section A

THE PLANNING BOARD: THE LAW

INTRODUCTION

No local government agency affects the environment in more permanent and visible ways than the planning board. This volunteer board implements state law, which regulates all land development. The planning board also reviews land use ordinances introduced by the governing body.

Membership and Environmental Representation

The Municipal Land Use Law (MLUL) empowers a municipal governing body to create, by ordinance, a seven- or nine-member planning board. The MLUL specifies that the membership of the board must include the mayor (or his representative), one member of the governing body, one municipal official not on the governing body, and “other citizens of the municipality.” One member of the planning board must be from the “environmental commission...if there be one.” Additionally, on nine-member boards, one citizen member “may be a member of the board of adjustment or historic preservation commission.”¹ No special qualifications or background are otherwise required for board members.

Conflicts of Interest

The MLUL states that “No member of the planning board shall be permitted to act on any matter in which he has, either directly or indirectly, any personal or financial interest. Any member...after a public hearing, if he requests one, may be removed by the governing body for cause.”² Even without these statutory prohibitions, New Jersey’s common law condemns any personal or pecuniary conflict that could taint public confidence in the outcome of the process. (See, e.g., *Driscoll v. Burlington-Bristol Bridge Co.*,³ and, more recently, *State of New Jersey v. East Shores, Inc.*)⁴

Impermissible conflicts arise in four ways: (1) direct pecuniary interest in the outcome of the proceeding; (2) indirect pecuniary interest; (3) direct personal interest; and (4) indirect personal interest.⁵ Of special concern to members of charitable or environmental organizations is the latter category. For example, in *Zell v. Roseland*,⁶ a planning board member who was a member of a church that was selling property to a bank seeking to have the property rezoned was held to have an indirect personal interest. As a result, the rezoning was invalidated.

All board members should be wary of potential conflicts — especially those of an “organizational” nature. Standard procedure should be to insist upon statements of disclosure or affirmation of “no conflict” before reviewing each case. Wherever a conflict is found, it cannot be

waived by consent of applicants or other parties.⁷ Even a substantial *appearance* of a conflict — *where no actual conflict exists* — can be grounds for disqualification. The “rule” may be stated: “Would an impartial and concerned citizen, intelligent and apprised of all the facts in the situation, feel that there was *the potential for non-objectivity* on the part of the officeholder making a decision? If the answer is affirmative, the appearance of conflict exists”⁸ (emphasis added).

In the end, the decision to disqualify must be made on the basis of all the facts in the case. For example, membership by a board member — or the spouse — in a national environmental organization might not dictate disqualification of the board member. But when an environmental advocacy group is local in nature, it may. At least one unpublished court decision has reached this result on the basis of a “personal” interest that could damage the credibility of the process — leading to invalidation of the board’s decision, even though the vote was unanimous.⁹

ENVIRONMENTAL RESPONSIBILITIES

New Jersey law endows planning bodies with significant environmental responsibilities. They must regulate land use in ways that protect open space, promote renewable power, conserve natural resources, control “sprawl,” and encourage recycling, among other duties. While planning boards derive their power and direction from policies found in the Municipal Land Use Law, reference to the standards contained in the zoning, site plan and subdivision ordinances is also required¹⁰

The environmental responsibilities of a planning board are outlined in Section 2 of the MLUL, N.J.S.A. 40:55D-2. It is the *intent and purpose* of the law (emphasis added):

- a. To encourage municipal action to guide *the appropriate use or development of all lands in this State*, in a manner that will promote the public health, safety, morals, and general welfare;
- b. To secure safety from fire, *flood*, panic and *other natural and man-made disasters*;
- c. To provide adequate *light, air and open space*;

- d. To ensure that the development of individual municipalities does not conflict with...neighboring municipalities, the county *and the State as a whole*;
- e. To promote...appropriate population densities and concentrations that will contribute to the well-being of persons, neighborhoods, communities and regions and *preservation of the environment*;
- f. To provide sufficient space in appropriate locations for a variety of *agricultural*, residential, *recreational*, commercial and industrial uses and *open space*, both *public and private*, according to their respective *environmental requirements* to meet the needs of all *New Jersey citizens*;
- g. To encourage the appropriate and efficient expenditure of public funds by coordination of *public development with land use policies*;
- h. To encourage the location and design of *transportation routes* that will promote the free flow of traffic while discouraging location of such facilities and routes that result in *congestion or blight*;
- i. To promote a *desirable visual environment*...;
- j. To *promote the conservation of... open space, energy resources, and valuable natural resources, and to prevent urban sprawl and degradation of the environment through improper use of land*; [For definition of “open space,” see N.J.S.A. 40: 55D-5, “Definitions”]
- n. To promote *the utilization of renewable energy sources*; and
- o. To promote *the maximum practicable recovery and recycling of recyclable materials from municipal solid waste* through the use of planning practices designed to [follow]...the State Recycling Plan...and complement municipal recycling programs” (all emphases added).

Complicating these environmental responsibilities, recent court decisions have revived the “taking issue” — when land use controls effectively “take” private property — but without drawing a clear line as to when a “taking” has occurred.¹¹

Powers and Duties

The MLUL assigns the planning board nine general powers and duties, six of them required, and three optional.¹² The board is required to follow the provisions of the MLUL and, accordingly, exercise its powers in regard to:

1. The *master plan* [N.J.S.A. 40:55D-28];
2. *Subdivision control and site plan review* [N.J.S.A. 40:55D-37];
3. The *official map* [N.J.S.A. 40:55D-32];
4. The *zoning ordinance*, including conditional uses [N.J.S.A. 40:55D-62];
5. The *capital improvement program* [N.J.S.A. 40:55D-29]; and
6. *Variances* [N.J.S.A. 40:55D-60] (all emphases added).

Optionally, the planning board may participate in and review programs or plans required by federal or state law, assemble data as part of a continuous planning process, and perform other advisory duties assigned by the municipal governing body.¹³ Other municipal bodies or officers also may refer matters to the board for advice.¹⁴

The planning board has the power and the duty to make recommendations to the governing body regarding any proposed “development regulation, revision, or amendment thereto.” The board’s review must identify any provisions in the proposed regulation that are inconsistent with the municipal master plan, and include recommendations concerning these inconsistencies. A planning board recommendation can be rejected or changed by a majority vote of the full membership of the governing body, but the reasons for such an action must be set forth in a resolution and recorded in the minutes of the meeting.¹⁵

THE MUNICIPAL MASTER PLAN

Preparing a master plan is really not optional; it is a regular planning board activity. Although the MLUL states that each municipal planning board “may prepare and...adopt or amend a master plan or component parts thereof,” N.J.S.A. 40: 55D-28 (emphasis added) any zoning ordinance, other than a temporary or interim ordinance, is legally adopted *only* after the “land use portion of the

master plan” has been promulgated. (See, *e.g.*, *Pop Realty Corp. v. Springfield Bd. of Adjustment*.¹⁶) Thus, to sustain the zoning ordinance, a master plan must be adopted.

The MLUL requires that the master plan and land use ordinances be reexamined at least every six years. This reexamination is to be carried out by the planning board, which must prepare and adopt (by resolution) a *reexamination report*. Based on such reexamination, the board may decide to revise elements of its master plan or recommend changes in ordinances; however, this is not mandatory. Copies of the reexamination report must be sent to adjoining municipalities and the county planning board. Without an up-to-date reexamination report, a municipal master plan may not be considered valid in a court challenge of a zoning decision.

Contents of the Master Plan

Every master plan must contain a statement of “objectives, principles, assumptions, policies and standards” and a “land use plan element.”¹⁷ The land use plan element must include a statement of its relationship to the master plan’s statement of objectives and “other master plan elements including, but not necessarily limited to, topography, soil conditions, water supply, drainage, flood plain areas, marshes, and woodlands.”¹⁸

The land use plan element must show “the existing and proposed location, extent and intensity of development of land to be used in the future for varying types of residential, commercial, industrial, agricultural, recreational, educational and other public and private purposes or combination of purposes; and [state] the relationship thereof to the existing and any proposed zone plan and zoning ordinance.”¹⁹ These factors must be correlated with “the existing and proposed location of any airports and the boundaries of any airport safety zones,” together with “a statement of the standards of population density and development intensity recommended for the municipality.”²⁰

In formulating the land use element of a master plan, a planning board should utilize the information contained in any *environmental resource inventory* (ERI), also called a natural resource inventory, that exists for the municipality. A primary function of a municipal *environmental commission*, if one is established, is to compile an ERI, which is a document containing maps and descriptions of the natural

features of all lands and located within municipal borders. An ERI includes information on soil, wetlands, water, floodplains, drainage, topography, forests, open space, wildlife, endangered species and other natural elements. It should also identify all sources of contamination. The use (residential, commercial, open space, etc.) that is planned for any given area should be based on the natural characteristics of that area and its surroundings; therefore, *the information contained in the ERI should be the foundation for the land use element of the master plan.*

The MLUL further specifies that “where appropriate” the master plan should also contain nine other elements. The housing plan element pursuant to [N.J.S.A. 52: 27D-310] “must be designed to achieve access to affordable housing to meet present and prospective low- and moderate-income needs.”²¹ The housing element should consider the lands that are most appropriate for affordable housing and the capacity of existing and proposed water and sewer lines that will service such housing. The housing element and fair share plan becomes part of the municipality’s petition to the Council on Affordable Housing (COAH) to gain COAH’s substantive certification for the housing plan.

Other elements that can be incorporated into the master plan are a circulation plan element regarding “all modes of transportation required for the efficient movement of people and goods,” a utility service plan, a community facilities plan, a recreation plan, and a *conservation plan*.

The conservation plan element should provide in-depth review of “the preservation, conservation, and utilization of natural resources [such as]...energy, open space, water supply, forests, soil, marshes, wetlands,...other waters, fisheries, endangered or threatened species wildlife and other resources, and [should]... systematically analyze the impact of each other component and element of the master plan on the present and future preservation, conservation and utilization of those [natural] resources.” Clearly, this provision carries over with unusual particularity the broadly environmental purposes of the MLUL. The information contained in any open space inventory and/or environmental resource inventory (ERI) for the municipality should provide the basis for the conservation plan element.

Further environmental aspects of the master plan appear in descriptions of a historic preservation plan element and a “recycling plan element which incorporates the State Recycling Plan goals.” A master plan can also include an “economic plan element” and “appendices or separate reports containing the technical foundation for the master plan and its constituent elements.”

Finally, “the master plan shall include a specific policy statement indicating the relationship of the proposed development of the municipality as developed in the master plan to (1) the master plans of contiguous municipalities, (2) the master plan of the county... (3) the State Development and Redevelopment Plan...and (4) the district solid waste management plan....”²² (See, generally, *Urban Farms, Inc. v. Borough of Franklin Lakes*,²³ affirming that *all* aspects of a zoning ordinance must be regional in orientation: “The insularity and parochialism of the Chinese wall theory of municipal zoning has long since been discredited.”²⁴)

THE CAPITAL IMPROVEMENT PROGRAM

A *capital improvement* is defined in N.J.S.A. 40:55D-3 as “a governmental acquisition of real property or major construction project.” In this regard, N.J.S.A. 40:55D-29 sets forth the relationship between the town planning board and the approval of all major capital improvements. “The governing body *may* authorize the planning board from time to time to prepare a program of municipal capital improvement projects projected over a period of at least 6 years...”(emphasis added). In light of the growth-inducing and growth-directing function of major infrastructure projects — new roads, sewers, schools, and the like — the planning board’s role is essential to tie fiscal planning to the goals stated in the municipal master plan. The MLUL states that, “The [capital] program... *shall* take into account public facility needs indicated by the prospective development shown in the *master plan*...or as permitted by other municipal land use controls”(emphasis added).

Notwithstanding the *planning* of capital projects, control of the purse strings incorporates planning board review on a project-by-project basis. N.J.S.A. 40:55D-31 mandates that no public funds may be expended on any capital project until the “specific project [is referred] to the planning board for review and recommendation in con-

junction with such master plan.” The board has 45 days to act on a referral. This section applies to any “action [proposed] by a housing, parking, highway, special district, or other authority, redevelopment agency, school board or other similar public agency, State, county or municipal” (emphasis added). While the planning board has no power to veto the expenditure of public funds on such public facilities, its recommendations should be vital to the governing body’s spending deliberations.

Finally, whenever the planning board reviews the complete plan for all future capital projects, “every municipal department, authority or agency shall, upon request of the planning board, transmit to said board a statement of all capital projects proposed to be undertaken by [the agency, to facilitate the board’s] study, advice and recommendation.” Thereafter, the board’s recommended capital plan is referred to the governing body to be adopted (or modified and adopted, “with reasons for said modification recorded in the minutes”) upon a vote of “a majority of the full authorized membership.”²⁵ Through this process the MLUL ties infrastructure decisions to the overall municipal land use planning process — including environmental concerns.

SUBDIVISION REVIEW

A municipal subdivision and site plan ordinance requires the local planning board to approve subdivision plats and site plans for all development except one or two dwelling-unit buildings, *N.J.S.A. 40:55D-37*. This ordinance gives the planning board power to oversee development on a case-by-case basis, to assure conformance with planning and environmental requirements. (Subdivision and site plan ordinances must be referred to the planning board for its advice prior to a public hearing by the governing body, *N.J.S.A. 40:55D-37b*.)

The scope of environmental review is delineated by the subdivision and zoning ordinances, as governed by the MLUL, *N.J.S.A. 40:55D-38*. There are a number of expressly environmental requirements for these ordinances, including the provisions below (numbered as found in the statute):

1. Consistency of the layout...of the subdivision or land development with the requirements of the

zoning ordinance (which, in turn, must be consistent with the MLUL and its strongly worded environment “purposes” section. *N.J.S.A. 40:55D-2*);

2. Streets in the subdivision...coordinated so as to compose a convenient system consistent with the official map, if any, and the circulation element of the master plan, if any, and so oriented as to permit, consistent with the reasonable utilization of land, the buildings constructed thereon to *maximize solar gain*...;
3. Adequate *water supply, drainage, shade trees, sewerage facilities* and other utilities necessary for essential services...;
4. Suitable size, shape and location for any area reserved for public use...;
5. Reservation...of any *open space* to be set aside for...the residents of planned development...;
6. Regulation of land designated as subject to *flooding*...;
7. Protection and *conservation of soils* from erosion by wind or water or from excavation or grading;
9. Conformity with a municipal *recycling ordinance* required pursuant to... [*N.J.S.A. 13:1E-99.16*] (emphasis added).

Furthermore, each subdivision review ordinance must spell out “provisions governing the *standards* for...streets or drives and for any required...*shade trees, fire hydrants and water, and drainage and sewerage facilities* and other improvements as shall be found necessary, and provisions *ensuring that such facilities shall be completed* either prior to or subsequent to final approval of the subdivision or site plan by allowing the posting of performance bonds by the developer” (emphasis added). Thus, an ordinance must do more than require the planning board to be satisfied that the developer would provide “adequate” shade trees, drainage and sewerage facilities, fire hydrants, or other items; it must include *standards* for them. These standards can be quantitative, descriptive or both. The applicant then has the burden of demonstrating compliance with the relevant standards before receiving approval.

A significant change with regard to local authority over subdivision and site plan review occurred in June, 1997, when the Residential Site Improvement Standards took effect. These statewide, uniform, mandatory standards, promulgated by the N.J. Department of Community Affairs, cover streets, sidewalks, parking, water supply, sanitary sewers and stormwater systems, and supersede any existing technical standards for residential development found in local ordinances.

The Legislature authorized the Site Standards with the intention of making construction requirements and costs more “predictable” for developers. The “findings and declarations” section of the statute states that “...The multiplicity of standards... that currently exists in this State increases the costs of housing without commensurate gains in the protection of the public health and safety,” (N.J.S.A. 40:55D-40.2). In some cases, the uniform standards are more stringent than those that would have been required in a given municipality. However, in some cases, the uniform standards are less stringent environmentally than a local ordinance would have required.

Exemption from the Uniform Site Standards might be obtained in two types of situations. A municipality may apply to the Site Improvement Advisory Board for special area status, based on unusual environmental (or other) characteristics of all or a portion of that municipality. With the Board’s approval, permanent special standards will be set for that designated area. The Site Standards statute also provides a process through which a waiver can be obtained for a specific development project, based on a health or safety hazard posed by literal application of the uniform standard(s) for that project. A municipality or a developer may apply for a waiver (N.J.A.C. 5:21-1 *et seq.*).

The “discretionary contents” of a subdivision review ordinance can give the planning board the option of encouraging so-called “planned development,” such as *planned unit developments* (“PUDs,” N.J.S.A. 40:55D-39-40). These developments differ from standard single-family housing developments in that they *cluster* residences together on portions of a development tract, leaving other areas of the tract undeveloped, preserving them as shared open space, or a *commons area*. Planned developments may also include shopping or business areas, allowing some of

residents’ daily needs to be met without driving. With planned development, the entire community, as well as residents of the new subdivision, can benefit from a greener environment, less traffic and less air pollution.

The general procedures for granting site plan and subdivision approvals and minimum requirements, such as the mandatory submission of site plans by applicants, are set forth in N.J.S.A. 40:55D-46 and 46.1 (“major” and “minor” site plan) and 47 (“minor subdivision”). Far more important are sections outlining the procedures for and effects of preliminary major subdivision and site plan approval (N.J.S.A. 40:55D-47, 48 and 49). Preliminary approval confers certain “vested rights” to the developer for at least three years. For a project with an area of 50 acres or more, the planning board may award approval “for such period of time longer than 3 years as shall be determined by the planning board to be reasonable,” taking into account the number of dwelling units or commercial floor area, economic conditions, and the comprehensiveness of the application.²⁶

SITE PLAN REVIEW

Site plan review involves the planning board in a detailed assessment of the *site plan*. The latter is defined as “a development plan [showing]...(1) the existing and proposed conditions of the lot, including *topography, vegetation, drainage, flood plains, marshes and waterways*, (2) the location of all existing and proposed buildings,... *drainage facilities, utility services, landscaping, structures and signs, lighting, screening devices, and* (3) *any other information* that may be reasonably required in order to make an informed determination pursuant to an ordinance [authorizing same]”²⁷ (emphasis added).

The site plan ordinance defines the scope of planning board supervision, as set forth in N.J.S.A. 40: 55D-41. The ordinance includes and is limited to “standards and requirements relating to:

- a. Preservation of *existing natural resources* on the site;
- b. Safe and efficient vehicular and pedestrian circulation, parking and loading...;
- c. *Screening, landscaping and location* of structures;
- d. Exterior lighting...;

- e. *Conservation of energy* and use of renewable resources; and
- f. Recycling of designated recyclable materials” (all emphases added).

Site plan review allows the planning board to regulate the *appearance* of a new project, and to protect natural resources by questioning a project’s environmental efficiency and impacts.

- Will the project affect wildlife and habitat on the site? Is there a way, for instance, to preserve stands of mature trees? Could the site plan be altered in order to conserve open space?
- Will the project impinge upon flood-prone areas or wetlands?
- Can the visual impact of the new homes be lessened through the grading of an earthen berm around its perimeter?
- Will the houses take advantage of the south-facing slope of the hillside to promote passive solar heating? Will structures be shaded by trees?

Site plan review is the time when board members can ask these and other critical resource questions, secure in the knowledge that the MLUL grants them jurisdiction over these issues.

Informal or Concept Review

At the developer’s request, the planning board may conduct an informal review of a “concept plan” for a projected development. Planning boards may choose to encourage this mechanism for large or complex projects where environmental disruption could be substantial.²⁸ The results of this informal review are not binding. However, because the review is undertaken early in the planning process, a project may be “fluid” enough to allow for some compromise and mediation. As an added benefit, the statutory 45- or 95-day time limit does not apply. Fees charged for the review are credited toward the total bills for formal review, so that experts can be retained even at this early stage.

Formal Review: Certification of Complete Application

An application for development is “complete” for review when so certified by the planning board.²⁹ Determining completeness is a critical first decision because it starts the clock on the approval process, and locks in much of the information the applicant must provide.

However, completeness *for purposes of review* is not the same as completeness for purposes of answering all relevant questions concerning a project’s potential environmental effects. Even after the board has certified that an application is complete — by default, if it does not act on the certification request within 45 days — “The [board] may subsequently require correction of any information...or any revisions in the accompanying documents, as are reasonably necessary to make an informed decision as to whether [to approve] the development....”³⁰ As the in-depth review progresses, the board has a right to demand correction of any information, or the submission of new data. Although the clock is not extended because of requests for new or corrected information, failure to comply with such requests may serve as a basis for denying the application.

To determine the completeness of an application, the board must determine whether the application complies with a checklist adopted by ordinance and provided to the applicant — subject to the applicant’s right to request a waiver of any checklist items; if not disallowed within 45 days, the request is deemed granted.³¹ This checklist, as specified in the municipal checklist ordinance, should require applicants to provide detailed information on all environmental factors. Sweeping generalities would not suffice either for certifying completeness of an application or for rendering a final decision.

May the board reject a development application because the petitioner has failed to submit enough convincing evidence to carry his burden of proof? Or must the board grant approval in times of doubt because the board has not found conclusive evidence for denial? The MLUL answers these questions as follows: “Nothing herein shall be construed as diminishing the *applicant’s obligation to prove* in the application process that he is *entitled to approval* of the application,”³² (emphasis added). The standard rules of judicial and administrative practice prevail: (1) Applicants

always have the burden of proof; and (2) the failure to carry that burden is sufficient basis to deny approval, so long as that failure is adequately documented in the record. (To support a denial on this basis, the planning board may need testimony by planning board experts or members, specifying areas of the application where information was lacking or where the applicant failed to answer relevant questions fully and credibly. A general assertion, without its own proof, that the developer failed to “carry his burden of proof” is unlikely to pass judicial scrutiny.)

The Procedure for Site Plan Review

To start the review process, the local ordinance must require an applicant to submit “a site plan and *such other information as is reasonably necessary* to make an informed decision as to whether the requirements...have been met” (emphasis added).³³ The ordinance should specify what additional information the planning board may need — notably, data and documentation on the full range of environmental effects from the project. This information is “in tentative form for discussion purposes for *preliminary approval*”;³⁴ the developer may later change or correct his submission. Moreover, final data and documentation may not be demanded at the preliminary approval stage.

Planning boards implement zoning ordinances; they do not rule on whether they are proper. For example, at least one intermediate level court has held that site plan approval may not be denied due to a planning board finding of excessive off-site traffic impacts. In *Dunkin’ Donuts of N.J. v. Tp. of North Brunswick*,³⁵ the court observed the following:

A planning board should consider off-site traffic flow and safety in reviewing [development] proposals.... Pursuant to ordinance it may condition site plan approval upon a contribution to necessary off-site street improvements.... *But the authority to prohibit or limit uses generating traffic* into already congested streets or streets with a high rate of accidents is an exercise of the zoning power vested in the municipal governing body³⁶ (emphasis added).

In this case, the court viewed the planning board’s disapproval as a form of administrative “veto” of the municipal zoning ordinance, *which permitted the use at the*

requested density. This ruling suggests that the governing body must assume that all uses authorized in the zoning ordinance will materialize. Therefore, when adopting a zoning ordinance, the governing body must consider the cumulative traffic and other impacts of the projected totals, compare the impacts to the capacity of the infrastructure, and alter the ordinance accordingly, or take other steps to assure that potential development will not overwhelm roads, sewers and the like. A town cannot assume that the planning board will act as a failsafe to deny applications for developments that are found to overwhelm the infrastructure on a case-by-case basis. Under the *Dunkin’ Donuts* rationale, that opportunity was foreclosed when the ordinance was adopted.

The Effect of Preliminary Approval

The term “preliminary approval” may be misleading. For all practical purposes, substantive reviews terminate with the grant of preliminary approval. *Vested rights* are rights held by the developer that cannot be altered by the municipality, except in the case of public health and safety needs. The MLUL specifies three of these rights:

First, “the general terms and conditions on which preliminary approval was granted shall not be changed, including but not limited to use requirements; layout and design standards for streets, curbs and sidewalks; lot size; yard dimensions and off-tract improvements....”

Second, the developer may “submit for final approval, on or before the expiration date of preliminary approval, the whole or a section or sections of the preliminary subdivision plat or site plan....”

Third, the applicant may seek “extensions on such preliminary approval for additional periods of at least one year but not to exceed a total extension of two years.”³⁷

The municipal governing body has no power to reverse, retract or modify a preliminary approval by enacting a new zoning ordinance or changing the key elements of the code under which approval was given, except in the case of a public health or safety crisis.

The courts have been especially strict in limiting municipal powers to alter zoning or other land use restrictions if the intent is to affect these vested rights. One intermediate level court has even applied the vested rights

doctrine to a planning board denial of site plan approval, where the court reasoned it should have been granted. (See *S.T.C. Corp. v. Planning Board of Tp. of Hillsborough*.³⁸) But in the same opinion the Appellate Division ordered, upon remand, that approval “should include...requirements that [the builder] assure an adequate water supply for its facility...and that it contribute to *any off-site street improvements that are rendered necessary because of the heavy truck and other vehicular traffic* to be generated by its proposed use...”³⁹ (emphasis added). In sum, the courts have taken a strict view of both the time limit and the powers to “condition” approval to account for these off-tract impacts caused by the facility.

A more important case was *Field v. Mayor and Council of Franklin Tp.*,⁴⁰ where the same level court expounded upon the powers of planning boards to demand adequate information on the full range of environmental impacts of a massive PUD application. The court drew a fundamental distinction between “preliminary approval granted subject to subsequent approvals by appropriate public agencies, and preliminary approval granted subject to *later submission of additional information fundamental to an essential element of the development plan*”⁴¹ (emphasis added). The former was not only authorized but required; the latter, however, invalidated approval not grounded upon prior analysis of the mandated information.

The *Field* court reasoned that “a municipality cannot guide the use and development of lands...if fundamental elements of a development plan are left unresolved before preliminary approval, leaving them, instead, for an unspecified later day.”⁴² In the category of necessary information were “drainage, sewage disposal and water supply” due to their “pervasive impact on the public health and welfare.”⁴³ The major point of contention was sewerage. At the time of preliminary approval, the PUD applicant had not determined which of three very different options he would employ (whether to connect to a regional sewerage authority, install his own “package treatment plants” or utilize “spray irrigation” of sewage). Thus, *Field* underscores the critical nature of preliminary approval; fundamental rights may “vest” at that stage, but the burden to receive approval is a heavy one; answering key questions cannot be postponed under the guise of “conditional approval.”

Final Approval

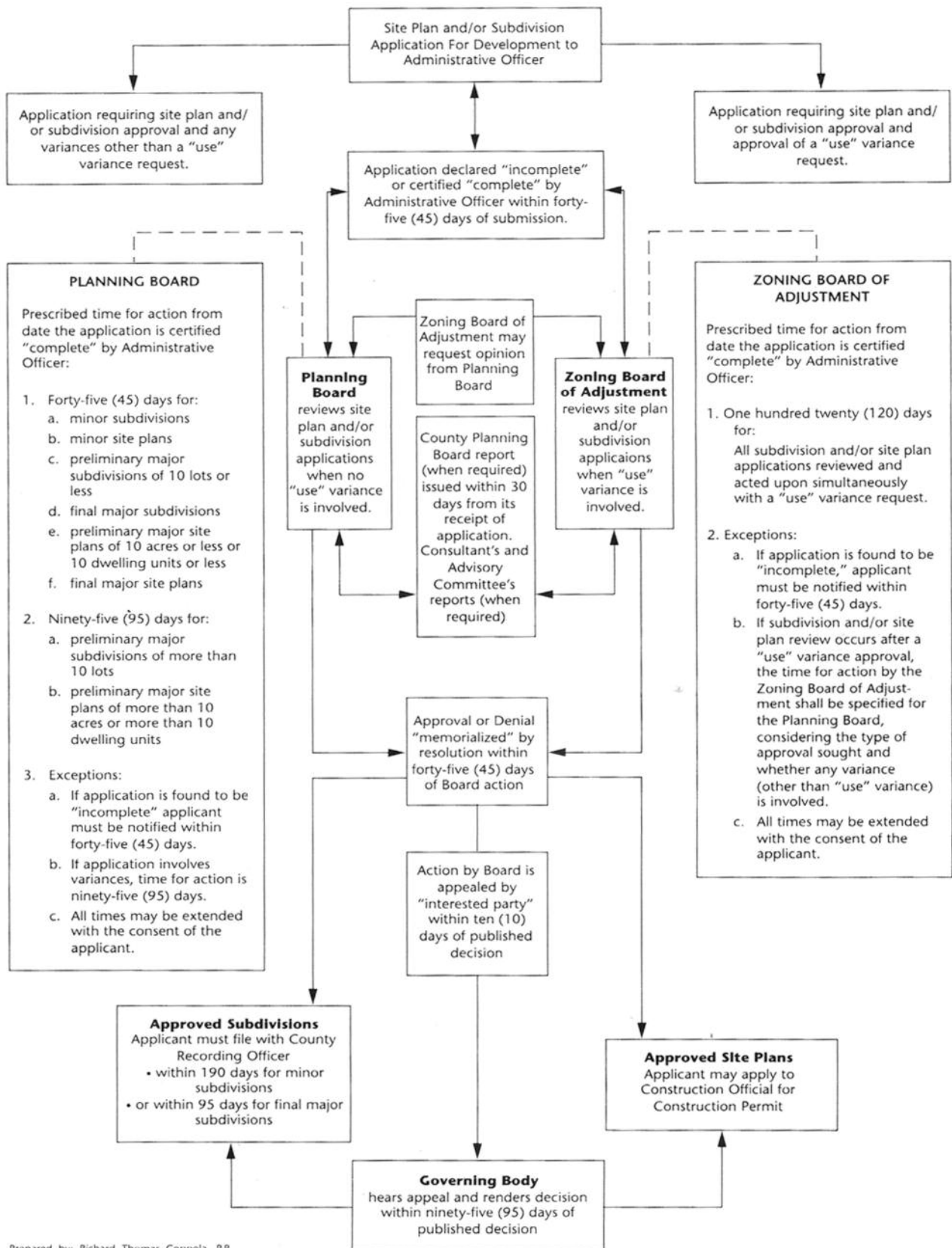
Having granted preliminary approval, the planning board must “grant final approval if the detailed drawings, specifications and estimates of the application for final approval conform to the standards established by ordinance for final approval, [and] the conditions of preliminary approval.” However, certain “minimal deviations” are permitted in the case of PUDs or certain other developments due to “change of conditions beyond the control of the developer since the date of preliminary approval.”⁴⁴

Time Limits for Decision

An important element of the review process is the statutory time limit for action on a development application. (See also, discussion of public hearing rules in *N.J.S.A. 40: 55D-10*.) For administratively complete applications involving 10 acres of land or less, and 10 dwelling units or less, the planning board must grant or deny approval within 45 days of the submission, or within such further time as has been consented to by the developer.

Upon the submission of a completed application for a site plan which involves more than 10 acres or more than 10 dwelling units, the planning board shall grant or deny preliminary approval within 95 days of the date of such submission, or within such further time as may be consented to by the developer. *Otherwise, the planning board shall be deemed to have granted preliminary approval*⁴⁵ (emphasis added).

These statutory time limits can be a source of tension between applicants and planning board members. Developers usually want to stick to the timetable, since the cost of a project and opportunities to contest it increase over time. On the other hand, planning boards want time to conduct a thorough review, especially where public concerns run high and residents want to question the applicant’s witnesses. Negotiating time extensions can be a necessary but contentious task. If the board fails to act by the end of the statutory period, the project is considered approved as submitted.⁴⁶



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Subdivision and Site Plan Review Procedures Under the Municipal Land Use Law

Coordination with State Agencies: “Conditional” Decisions

The MLUL specifies that the planning board must process an application even though a state agency — notably the DEP — has instituted legal action that effectively bars construction from proceeding (*N.J.S.A. 40: 55D-22*). In those circumstances, and in other instances when an application for local approval of a development requires parallel approval by a non-municipal governmental agency, the planning board is directed to grant “conditional” approval upon the unrelated agency granting its approval. For example, if a “sewer connection ban” has been imposed, pursuant to *N.J.A.C. 7: 14A-22.17*, which provides for a cessation of new sewer connections due to lack of sewage treatment capacity, the board nevertheless must complete its review of the project and render a final, if conditional, decision.⁴⁷

Planned Developments: A Special Case

As mentioned above, subdivision and site-plan ordinances may authorize “planned” developments — such as PUDs, planned residential developments (PRDs) and “cluster” developments —which aggregate units in one part of a site in order to reserve more of the open space in other locations. Every ordinance on these planned developments —perhaps better characterized as “negotiated” developments — must require, prior to approval of such developments, planning board findings on the following facts and conclusions:

- a. That departures...from zoning regulations otherwise applicable to the subject property conform to the zoning ordinance standards pursuant to [*N.J.S.A. 40: 55D-65c*];
- b. That the proposals for maintenance and conservation of the common open space are reliable, and the amount, location and purpose of the common open space are adequate;
- c. That provisions...for public services, control over...traffic, and the amenities of light and air, recreation and visual enjoyment are adequate; [and]

- d. That the proposed [project]...will not have an unreasonably adverse impact upon the area in which it is proposed to be established [*N.J.S.A. 40:55D-45a-d*].

These findings are made after board review and public hearings on the general development plan submitted by an applicant, pursuant to *N.J.S.A. 40:55D-45.1*.

N.J.S.A. 40:55D-45.2 lists elements that may be required (by ordinance) as part of a general development plan for a planned development. These additional elements go to the core of the entire planned development concept. With the following optional features, a general development plan ordinance becomes nothing less than a land use full disclosure law:

- a. A general land use plan...;
- b. A circulation plan...[regarding all] transportation facilities, including facilities for pedestrian access...and any proposed *improvements to the existing transportation system outside the planned development*;
- c. An *open space plan* showing the proposed land area and general location of parks and any other land area to be set aside for conservation and recreational purposes...;
- d. A utility plan indicating...*sewage and water lines*, any drainage facilities..., [and] proposed methods for handling solid waste disposal...;
- e. A *stormwater management plan*...;
- f. An *environmental inventory* including a general description of the vegetation, soils, topography, geology, surface hydrology, climate and cultural resources of the site, existing man-made structures or features and the *probable impact of the development on the environmental attributes of the site*;
- g. A community facility plan...[which may include] historic sites...;
- h. A housing plan...;
- i. A local service plan...[pertaining to public services, which may include] water, sewer, cable and solid waste disposal;

- j. A *fiscal report* describing the anticipated demand on municipal services to be generated by the planned development and any other financial impacts to be faced by municipality or school districts.... The fiscal report shall also include a detailed projection of property tax revenues...;
- k. A proposed timing schedule...; and
- l. A *municipal development agreement*, which shall mean a written agreement between a municipality and a developer relating to the planned development” (emphasis added).

Paying for the Planning Board’s Environmental Reviews

N.J.S.A. 40:55D-8 authorizes municipal agencies to charge *reasonable* fees to cover the cost of reviewing development applications. Such fees must be established by ordinance. Increasingly, government agencies are charging application fees to cover the costs of analyzing the potential impacts of projects that come before them. Many towns do not appear to take full advantage of this fee opportunity, even though the courts have upheld it. *Flama Const. Corp. v. Franklin Tp.*⁴⁸ upheld an ordinance providing a fee schedule based upon the size and complexity of the review process, requiring applicants to pay into an escrow account; refunds with interest were available for funds not expended on the professionals and experts retained to advise the planning board. *Burcam Corp. v. Planning Bd. of Medford Tp.*⁴⁹ disallowed the exaction of filing fees when no ordinance on the subject was yet in effect, but sustained fees after a valid ordinance was in effect and prior to the issuance of an occupancy permit. In sum, once the local governing body adopts a comprehensive fee ordinance, the planning board should not lack resources to review the full breadth of environmental impacts of an application.⁵⁰

Planning Board Hearings

A constant problem faced by any decision-maker is how to evaluate an applicant’s testimony. The MLUL provides ample opportunity for a quasi-judicial public hearing in which the credibility of an applicant’s testimony is evaluated. N.J.S.A. 40: 55D-10a requires a public hearing on each application for development. The presiding officer of

the planning board “shall have power to administer oaths and issue subpoenas to compel the attendance of witnesses and the production of relevant evidence....” The MLUL further provides that, “The testimony of *all witnesses* relating to an application for development *shall be taken under oath or affirmation* by the presiding officer, *and the right of cross-examination shall be permitted to all interested parties* through their attorneys, if represented, or directly, if not represented, subject to the discretion of the presiding officer and to reasonable limitations as to time and number of witnesses”⁵¹ (emphasis added).

As with all administrative agencies, “Technical rules of evidence shall not be applicable...but the agency may exclude irrelevant...or unduly repetitious evidence.”⁵² All proceedings must be recorded *verbatim*, by either a stenographer or mechanical or electronic means. Certified transcripts or duplicate recordings of such proceedings must be furnished by the municipal agency on request, but at the interested party’s expense.⁵³

Formal hearings, and accurate records of those hearings, enable planning boards to examine the truth of all assertions made regarding a development. They also enable an appellate court to review the proceedings at a later date. In practice, however, the procedures outlined in the MLUL are not always carried out. If witnesses are not sworn before testifying, their testimony will be deprived of legal weight in any subsequent legal challenge.

Citizen-complainants should note that unsworn written petitions are very much disfavored by the courts, and cannot be used as the basis for a permit denial. In *Seibert v. Dover Tp. Bd. of Adj.*⁵⁴ the court would not consider as evidence a petition of residents who were not present to be cross-examined on factual assertions made in the petition. Residents unrepresented by counsel seldom know of this requirement and planning boards seldom inform them.

Planning boards sometimes fail to realize their power to demand evidence from applicants or to question applicants on the full range of environmental side effects posed by their projects. Moreover, if boards allow applicants to control the clock, they may find themselves without adequate time to exercise their truth-determining powers to the fullest.

Making the Decision

The MLUL requires the planning board to prepare and publish written “findings of fact and conclusions... [for] each decision on any application for development.” These findings and conclusions may be provided 1) in the form of a resolution adopted by the board at the same meeting during which the application was granted or denied, or, 2) as a memorializing resolution adopted by the board within 45 days of the granting or denial of an application. If the board fails to act on this requirement, “any interested party may apply to the Superior Court...for an order compelling [it to do so] within a stated time, and the cost of the application, including attorney’s fees, shall be assessed against

the municipality” (N.J.S.A. 40: 55D-10 g). The written decision must be clear; in *Lizak v. Faria*,⁵⁵ the Supreme Court found that a failure to incorporate an “oral denial” of an application into the written resolution “transformed that denial into a grant of [approval].”

Customarily, the task of memorializing — putting into writing — the oral decision falls to the planning board attorney. Findings on the environmental aspects of a project should be included in this decision document. This assures that the findings have been fully considered, reviewed in detail, and preserved for appeal, and protects the planning board against challenges claiming a defective document.

Section B

THE ZONING BOARD OF ADJUSTMENT: THE LAW

INTRODUCTION

After the planning board, the zoning board of adjustment (“zoning board”) is the most important land use regulatory agency at the local level. The Municipal Land Use Law (MLUL) requires each municipality to create a zoning board of adjustment upon the adoption of a zoning ordinance (N.J.S.A. 40:55D-69). Municipalities with fewer than 10,000 residents may exercise, by ordinance, the option of consolidating the powers and functions of a zoning board of adjustment within a nine-member planning board, as provided in N.J.S.A. 40:55D-25c.

A zoning board consists of seven regular members and not more than two alternate members. Members serve staggered four-year terms, with the method of appointment dictated by ordinance. They are barred from holding any elective office or position under the municipality. The law does not specify a particular level of expertise as a qualification for appointment. Standard rules against conflicts of interest apply to all members.¹

POWERS

The MLUL is the source of all zoning board powers, as provided in N.J.S.A. 40:55D-70. They include the power to:

- a. *Hear and decide appeals* [regarding]...any order, requirement, decision or refusal made by an administrative officer based on or made in the enforcement of the zoning ordinance;
- b. *Hear and decide requests for interpretations* of the zoning map or ordinance, or for decisions upon other special questions, if permitted by local ordinance;
- c. (1) Where (a) by reason of exceptional narrowness, shallowness or shape of a specific piece of property, or (b) by reason of exceptional topographic conditions or physical features uniquely affecting a specific piece of property, or (c) by reason of an extraordinary and exceptional situation uniquely affecting a specific piece of property or the structures lawfully existing

thereon, the strict application of any [zoning] regulation... would result in peculiar and exceptional practical difficulties to, or *exceptional and undue hardship* upon the developer of such property, [the zoning board] may grant...a variance from such strict application of such [zoning] regulation so as to relieve such difficulties or hardship; (2) where...the purposes of [the MLUL] would be advanced by a deviation from the zoning ordinance...and the benefits of the deviation would substantially outweigh any detriment, [the zoning board may] grant a variance to allow departure from [zoning] regulation....; and

- d. In particular cases and for special reasons, [the zoning board may] grant a variance to allow departure from [zoning] regulations... to permit (1) a use or principal structure in a district restricted against [it]..., (2) an expansion of a nonconforming use, (3) deviation from a specification or standard... pertaining solely to a conditional use, (4) an increase in the permitted floor area ratio..., (5) an increase in the permitted density, or (6) [an increase in the permitted height of a structure]. A variance under this subsection can be granted only by affirmative vote of at least five members...or two-thirds of the full authorized membership in the case of a regional board.... (This category of variances is often referred to as use, or “D” variances.)

No variance or other relief may be granted...unless such variance or other relief can be granted *without substantial detriment to the public good and will not substantially impair the intent and the purpose of the zone plan and zoning ordinance*² (emphasis added).

The powers to deviate from a specification or standard pertaining to a *conditional use*, to approve *variances*, to overrule zoning administrators and to make interpretations on zoning questions give the zoning board of adjustment quasi-judicial authority to fine-tune land use regulations on a case-by-case basis, based upon very strict criteria. Of special note is the “conditional use” power — described as

permitting a use that is suitable to *certain* locations within a particular zoning district but not anywhere within that same district. In *Cardinal Properties v. Westwood*,³ an appeals court reversed a “conditional use” approval for a warehouse after finding that the ruling was not based upon clear and specific standards in the local zoning ordinance. The court emphasized that *economic need is no substitute for “physical criteria”* (such as distance standards from other property owners). In *Loscalzo v. Pini*,⁴ the same court reversed a “special reasons” variance because the expanded development “would contravene at least two of the general purposes of the MLUL, namely N.J.S.A. 40:55D-2b, ‘to secure safety from fire...’ and c, ‘to provide adequate light, air and open space.’ That the municipality might obtain a tax advantage...cannot support the grant of a use variance.”

Furthermore, the existence of a large number of non-conforming uses in the same district does not provide sufficient basis for the granting of a “use” variance.⁵ The Loscalzo case shows how closely courts examine variance decisions not firmly rooted in specific findings or without a clear showing of conformance to the general purposes of the state land use law, with its many environmental objectives.

A leading case is *Medici v. BPR Co.*⁶ Culminating a tangle of contradictory rulings, the New Jersey Supreme Court set aside a variance granted by the South Plainfield zoning board. Justice Stein’s opinion helps to explain some of the emerging nuances in this changing field. The case involved a motel planned for an industrial zone in a municipality where motels were not permitted in any zoning district. The Court expressly reaffirmed the holding of *Kohl v. Mayor of Fair Lawn*,⁷ in light of several major changes in state land use law, with a strong declaration that — at least with respect to a “commercial use that does not *inherently* serve the public good,” as would public housing — “an enhanced quality of proof, as well as clear and specific findings by the board of adjustment that the grant of a use variance is not inconsistent with the intent and purpose of the master plan and zoning ordinance” are essential to sustain a use variance⁸ (emphasis in original). The Court noted its anticipation that the ruling “will narrow to some extent the discretion of [zoning] boards...for uses that are deliberately excluded by the governing body from those permitted by the zoning ordinance. It will also effectuate

the legislature's apparent objective of encouraging municipalities to make zoning decisions by ordinance *rather than by variance*"⁹ (emphasis added).

A common source of variance requests is landowners who find their ability to build constricted by a floodplain or other "critical areas" designation. In *Terner v. Spyco, Inc.*,¹⁰ an appellate court set aside a zoning board variance awarded on the basis of a finding of "undue hardship" for a subdivision with dwelling units planned for a 100-year floodplain. The court remanded the matter to the zoning board with these comments:

Although we do not ignore the significance of [the board's] findings, they are directed almost exclusively at the [MLUL's] negative criteria, that is that the grant of a variance will not result in substantial detriment to the public good. In addition to satisfying the negative criteria, an applicant for a hardship variance must show that his property is *unique and different* from other property in the zoning district and that *this uniqueness places an exceptional hardship* upon the owner of the property....That the topography of land favors a given location does not warrant a hardship variance [cases omitted]. Moreover, 'undue hardship' involves the underlying notion *that no effective use can be made* of a property in the event the variance is denied¹¹ (emphasis added).

The judges recognized the important safety considerations behind floodplain designations and the apparent lack of any "unique" features to the applicant's property. In light of these recent cases, the judicial trend seems clear: Courts scrutinize variance determinations closely in order to promote the MLUL objective that major land use decisions be consistent with the zoning ordinance and master plan.

ADDITIONAL ZONING BOARD MATTERS

Annual Report

The MLUL requires each board to prepare an annual report containing a "review [of] its decisions on applications and appeals for variances," and "recommendations for zoning ordinance amendment or revision," N.J.S.A. 40:55D-70.1. Copies of the report are to be given to the planning board and governing body.

Time for Decision

The zoning board must render a decision within 120 days of the filing of an appeal or a complete application for development. The failure to act within 120 days, "or within such further time as may be consented to by the applicant," results in an automatic decision favorable to the applicant.¹²

Appeals to the Governing Body

If permitted by local ordinance, *any interested party* may file an appeal to the governing body regarding the zoning board's decision to grant a "use" variance. See, e.g., *Grant Center v. Mayor & Council*,¹³ applying N.J.S.A. 40:55D-17a. This subsection of the MLUL provides certain limits to the right of appeal; the local ordinance must authorize such actions, and the appellant must act within 10 days of the date of publication of the final decision.¹⁴ The governing body's decision is limited to the record of proceedings held before the zoning board, and must be made within 95 days, lest the board's ruling be sustained by operation of law.¹⁵ Importantly, once an appeal is filed, all other "proceedings in furtherance of the [application]" are "stayed" (held) until the appeal is decided.¹⁶ Once the appeal process is completed, any aggrieved party may take an appeal to "any court of competent jurisdiction."¹⁷

For Further Information

Written references:

New Jersey Zoning and Land Use Administration, by William M. Cox, Gann Books, Newark, NJ 07102

Copies of the *Municipal Land Use Law*, available from the New Jersey Planning Officials, P.O. Box 7113, Watchung, New Jersey, 07060.

POLICIES AND OPERATIONS

INTRODUCTION

Land use decisions tend to be final and far-reaching. A farm converted to housing will not be farmland again. A forest cut for an office complex is lost forever. A road built to solve traffic problems will generate more traffic and change the land use patterns. A sewer line extended to remedy the problems of on-site waste disposal may bring high intensity growth and perhaps cause more pollution than it can correct. The particular look and feel of each of New Jersey's 566 municipalities is in the hands of its local planning board and zoning board of adjustment. If these agencies plan and regulate properly, they will protect natural, cultural and economic resources and improve the quality of life in the community.

Planning board and zoning board of adjustment decisions are often tough, sometimes unpopular. Often, board members must weigh a landowner's interest against the future of the town and the region. By coordinating the Municipal Land Use Law (MLUL) with the state's strong environmental laws, a well documented database, a well prepared master plan and a strong local land use law, they can effectively serve a public that wants to preserve the quality of life for all New Jerseyans. Local ordinances, properly enforced, can encourage development of desirable, economically promising sites without jeopardizing local natural resources.

REGIONAL AND STATE PLANNING

County master plans provide municipalities with a regional framework for their local planning process. Many of the effects of land use spread across municipal boundaries. County planning boards assist local boards in meeting regional objectives. These boards review local applications to be sure they are consistent with county planning for transportation and stormwater control. County approval is required for applications that front on county roads or will impact county drainage systems.

At least three other levels of planning affect the local process:

- State planning for resource protection, housing and infrastructure investment;
- State agency planning for water supply, sewers and highways;
- County planning for transportation and storm-water drainage control.

The State Planning Act was passed in an effort to coordinate all these activities. *The New Jersey State Development and Redevelopment Plan* (SDRP) establishes a consistent set of planning policies that state and county levels of government should follow. It encourages planning for the kind of development that makes use of existing infrastructure in already developed areas, saving public funds that would otherwise have to be spent on new infrastructure. Through a cross-acceptance process whereby county and municipal officials have input into the Plan, and examine their local master plans for consistency with it, state capital improvements can be planned against a more consistent background of local plans. The SDRP broadens the perspective of local planning while still protecting local options, and should make the coordination of state agency reviews more efficient.

Also affecting local land use decisions are regulations from the Department of Transportation for access to state highways; the counties for road access and drainage control; and the DEP for governing the impact of pollution and protecting natural and cultural resources.

MUNICIPAL PLANNING

Municipal planning boards plan and regulate land use. They adopt their town's master plan and carry out the land use ordinances approved by the governing body. They may be asked to prepare a capital improvement program, and they must review all capital expenditures for consistency with the master plan.

The local boards are responsible for carrying out the MLUL, a strong environmental protection law that acknowledges the direct and the indirect impacts of land use decisions. Among their tools for planning and enforcement are master plans, official maps, capital improvement programs, zoning, subdivision and site plan review ordinances. A realistic well-drawn master plan is fundamental. Zoning ordinances, except under rare circumstances, must be consistent with this plan. Based on the master plan, the official map shows landowners, developers and the local boards the location of planned roads, drainage basins, schools and parks.

The MLUL empowers towns to adopt land use ordinances that provide the planning board with all the information, funds and expert assistance needed to review applications thoroughly. A planning board review must consider every effect of a proposed application, from where gridlock will occur and where the school bus can stop safely, to the impact of stormwater runoff. Boards need to consider:

- how to prevent fertilizers, oil drippings, herbicides and animal feces from getting into streams;
- how renewable energy sources, such as solar power, can be utilized;
- how to ensure protection of state regulated wetlands;
- how to be sure roads are adequate and safe;
- how to provide adequate open space and recreation for residents;
- how to provide adequate and affordable housing;
- how to retain the character of the municipality.

Based on local data and expert review, the planning board negotiates with the project developer to determine the ultimate intensity of use and the design of each project.

The MLUL requires all government agencies to submit project plans for spending public funds to the local planning board for review and comment. Although the board cannot require improved site design, realignment or relocation of a facility, its members can express concerns and make suggestions. They look for the primary and secondary impacts of previously unplanned public improvements — whether they are sewers, schools, new roads, road improvements,

ditches, basins or parks. Local boards use the master plan, the capital improvement program and official map to avoid potential conflicts of local public or private projects with the master plan.

THE ZONING BOARD OF ADJUSTMENT

The zoning board of adjustment adds flexibility to the municipal planning and zoning process. It is an appeals agency through which applicants may request variances or exceptions to existing zoning regulations.

The zoning board of adjustment and, in cases in which it is involved, the planning board weigh requests for relief from regulation (variances) against the broader public need. They must maintain the overall effectiveness of the master plan, the zoning ordinance and state laws. For example, a variance granting permission to build on a steep slope can endanger water quality, species habitat, the safety of residents and the aesthetic values of ridgelines. Variances that permit increased density in areas where soils are unable to handle on-site treatment of wastewater could threaten the town's water supply. One change in land use may change a whole neighborhood.

Any variance should be treated as an unplanned change in the locally accepted land use scheme. As a rule of thumb, ordinances that result in the granting of numerous variances probably need to be reviewed and updated. Zoning by variance tends to ignore background data, creates an arbitrary level of uncertainty and leads to unnecessary litigation.

STATE REGULATION AND THE LOCAL PLANNING PROCESS

The air, oceans, rivers and groundwater do not recognize political boundaries. Hence, few environmental problems stop at the town line. Pollution discharged into the air from a congested, industrial city may have a serious negative impact on a downwind community with little traffic and no industrial facilities of its own. Groundwater contamination is a statewide problem in which the cause — improper land use in one area — may be widely separated from the effect — a building moratorium in another area due to contaminated water. Flood protection is another concern that crosses local boundaries. New Jersey law requires state and local agencies

to address these regional or statewide problems. In some cases, state law preempts local regulation; in others, the law requires local enforcement of state standards.

New Jersey's environmental laws, administered by the DEP, protect the state's critical natural and cultural resources. They can provide strength and support for local environmental regulation. State law requires that the local government must be notified of nearly every application for a DEP permit affecting land or property within its borders; it provides a review and comment period to allow for local input to DEP decisions.

State regulations can be incorporated into local planning and regulations to preserve local options and expedite the subdivision and site plan review process. In this way, possible conflicts between state and local regulation can be resolved at the planning and zoning stage rather than during the review of an application for a DEP permit. For example, the local regulations might include: 1) a master plan that identifies state regulated wetlands areas and discusses their critical nature; 2) a zoning ordinance with housing densities that permit use of land without encroachment on wetlands and; 3) a site plan review ordinance that requires on-site delineation of wetlands and careful development of the site. Every landowner will understand the constraints of state and local regulation on his lands and will know what to expect. The planning board and zoning board of adjustment will know the location of critical areas, coordination between state and local permits will be improved, and residents can be certain "things will be done right."

Even though the state grants a permit, this does not preempt local planning and zoning. Local land use decisions should judge each proposal on the basis of local land use planning – subject to the state permit process. Except in cases where state delineation of wetlands must occur before proper site planning can go forward, application for a state permit should occur as a result of a local land use decision.

The MLUL provides procedural tools to integrate an applicant's desire to develop his land into the local vision of the community's future. Often overlooked, the informal, or "concept" review process permits broad discussion of a project without the expensive site development material required for site plan approval. For example, the local

master plan may emphasize the desirability of contiguous open space, public access to parks, linkages between pedestrian walkways, and protection of stream corridors. An applicant may not be aware of these local preferences but may, during an informal discussion, come to understand and even alter his planning to meet these goals. The result in many cases is a more marketable and cohesive project.

THE ENVIRONMENTAL AGENDA

Clean Air

Municipal zoning controls the intensity, location and type of land use throughout the state and, consequently, affects air quality. To reduce vehicle miles, towns can cluster residential, commercial and industrial areas so that people do not have to drive so far to work or shop. Local zoning can also specify a population density that will support mass transit. Local regulations can include a traffic management plan as a prerequisite to site plan approval. They can require applicants to limit parking; plan for bikeways, paths and pedestrian access; require the planting or retention of trees to buffer noise and solar heat; and devise alternate transportation schemes and transportation linkages to reduce vehicle miles. Zoning regulations can prevent sources of air pollution from being located upwind of sensitive uses such as nursing homes or schools, or in areas where inversions or stagnant air occur frequently. Planning to locate roads on northern slopes preserves the brighter, sun-warmed southern and western slopes for buildings.

The site plan approval process provides an opportunity to address air quality issues. Parking, traffic, landscaping, microclimate control, and location of facilities for recycling and waste disposal are factors that affect air quality. Preserving on-site trees and bushes can curb carbon dioxide levels. It also lessens the use of fossil fuels to mow expanses of unused lawn. In densely populated areas, microclimates created by the overall layout and building design can affect the quality of life.

Environmental Quality

One of the purposes of the 1969 National Environmental Policy Act (NEPA), PL 91-190 Sec. 101(b) is the "assurance for all Americans of safe, healthful, productive, aesthetically and culturally pleasing surroundings." The MLUL echoes

this purpose and delegates responsibility for preserving many aspects of environmental quality to local planning boards and zoning boards of adjustment. These boards can help protect the public from toxic pollutants in the air and water, reduce the risk of toxic accidents, control noise levels, prevent exposure to radiation or radon, and restrict the use of pesticides and herbicides on sensitive sites.

Emergency preparation and response – The New Jersey Worker and Community Right to Know Act (N.J.S.A. 34:5A-1 *et seq.*) and the Toxic Catastrophe Prevention Act (N.J.S.A. 13:1K-19 *et seq.*) require municipalities to plan their response to toxic spill emergencies. These laws also require all businesses that use, store and transport hazardous substances — from garden stores to chemical plants, doctor's offices to drug stores, and car dealers to hospitals — to provide information on their use and handling to the DEP and the Local Emergency Planning Committee (LEPC). Municipalities should use this information in making land use plan and regulatory decisions to provide adequate buffering and safe transportation networks. Such planning ensures that a facility where hazardous materials are handled is not located in or near environmentally sensitive areas, does not encroach on neighbors and is accessible to emergency vehicles. The site plan review process enables town boards to reduce on- and off-site risks posed by the facility. It is best to plan for the service facilities needed by every community – a cleaner, a garden center or a medical office — with special attention to potential conflicts.

The transportation network can be planned to route hazardous materials around environmentally sensitive or densely populated areas. Local boards must consider the need to quickly evacuate residents who live near major highways and facilities using hazardous materials if a hazardous spill occurs. Every transportation facility in a municipality must be regarded as a possible source of contamination whether by accident or from negligence.

The Toxic Catastrophe Prevention Act requires approximately 100 New Jersey facilities that have the potential to be extremely hazardous to prepare a risk management or a risk reduction plan. These plans are an important factor in local land use planning in the many communities where such facilities are located. Local zoning

ordinances tend to prohibit hazardous facilities or, at least, make them a conditional land use, subject to planning board or zoning board of adjustment action. Changes in use are of particular concern; the construction or location of older buildings often renders them unsuitable for the use of hazardous materials. Because changes in land use are not planned in advance, they often present difficulties in terms of transportation and buffering. They can change the character and potential of a whole area.

All facilities and businesses that use hazardous substances must be evaluated with respect to the discharge of hazardous emissions. Bear in mind that state permits should result from and not bring about local land use decisions.

Radiation – The hazard of exposure to unhealthful levels of radiation is very real. Radon, a naturally occurring radioactive gas that emanates from the ground, can reach unhealthful levels when it enters a building through its foundation and collects in living spaces. Fourteen counties in the state have been designated as having a high risk of indoor radon contamination. Planning boards in these areas have been informed of this designation. According to the Radon Hazard Subcode of New Jersey's *Uniform Construction Code*, new public facilities and housing in the high-risk areas must be constructed with passive radon reduction systems. Also, although state law does not require home testing, the Radiation Protection Act does require that if radon testing and/or mitigation *has* been performed on a building, the test results must be disclosed to a prospective buyer at the time a contract of sale is signed (N.J.S.A. 26:2D-73).

Noise Control – The impact of noise on neighboring land values and human well-being must be considered in making land use decisions.

Municipalities have several options in developing noise ordinances. They can require buffering to keep noise from one type of land use—a factory, for example— from becoming a nuisance for another type such as a residential neighborhood. Site plans should be designed to prevent noise from crossing property lines. Municipalities can also regulate the allowable density of development in a given area to prevent noise conflicts. Land near farms, roadways and industrial facilities should be zoned for low densities, with a flexible design to permit buffering between the resi-

dences and the sources of noise. Highway noise barriers tend to benefit only the densely populated areas immediately adjacent to a highway. Depending on local acoustics, noise pollution may still be a problem some distance from such structures.

Pesticide and Herbicide Management – The potential impacts of herbicide and pesticide use on the local environment should be considered during site plan review. Pesticide and herbicide application instructions caution against use before a rainstorm, near a wetland or near a stream. Because these precautions are sometimes ignored, stormwater systems should be designed to handle the worst cases of potential contamination. In areas near wildlife habitat or in sensitive environmental areas it may be necessary to prohibit the use of certain materials as a condition of site plan approval. Planning boards should also require the use of native, pest-resistant plant species.

Clean Water

A good master plan based on sound data allows a municipality to manage growth in ways that prevent degradation of ground and surface water resources and minimize costly new infrastructure. For instance, planning for well designed villages of higher density rather than sprawl development can reduce costs of infrastructure and the resulting air and water pollution.

Municipal wastewater management plans (WMPs) are an example of how infrastructure planning is intended to follow local land use planning. Generally, the DEP must approve these plans before any wastewater treatment system can be altered or expanded. The WMP addresses the need for treatment facilities to accommodate the planned growth of the municipality or the county.

With good local planning and land use regulation residents can be assured that growth is taking place in an orderly way and not as the result of, or to pay for, a sewage treatment plant. They also can be assured that the short-term ratable is not leading to long-term environmental problems.

The technical problems involved in controlling sewer plant discharges are related to cost and the assimilative capacity of the receiving waters. These problems are easier to predict, quantify and solve than are those related to the cumulative impacts of point sources and nonpoint sources

of pollution. Planning that takes these factors into account requires cooperation, or at least information, that crosses municipal boundaries. Since almost every town is downstream from somebody else, this type of water resource planning cannot be done in isolation. The assimilative capacity of a watershed system is limited, and the total amount of point and nonpoint pollution dumped into the system must be considered in planning for the ultimate “build out” of the towns within the watershed. Areawide Water Quality Management Plans (“208” plans) provide a framework for this planning, but thus far have dealt only peripherally with the issue of nonpoint source pollution.

Creating a master plan and zoning ordinance that recognize the constraints imposed by nonpoint source pollution is far more difficult than determining the zoning densities and land uses to be accommodated by sewers or on-site septic systems. In densely populated areas served by a sewer plant, the control of nonpoint pollution sources may require heroic measures. Strategies will include mechanical and structural solutions such as regular vacuum sweeping of parking lots and streets, grease traps, and sophisticated catch basins and detention areas, all of which need frequent maintenance. Other planning strategies include preserving vegetated areas and reducing impervious coverage wherever possible. For example, towns can encourage the development of high-density mixed-use communities centered on pedestrian and public transportation. Such a strategy permits productive growth, but limits non-productive automobile parks and elaborate roadways.

In more open areas, ordinances protect stream corridors and wetlands. The DEP delineates and maps these areas and the buffer areas needed to protect them from runoff from abutting lands. In these and all environmentally sensitive areas, flexible, low-density zoning can permit land use without creating a pollution problem. Techniques might include lot averaging, cluster development, open space zoning, and transfers of development rights. In the areas using on-site waste disposal systems, land use density must never exceed the capability of the soils to treat effluent adequately before it enters the groundwater.

In addition to controlling the intensity of development, land use ordinances that are sensitive to water resources include performance standards to control the

quantity and quality of point and nonpoint source pollution discharges. Such regulations may prohibit direct discharges to wetlands, limit the permitted peak runoff of stormwater from a site to the amount existing prior to development, and require detention facilities to hold the first flush runoff from streets and parking areas for a time. Local regulations may require farmers to use Rutgers' approved Best Management Practices (BMPs) and provide a vegetated buffer between streams and farm field runoff. To protect water resources, site plan approvals can limit the use of pesticides, herbicides and road salt. Based on municipal regulations, local boards can require developers to modify designs to reflect on-site conditions. They may call for reduced impervious coverage, such as paving or building coverage, or restricted water usage. They can regulate the removal of vegetation, require strict soil and erosion control methods, control off-site construction impacts, and require street sweeping and maintenance of catch basins and retention ponds.

Providing economically viable development opportunities by using natural systems to prevent costly pollution is a critical local challenge. Zoning that accurately reflects the natural conditions of the land reduces the need for structural and mechanical "cures" on the site. For example, an area along a stream corridor kept to low density uses requires little on-site mitigation, whereas a high density development abutting a stream may necessitate expensive remedial measures — which may eventually appear on the expense side of the local budget.

Waste Management

The success of New Jersey's waste management program depends on the support of local government and, in some cases, on local implementation. The MLUL states that the planning board may include a recycling plan element in the municipal master plan. This recycling element is applied through the zoning and site plan review ordinances. Site plan applications should provide for facilities for processing and storing recyclables. The objective is to ensure proper storage of materials and easy access to the recycling area for residential and business recyclers and for the agency responsible for pick-up.

During the site plan and subdivision review process the

planning board should require the applicant to prepare a history of the site related to possible past hazardous waste dumping. If evidence of possible contamination is uncovered, it should be reported to DEP.

Historic Resources

The most effective tools for historic preservation are at the municipal level. Except in areas of special state protection such as the Pinelands and the coastal area, neither federal nor state governments can control the use of private land in New Jersey. The key to protecting historic sites and areas around them is to find safe, modern uses for them.

Under the MLUL a governing body may establish a historic preservation commission to survey historic sites and advise the planning board and zoning board of adjustment on historic preservation within the municipality (*N.J.S.A.40:55D-107 et seq.*). The historic preservation element of the master plan indicates the location and significance of potential preservation districts or sites, and describes options for using and preserving these areas. The historic preservation element must describe the standards used to assess worthiness for designation as a historic site or district.

The zoning ordinance, consistent with the master plan, may designate historic sites or districts and regulate them by providing design criteria for development in the zone. These are "overlay" zones with regulations in addition to the other requirements of the zone. In municipalities with historic preservation commissions, applications for any development permit in historic districts must be forwarded to the commission for review.

In addition to the design regulations, good planning and zoning can buffer and protect historic sites from inappropriate intrusions and damage. For example, historic buildings in a village should be buffered from uses that would damage them or change the historic ambience of the area. Local ordinances also can encourage adaptive reuse of such buildings by permitting appropriate uses in the historic overlay zone. An office in a mill is a good example, as long as the outward appearance of the building is not altered and the provisions for accessory uses, such as parking, satellite antennae and loading docks, are either-made to fit or disallowed.

Often historic buildings and sometimes whole historic districts are non-conforming uses. Side yards, setbacks and segregated commercial and residential uses were not the norm 100 years ago. Therefore, use of these sites falls under the jurisdiction of the zoning board of adjustment. These site plan reviews must be carried out with special attention and care. To design a use and a site plan that will make preservation possible, applicants, the commission and the boards should work together.

Land and Wildlife

To protect the public interest in critical areas, the planner's best defense is an offense — a process of advance planning and an imaginative implementation of those plans. Towns can draw master plans that reflect constrained areas and planned recreation areas, adopt ordinances that support the master plan, and establish criteria for development and performance standards that conform to those constraints. Just as “location, location, location” is the credo of the realtor, “buffer, buffer, buffer” should be the credo of boards planning for land uses around critical areas and publicly accessible open spaces.

The land use element of the local master plan describes the proposed future use of the town's land. The private and public uses outlined in that plan must protect natural resources and prevent sprawl. Optionally, the master plan may contain recreation and conservation elements, which further amplify the concepts described in the land use element.

Good planning dictates that the land use element of the master plan and the regulations adopted to implement it shall prevent conflicting uses on abutting properties. Avoiding such conflicts is especially important to protect and to buffer areas dedicated to the public interest, whether for preservation of wildlife habitat, for farmland or for recreation. Scientists, bureaucrats, planners and the public recognize that we could never buy the amount of open space required to guarantee clean air, clean water, safety from flooding and the biological diversity needed for survival. Courageous use of new and even experimental planning techniques will be required. Clustering of development, zoning for open space, deed restrictions and the transfer of development rights are among the techniques available to planning boards.

The land use element and the conservation element of a municipal master plan will show greenway linkages and will present the rationale for preserving certain private and public open spaces. By relating a town's development and its open space plan to regional plans, the planning board may make the town a better candidate for participation in state open space acquisition programs.

Based on the comprehensive master plan and a flexible zoning ordinance, local boards can work with applicants to design land uses that protect and buffer natural resources and open space.

A good master plan will include maps of wildlife habitat, stream corridors, steep slopes, wetlands, scenic rivers and ridges. The town can establish comprehensive land management regulations that protect these resources while permitting the reasonable use of every parcel of land. The official map makes the master plan visible, and can indicate any special properties that should be preserved for public open space.

For example, if a zoning ordinance is based on a comprehensive database and master plan, it can arrange densities of use and require clustering to buffer special lands from the impacts of development. The alignment of new lots can be designed to keep septic systems out of critical areas. Open space, bikeways and trails can be linked and publicly accessible. Site plan review requirements can insure full disclosure of on-site conditions. Open space set-asides that realistically serve the needs of residents can be required in large projects. In commercial or small developments the master plan and supporting ordinances establish the nexus for mandatory contributions by developers for land acquisition to balance development.

State Regulation – Many development applications affecting critical environmental areas are considered first at the local level, even though they may require permits from the state. Though the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 *et seq.*) makes the DEP responsible for wetlands identification and regulation, local planning officials are the first line of defense. Local planning can help owners of wetlands make reasonable use of their properties through alternative development techniques.

For instance, local planners and environmental commissioners must be alert to the possibility of freshwater

wetlands related to any application. Some towns have detailed maps of local wetlands; others depend on consultants or use the US Fish and Wildlife National Wetland Inventory (NWI) or county Soil Survey maps. When in doubt, they should require a DEP Letter of Interpretation (LOI) delineating the wetlands and their transition areas as a part of a complete application. Considering these constraints at an early stage not only protects the wetlands but expedites the review and approval process.

In another example of state regulation, the New Jersey Flood Hazard Area Control Act (N.J.S.A. 58:16A-50 *et seq.*) requires stream encroachment permits for development within the area that would be inundated by a 100-year flood. Local knowledge of these areas combined with up-front planning will integrate the local and state regulatory schemes and facilitate the review process. Stream encroachment permits are required to assure that the flood level of a stream is not raised, the flow of floodwaters is not impeded, and wetlands are not damaged — problems that lead to flooding and environmental damage and may result in a need for expensive structural solutions. Local planning measures can provide permanent, economical protection from flooding by prohibiting filling and otherwise obstructing floodways, controlling stormwater discharges, and establishing open space corridors in adjacent lands. A well located and well designed development that does not require a stream encroachment permit will save time and money, for the short term and in the future.

The wisdom of sound land use planning extends to development in habitat areas of threatened or endangered plant or animal species. Delineation of areas and preparation of a management plan for the protection of the species should be established in the master plan and reflected in the zoning ordinance before an applicant submits a development plan, thus simplifying the process of site plan design and review.

Regional Planning – Municipalities increasingly are seeking to link and provide public access to paths, bikeways, trails and public open space. Coordinating this local effort with the New Jersey Trails Plan can integrate local trails and bikeways into the larger, regional network.

Some privately owned open space provides public access to recreational areas, or provides an important linkage between publicly owned facilities. Identification of

these lands in local planning may provide opportunities to preserve them for the common good. They should be part of the land use element of the master plan. Abutting property owners then can plan appropriately to prevent conflicts.

There are roughly 335,000 acres of state-owned parks, forests and wildlife management areas, and approximately two million acres of privately-owned open or forested land in the 566 municipalities in New Jersey. Most of these lands come under the management of private owners or the DEP under state standards of forest management. To prevent conflicts, local master plans should include buffer areas around publicly owned lands.

Special Protection Areas

Regional plans augment local land use control in each of New Jersey's four special protection areas: the Hackensack Meadowlands District, the Pinelands Protection Area, the Coastal Zone, and the Delaware & Raritan Canal. In these areas, local planning board members must craft ordinances that meet regional planning goals. Ideally, the resulting cohesive land use regulations will preserve local options, prevent the exploitation of some of the state's most unique resources, streamline application and review procedures, and give applicants a predictable set of standards.

Hackensack Meadowlands – In the Hackensack Meadowlands, the 14 municipalities that make up the Meadowlands District participate in reviews of the HMDC Master Plan through participation in the Hackensack Meadowlands Municipal Committee. This helps to assure coordination, conformance and compatibility between the HMDC Master Plan and the master plans of the municipalities in the HMDC area.

Coastal Zone – The local land use decision process is the ultimate tool in coastal area land use. Coastal Area Facilities Review Act (CAFRA) permits are required for most construction activities within the CAFRA shoreline zone, but local ordinances apply to *all* development. Local planning boards can do much to make sure the principles of good planning and land use regulation apply to all projects. For instance, local boards can make sure their towns have:

- master plans and zoning ordinances that delineate wetlands and utilize the same, or more stringent, policies outlined in the CAFRA Coastal Policies;

- land use ordinances that include the state mapping of riparian lands and those that address development of the waterfront in accordance with state law;
- zoning and subdivision ordinances that permit clustering and set aside open space;
- site plan review ordinances that require submission of environmental impact statements (EIS) as information gathering tools to be used to establish conditions for development.

If a proposed coastal area development does not meet local standards and is denied, the state cannot force an approval. However if any action is arbitrary and unreasonable, the courts may step in and overturn local or state decisions.

Delaware and Raritan Canal – The Delaware and Raritan Canal Commission (DRCC) reviews all development that might affect the canal or park, and has stringent review standards for controlling runoff from new development. To help protect water quality in the canal, planning boards in the 34 towns of the Delaware and Raritan Canal “Review Zone” should also require special measures of protection for streams that run through them and eventually drain into the canal or park.

Local boards may choose to adopt the DRCC stormwater control standards for the entire town, in addition to

the areas subject to DRCC standards and review. This would make reviews more uniform and would further protect the waters of the D&R Canal.

Pinelands Protection Area – The Pinelands Commission, through its Comprehensive Management Plan (CMP), permitted a flexible interpretation of plan requirements during the negotiations that lead to certification of local master plans and zoning ordinances. Once the commission certifies a local plan, the planning board follows local ordinances during review of development applications. In most cases, compliance with local ordinances will assure a speedy Certificate of Filing, without a call up for review by the Pinelands Commission.

Working with the public and expert consultants, local planning boards can develop innovative and locally acceptable ways of meeting both local and CMP goals. Municipalities that are only partially in the Pinelands Protection Area should consider applying the Pinelands performance standards for stormwater control throughout their entire town in order to protect all water resources.

For Further Information

Contact:

New Jersey Planning Officials, 908-412-9592

Website:

New Jersey Planning Officials, <http://njpo.org>

Section A

1. N.J.S.A. 40:55D-23a.
2. N.J.S.A. 40:55D-23.1 applying the same restrictions to “alternate members.”
3. 8 N.J. 433 (1952).
4. 164 N.J. Super. 530, 537 (App. Div. 1979).
5. See, generally, Pane, “Local Government Law,” 35 N.J. Prac. Sec. 343.
6. 42 N.J. Super. 75 (App Div. 1956).
7. See, e.g., *McVoy v. Bd. of Adj. of Montclair Tp.*, 213 N.J. Super 109 (App. Div. 1986) and *Skolinski v. Woodbridge Tp. Mun. Council*, 192 N.J. Super. 101 (App. Div. 1983).
8. Pane, *supra.*, at Sec. 344.
9. *WHIBCO, Inc. v. The Zoning Bd. of Maurice River Tp.*, Docket No. W-004251-88PW, Judge Porreca, J.S.C. (Order granting summary judgment, dated October 28, 1988).
10. See *Lusardi v. Curtis Point Property Owners’ Ass’n.*, 86 N.J. 217 (1981), holding that statewide environmental policies override purely local views and must be reflected in planning decisions. But see *Pizzo Mantin Group v. Township of Randolph*, 137 N.J. 216 (1994), planning board is required to review subdivision applications under standards contained in the subdivision and zoning ordinances, not based independently on the general purposes of the MLUL.
11. This book will not explore the “taking issue” in great detail. However, among the leading cases are these: *Lucas v. So. Carolina Coastal Commission*, 505 U.S. 1003, 112 S. Ct. 2886, 120 L.Ed. 2nd 798 (1992) (taking found where landowner had been denied permission to construct two oceanfront homes); *First English Evangelical Lutheran Church v. County of Los Angeles*, 107 S. Ct. 2378 (1987) (authorizing litigation for financial damages even for a temporary “taking”); *Nollan v. Calif. Coastal Commission*, 107 S. Ct. 3141 (1987) (regarding permissible and impermissible means of providing “public access” over private property); *Penn Central*

- Transp. Co. v. City of New York*, 438 U.S. 104 (1978) (approving of a strict historic preservation ordinance); *Sheer v. Evesham Tp.*, 184 N.J. Super. 11 (Law Div. 1982) (held that zoning property for “Environmental Protection” forbade any practical use of the land and thereby constituted a “taking”; and *Usdin v. D.E.P.*, 179 N.J. Super. 113 (App. Div. 1981) (sustained a denial of a permit to construct within a designated flood plain as a valid exercise of the police power to prevent harm to others).
12. N.J.S.A. 40:55D-25a-b.
 13. N.J.S.A. 40: 55D-25b.
 14. N.J.S.A. 40:55D-26b.
 15. *Id.* at a and b. See also N.J.S.A. 40:55D-64, requiring referral of any proposed zoning ordinance, or any amendments thereto, prior to adoption by the governing body.
 16. 176 N.J. Super. 441, 446-50 (Law Div. 1980).
 17. N.J.S.A. 40:55D-28b.
 18. *Id.*
 19. *Id.* at (2)(b).
 20. *Id.* at (2)(c) and (d).
 21. *Id.* at (3).
 22. *Id.* at (9) through (12), and d.
 23. 179 N.J. Super 203 (App. Div. 1981).
 24. *Id.* at 213.
 25. N.J.S.A. 40: 55D-30.
 26. N.J.S.A. 40:55D-49d.
 27. N.J.S.A. 40:55D-7.
 28. N.J.S.A. 40: 55D-10.1.
 29. N.J.S.A. 40: 55D-10.3.
 30. *Id.*
 31. *Id.*
 32. *Id.*
 33. N.J.S.A. 40:55D-46a.
 34. *Id.*
 35. 193 N.J. Super. 513 (App. Div. 1984).
 36. *Id.* at 515.
 37. N.J.S.A. 40:55D-49a-c.
 38. 194 N.J. Super. 333 (App. Div. 1984).
 39. *Id.* at 335.
 40. 190 N.J. Super. 326 (App. Div. 1983).
 41. *Id.* at 332.
 42. *Id.*
 43. *Id.* at 332-33.
 44. N.J.A.C. 40:55D-50a.
 45. N.J.S.A. 40:55D-46c.
 46. N.J.S.A. 40:55D-10.4.
 47. See, also, N.J.A.C. 7:14A-12.21 for application procedures for obtaining a sewer connection ban exemption.
 48. 201 N.J. Super. 498 (App. Div. 1985).
 49. 168 N.J. Super. 508 (App. Div. 1979).
 50. See, also, N.J.S.A. 40:55D-24, regarding the employment of full-time employees, legal counsel, “and experts and other staff,” based upon appropriations made by the governing body; and further, see N.J.S.A. 40:55D-53.1, regulating the above escrow account.
 51. N.J.S.A. 40:55D-10d.
 52. *Id.* at e.
 53. The failure to record a hearing has been held grounds for a remand to the board for “complete new hearing”: *Lawrence M. Krain Associates, Inc. v. Mayor and Council of Maple Shade Tp.*, 185 N.J. Super. 336 (Law Div. 1982); typed “minutes” were not a legal substitute; *Carbone v. Planning Board of Weehawken Tp.*, 175 N.J. Super. 584 (Law Div. 1980). See also N.J.S.A. 40:55D-10f.
 54. 174 N.J. Super. 548 (Law Div. 1980).
 55. 96 N.J. 482, 496 (1984).

Section B

1. Note that if a conflict arises, the member may not be permitted to sit in judgment of a case even if the parties have “waived” this protection. *McVoy v. Bd. of Adjustment of Montclair Tp.*, 213 N.J. Super. 109 (App. Div., 1986) See, also, n.8 section A, *supra*, for discussion of a recent (unreported) court decision disqualifying a zoning board member on the basis of the potential “personal” interest conflict generated by the board chairman’s wife being an active member of a local advocacy group.
2. N.J.S.A. 40:55D-70.
3. 227 N.J. Super. 284 (App. Div. 1988).
4. 228 N.J. Super. 291 (App. Div. 1988), certif. den. 118 N.J. 216 (1989)
5. *Id.* at 301.
6. 107 N.J. 1 (1987).
7. 50 N.J. 268 (1967).
8. 107 N.J. 4.
9. 107 N.J. 5.
10. 226 N.J. Super. 532 (App. Div. 1988).
11. *Id.* 547-48.
12. N.J.S.A. 40:55D-73.
13. 235 N.J. Super. 491 (App. Div. 1989).
14. N.J.S.A. 40:55D-17a.
15. *Id.* at a, c, and d.
16. *Id.* at f. An exception is permitted where, by virtue of the stay, an “imminent peril to life or property” would result.
17. *Id.* at g and h.

Chapter 4

ENVIRONMENTAL COMMISSIONS

Section A

THE LAW

INTRODUCTION

At the same time that environmental statutes were tending to centralize controls at the state and federal levels, New Jersey enacted laws to permit each municipality to create a quasi-autonomous environmental commission to engage in a variety of environmental activities, including advocacy. The environmental commission enabling legislation, passed in 1968 and amended in 1972, 1975 and 1989, states that:

The governing body of any municipality may by ordinance establish an environmental commission for the protection, development or use of natural resources, including water resources, located within its territorial limits (N.J.S.A. 40:56A-1).

Commissioners serve without compensation but the local government can appropriate funds for expenses incurred by the environmental commission, including travel and other expenses of being a member.¹ In addition, environmental commissions frequently expend public funds for secretarial assistance and advice from environmental consultants.

Municipalities may form a joint environmental commission whenever two or more municipalities enact similar ordinances and agree to share the expenses of the joint agency as “determined and agreed upon by the participating municipalities” in the ordinances.² In such a joint commission, the exact number and qualifications of the commissioners, as well as their terms and methods of appointment or removal “shall be such as may be determined and agreed upon by [the joining municipal] governing bodies and set forth in the ordinance” creating it.³

MEMBERSHIP AND ORGANIZATION

The five to seven members of a municipal environmental commission serve staggered terms in office of “3 years and until the appointment and qualification of their successors.”⁴ (Thus, a member may continue in office past the three-year term if no successor has been appointed.) For a joint commission created by two municipalities, “there shall be at least three members from each municipality; ... when such joint commission is created by three or more municipalities, there shall be at least two members from each municipality.”⁵

The enabling legislation stipulates that one of the members of a municipal commission “shall be a member of the municipal planning board and all...shall be residents of the municipality.”⁶ In the case of a joint commission, “at least one member from each municipality shall be a member

of the planning board” and “a majority of the members...shall hold no other public office, except membership on a municipal or other planning board.”⁷

In a municipal commission, “The mayor...shall designate one of the members to serve as chairman and presiding officer...”⁸ A joint environmental commission elects a chairman from among its members (N.J.S.A. 40:56A-9).

An amendment to the environmental commission statute allows for the appointment of not more than two alternate members. These alternates may participate in a commission’s discussions but may not vote except in the absence or disqualification of a regular member (N.J.S.A. 40:56A-1).

POWERS AND DUTIES

A local commission is generally limited to information gathering, offering advice to other agencies, and, with local government approval, acquiring land and property, such as endangered open space. N.J.S.A. 40:56A-2 authorizes a commission “to conduct research into the use and possible use of the open land areas of the municipality” and further permits it to “coordinate the activities of unofficial bodies organized for similar purposes.”

Of special importance is the commission’s ability to communicate with the public. A commission may “advertise, prepare, print and distribute books, maps, charts, plans and pamphlets which in its judgment it deems necessary for its purposes.” In this way, a commission may take controversial positions, as its members see fit.

Perhaps the only non-discretionary duty is that the environmental commission:

...shall keep an index of all open areas, publicly or privately owned, including open marshland, swamps and other wetlands, in order to obtain information on the proper use of such areas, and may from time to time recommend to the planning board or...to the mayor and governing body...plans and programs for inclusion in a municipal master plan and the development and use of such areas⁹ (emphasis added).

As to the acquisition of property by the commission, the statute provides:

...subject to the approval of the governing body, [a commission may] acquire property, both real and personal, in the name of the municipality by gift, purchase, grant, bequest, devise or lease for any of its

purposes and shall administer the same for such purposes....Such an acquisition may be to acquire the fee or any lesser interest, development right, easement (including conservation easement)...as may be necessary to acquire, maintain, improve, protect, limit the future use of, or otherwise conserve and properly utilize open spaces and other land and water areas in the municipality.¹⁰

Financial Assistance

The DEP provides financial assistance to commissions under the “Environmental Aid Act.”¹¹ This act authorizes matching grants of up to \$2,500 “in State aid per year to any local environmental agency” — including local environmental commissions, joint commissions formed by two or more municipalities, county commissions and soil conservation districts.¹² The \$2,500 limit has not been changed since 1975.

Environmental Aid Act grants may be made for any purpose that the recipient is authorized to perform, including the preparation of an environmental index, or environmental resources inventory. Such an index consists of a report on local environmental conditions and sets forth objectives concerning environmental resources.¹³

Once a local commission has “prepared and submitted to the [municipal] planning board and to the board of adjustment an index of the natural resources of the municipality, either board shall make available to the environmental commission an informational copy of every application for development submitted to either board.”¹⁴ Having an early copy of these applications facilitates the commission’s ability to comment on development applications. However, the same section of the MLUL provides that “failure of the [either board] to make such informational copy available to the environmental commission shall not invalidate any hearing or proceeding.”

Does a Commission Have the Power to Sue?

May a commission file an environmental lawsuit *in its own name*? While the environmental commission enabling legislation is silent on this matter, New Jersey’s Environmental Rights Act (ERA)¹⁵ authorizes: “Any person [to] maintain an action in a court of competent jurisdiction against any other person to enforce, or to restrain the violation of, any statute, regulation or ordinance which is designed to

[protect]...the environment.”¹⁶ “Person” is defined in the ERA as including “...the State, *any political subdivision* of the State and *any agency or instrumentality of the State or of any political subdivision* of the State”¹⁷ (emphasis added).

As an agency of local government, an environmental commission almost certainly meets the ERA’s expansive definition of “political subdivision.” To date, no reported state court decision has shed light on this topic. However, in an unreported trial court ruling a commission was found not to have the independent authority to bring suit. Also, in *Springfield Tp. v. Lewis*¹⁸ a federal district court held that the ERA *by itself* did not confer “standing to sue” on environmental groups and local government units when suing to enforce *federal* laws in *federal* court — where a much stricter standard has long prevailed.

Whatever powers are vested or not vested in an environmental commission by New Jersey law, the ERA stands as an independent grant of power to an otherwise largely advisory environmental commission to sue to protect the environment.

Protection of Commissioners Against Summary Removal

Regardless of a commission’s power to sue, the power of persuasion remains. In addition to its mandate to conduct research and publicize its findings, an environmental commission may also “*make recommendations* concerning open space preservation, water resource management, air pollution control, solid waste management, noise control, soil and landscape protection, environmental appearance, marine

resources and protection of flora and fauna”¹⁹ (emphasis added). Thus a commission may study almost any environmental matter, reach a conclusion about contested permits, address the local permit authority accordingly, and issue press releases and other written material designed to reach the widest possible audiences concerning its findings — even though the commission knows that its findings contest the views of the local governing body.

The question then arises as to whether the mayor or governing body can summarily remove local commissioners. The clear answer is no.

Commissioners serve three year terms and may be removed during their statutory term *only* “for cause, on written charges served upon the member and *after a hearing thereon* at which the member shall be entitled to be heard in person or by counsel”²⁰ (emphasis added). If a mayor seeks to remove outspoken commissioners, the law mandates nothing short of a local impeachment process. Any local ordinance to the contrary must be considered in violation of the state statute and preempted to the extent of the conflict with state law. However, the same legislation authorizes governing bodies establishing joint commissions to fix “the number and qualifications of the members...and *their terms and methods of appointment or removal*” in the ordinance creating the joint commission.²¹ Thus, if the ordinances creating a joint commission do not incorporate the protections given by statute to single-municipality commissions, its members may be subject to removal without prior hearing or finding of “cause.”

Section B

POLICIES AND OPERATIONS

INTRODUCTION

In the early 1960s, New Jersey residents and officials began to realize that the state was headed for environmental disaster, and began to deal with problems like water pollution, air pollution, open space loss and toxic contamination. At both the state and local levels, governing bodies passed environmental laws and created bureaucracies to administer them.

People realized that, in a home-rule state like New Jersey, local government needed data and trained people to assist in meeting these new challenges. In 1968, the legislature passed a law, amended in 1972, 1975 and 1989, allowing municipal governing bodies to create local environmental commissions. Recognizing the interrelationship between land use planning and environmental protection, the Legislature, in both the environmental commission

enabling legislation and the Municipal Land Use Law (MLUL), required that one member of the environmental commission should serve also on the planning board.

ENVIRONMENTAL COMMISSION ACTIVITIES

Environmental commissions are assigned many roles, some by statute and some by circumstance, but their primary obligation is to protect natural resources and encourage their wise use. As members of the official municipal family, environmental commissions protect the public's quality of life by protecting the environment. To carry out this function, commissions develop and maintain a local database of the town's environmental and natural resources, review and comment on governmental actions, and promote regional and long-range planning. They inform the public through educational programs, publications and meetings, and function as the local pipeline to state environmental agencies and the non-profit network of environmental organizations.

Environmental commissions play a coordinating role among the diverse actors in environmental protection: the Department of Environmental Protection (DEP), the Soil Conservation Service, local planning boards, boards of health and utilities authorities. Environmental commissions review and comment on the actions of state agencies and neighboring municipalities that can affect the local environment but fall outside local review. They are definitely not anti-progress; applicants for local development who appear before environmental commissions early in the preparation of a project often find help in charting their course through the maze of regulatory processes, and can benefit from being apprised of locally available data and local concerns. Environmental commissions have an interest in all items on the environmental agenda. Though not empowered to veto development proposals, they have the power of review and comment for all local applications and for many state permits. They prepare and maintain an index of open space, the environmental resources inventory (ERI) and other local databases, and have access to training and professional guidance. They use this information and training to develop findings of fact and make recommendations to other local and state agencies.

Commissions play an important public liaison role – both informing and listening to the public on environmental matters.

The Environmental Agenda Clean Air

Because municipalities tend to locate factories and traffic-generating developments on their outskirts, neighboring communities often experience the worst air quality impacts of local development. In a similar fashion, people tend to think of global warming and atmospheric degradation as someone else's responsibility, ignoring their own and their community's contribution to a problem that affects everyone's well-being. The difficulty of facing up to a global problem at the municipal level without the umbrella of international cooperation cannot be exaggerated. However, if governments at the local level demonstrate environmental responsibility, international cooperation may follow. Environmental commissions can take the lead in advising governing officials and residents of necessary and appropriate local action. For instance:

- A commission might prepare a database to show local sources of emissions and traffic "hot spots," and use this information when reviewing or proposing municipal ordinances. (This database, like others mentioned throughout this manual, does not have to be on computer, but can be simply a well-organized and indexed report of facts.)
- As an alternative to open burning, commissions can present methods for disposing of vegetative wastes, such as farm and backyard composting, and municipal or contracted chipping services. Local prohibition (by ordinance) of open burning preempts the state's right to allow certain types of open burning.
- Environmental commissions can review site plans in the light of meteorological data, micro-climate information, and existing air quality. They can ask an applicant to submit data on stationary sources of air pollution, traffic management and energy conservation measures.

Any land use decision is an air quality decision. The planning board and the environmental commission can use the air quality database in preparing a regionally responsible master plan that includes strategies to reduce air pollution.

Possible strategies include:

- reducing vehicle miles by concentrating higher density development near mass transit nodes;
- encouraging mixed-use communities;
- planning alternate transportation facilities like bikepaths and pedestrian walkways;
- ensuring that the orientation of proposed road systems enables potential homes to face south to take maximum advantage of solar energy.

Environmental Quality

Emergency Preparation and Response – The New Jersey Worker and Community Right to Know Act (N.J.S.A. 34:5A-1 *et seq.*) requires users of hazardous substances to inform the DEP and the Local Emergency Planning Committee (LEPC) about the use and storage of all such materials. The environmental commission should incorporate this information into the Environmental Resources Inventory (ERI), the natural resource database each commission maintains for its town.

Conversely, the LEPC's plans for dealing with disasters involving hazardous substances should be based on accurate information about geology, soils, ground and surface water—information that is found in the ERI. Information on wind directions and microclimates that might affect air pollution plumes could be useful in planning evacuations.

Radiation – Radiation presents two types of concerns for environmental commissions. One is residents' exposure to radon, a naturally-occurring gas, and the other is the transportation and local storage of radioactive materials. Environmental commissions need to know the location of local users of radioactive materials and when, where and how the material is moved on the local transportation network. The LEPC can use this information, included in the ERI, to help residents avoid exposure in the event of an accident or spill.

Environmental commissions also need to make sure that residents are aware of the risks of exposure to radon in their homes, schools and other buildings. In areas of the state where the risk of high radon levels is greatest, New Jersey's Uniform Construction Code requires the installation of passive radon systems in all new residential construction.

However, testing and remediation of radon problems in existing homes is the homeowner's responsibility. Environmental commission publications can educate homeowners about potential exposure risks, methods of testing, and options for mitigation. The commission can refer residents to the DEP's Radon Section (1-800-648-0394) for information and a list of contractors certified by the state to do radon testing and mitigation.

Noise – The environmental commission can gather information on noise that will be useful in developing standards for local ordinances. It also can review land use applications, giving consideration to potential noise problems. For example, with or without sound barriers, an interstate highway causes high levels of noise and air pollution and should not be the site of high-density housing. Open space, farmland or woods as a buffer can reduce the levels of noise and reduce air pollution.

Pesticides and Herbicides – Environmental commissions can assist the public and local officials in objectively weighing the risks of pesticides and herbicides against their benefits, and can make the community aware of possible alternatives for pest and weed control. For instance, they can:

- work with the local road department to determine whether brush cutting is an acceptable alternative to using an herbicide when the herbicide may pollute a nearby stream;
- explain the use of biological controls for pests such as gypsy moths;
- work closely with utility companies, encouraging them to plant limited growth species rather than use herbicides in right-of-way maintenance programs;
- inform the public and local officials of the proper way to dispose of empty containers and leftover pesticides and herbicides.

Clean Water

Water quality data from all sources forms an important element of the local ERI. Commissions use this information as a basis for their comments on proposed state permit actions, findings of fact for wastewater management planning and participation in the local master plan process.

The planning and review responsibilities of environmental commissions provide opportunities to monitor and curtail nonpoint sources of pollution. These sources of water pollution are site specific and do not lend themselves to technical solutions. Engineered solutions such as catch basins and detention facilities require extensive maintenance and repair. The most efficient and economic nonpoint source pollution control measures are those that prevent the pollution at the source. Databased planning and good design control both pollution and future public costs.

Tools like the computerized dilution models that use nitrate as a pollution indicator can help gauge the capacity of the subsurface system to assimilate wastes and determine how much development the site can support. Overland runoff can carry pesticides, herbicides, nutrients and petroleum products into waterways. Vegetated buffer areas along small or large waterways will absorb much of this runoff before it reaches the stream or river. Channeling runoff across grassy swales rather than through pipes will also diminish the volume. In urban areas, regular street sweeping is an effective way of controlling pollution.

The environmental commission needs to interact with the planning board to assure that water quality and water supply constraints are fully incorporated into the master plan and zoning ordinance.

Waste Management

Source separation and recycling, which began as a local initiative by environmental commissions and others, proved so successful that the state made it mandatory in 1987. Environmental commissions remain active in recycling and source separation, educating and informing the public and ensuring that these programs operate efficiently. Recycling efforts have dramatically reduced the need for additional landfills or incinerators.

Environmental commissions around the state have advocated municipal garbage collection programs where customers pay based on the amount of solid waste they throw out. Called a “per-container,” or “per bag” fee, this type of system charges for each can or bag collected, so that residents have an incentive to reduce their waste and recycle more.

An environmental commissioner is often the local representative on the county Solid Waste Advisory Committee (SWAC). Commissioners are in a good position to act as the

informed liaison between governmental agencies, the public and local officials.

Commissions also educate residents about ways to decrease their generation of household hazardous wastes such as pesticides, poisons and petroleum products through the use of alternate methods of pest control, switching to latex paints (instead of oil-based), or by using non-toxic cleaning products. Commissions publicize the dates of county hazardous waste collections and encourage residents to dispose of household cleaners, pesticides, motor oil, batteries and oil-based paint properly, instead of throwing them out with the household trash or pouring them down storm drains.

Historic Resources

In some municipalities, historic preservation commissions compile and maintain records of historic data, and also review development applications. If a town lacks a historic commission, the environmental commission can ensure that the historic data of the community is part of the ERI, and that the planning board includes it in the master plan and considers it during its review of development applications.

Land and Wildlife

The environmental commission can act as the keeper of the “commons” — lands owned or used in common by the community — by assisting the planning board in incorporating standards for municipal open space into the local master plan and requiring applicants to meet state and local requirements to set land aside for open space, recreation, habitat protection and critical environmental sites. Using information in the ERI, the commission can advise the governing body, planning board and board of health on planning, implementing regulations and acquiring lands to protect local and state resources. The environmental commission's tools include information, public support, training in local and state programs, and a seat on the planning board.

Local land use decisions involve landowners, other municipalities, the county, the region, the state and the federal government. The issues that affect these decisions go far beyond specific projects and local zoning. Among these are the local impact of federal and state funds used for highways; the state and federal governments’ recognition of the value of wetlands; the need to regulate; and the consis-

tently strong public support of bond issues for the purchase of open space and preservation of farmland.

One function of the environmental commission in making recommendations toward the development of municipal master plans and land use regulations is to translate state and federal regulations, and local long-range objectives, into permitted land uses and standards of performance. For example, a local ordinance can protect water quality by tying the intensity of use to the land's capacity to treat septic system effluent and stormwater runoff. Zoning can mandate lots large enough to adequately buffer wetlands and still assure landowners reasonable use. Land use techniques like cluster zoning and transfers of development rights can protect farmland, species habitat or public open space. Towns can require vegetated buffer strips along streams, and noise and pollution buffers along roads and highways. (Strategies that use natural systems to treat and avoid pollution and to preserve productive farmland can result in significant savings for taxpayers.) In short, good planning can protect the economy and the quality of life; it can preserve the character of the town while accommodating growth.

The environmental commission, cooperating with the governing body, often takes the initiative to participate in programs that preserve local lands. These programs include:

- outright purchase of land through the Green Acres programs or a local open space tax;
- the Green Acres Tax Exemption program for non-profit organizations;
- the Natural Lands Trust and local land trusts.

Local commissions with an interest in evaluating habitat and locating threatened and endangered species may ask for technical assistance from the Natural Heritage Program at DEP. This information is the basis of land use and acquisition programs for species protection. The Green Acres Program also provides technical assistance on open space and recreation planning.

State regulation of critical areas shapes local land use regulation, particularly that pertaining to wetlands and flood hazard areas. Local land use ordinances that reflect state regulations and delineations and incorporate State Plan goals enable towns to require landowners to adjust site design to avoid destroying natural resources, while still allowing rea-

sonable use of the land. A pre-application appearance before the environmental commission can make applicants aware of environmental constraints before the formal application process begins, while plans are still flexible.

At the state level, DEP regulations require applicants for stream encroachment permits, sewer extension permits, NJPDES permits and many others to notify the municipality that the application is pending. Review of these applications by the environmental commission can help the applicant and the town avoid surprises and meet local and state goals. For instance, a stream encroachment application for a bridge may involve channel clearing and vegetation removal that will damage water quality in the stream. A municipality can negotiate a reduction in the negative effects of some permits if it lets the applicant and the state agency know the local concerns early in the process. Growth generating infrastructure that has secondary effects, such as sewer extensions and roads, can undermine a local land use plan and should be planned carefully to be consistent with the master plan and wastewater management plan.

In summary, the coordination of these multi-level jurisdictions by the environmental commission and the early exposure of pending applications to public scrutiny tend to streamline the review process and reduce conflict.

Special Protection Areas

Hackensack Meadowlands – As interested municipal officials, environmental commissions in the 14 Hackensack Meadowlands Development Commission (HMDC) municipalities should participate in proposed revisions to the master plan, and review and comment on all development applications.

Coastal Zone – Along with the Coastal Area Facilities Review Act (CAFRA) (*N.J.S.A. 13:19-1 et seq.*), other DEP-administered laws that affect applicants in the coastal region are the Coastal Wetlands Act (*N.J.S.A. 13:19a-1 et seq.*) and the Waterfront Development Act of 1914 (*N.J.S.A. 12:5-1 et seq.*). Only local approvals of development come under CAFRA scrutiny. The DEP cannot overturn decisions that deny action or involve locally prohibited land uses.

Environmental commissions in CAFRA towns need to be aware of the coastal policies used by DEP to review and condition applications in that zone. Consistency in planning

and review procedures between the CAFRA and local municipalities will expedite the review procedure. Local commissioners should comment on all CAFRA permit applications and participate in public hearings held to discuss possible changes in CAFRA regulations.

Delaware and Raritan Canal – Environmental commissions in the 34 towns in the Delaware and Raritan Canal watershed should consider the regional impacts of development proposals. Local ordinances that extend the same or more stringent standards than those proposed by the D&R Canal Commission throughout the entire municipality will speed local reviews. The local environmental commission's participation in the D&R Canal Commission's reviews of local and state actions will also help protect this important state resource.

Pinelands Protection Area – Pinelands Commission regulations require that local environmental commissions in the Pinelands municipalities must receive notice of all development applications, for review and comment. Commissions in these municipalities should make sure that reviews take place and that all actions comply with the stringent standards of the Pinelands Comprehensive Management Plan (N.J.A.C. 7:50-1 *et seq.*).

For Further Information

Contact:

The Association of New Jersey Environmental Commissions,
973-539-7547

Website:

The Association of New Jersey Environmental Commissions,
<http://www.anjec.org>

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1. N.J.S.A. 40:56A-5.
 2. N.J.S.A. 40:56A-8 -10.
 3. N.J.S.A. 40:56A-8b.
 4. N.J.S.A. 40:56A-1.
 5. N.J.S.A. 40:56A-8b(1) and (2).
 6. N.J.S.A. 40:56A-1.
 7. N.J.S.A. 40:56A-8b(3) and (4).
 8. N.J.S.A. 40:56A-1 and -9.
 9. N.J.S.A. 40:56A-2.
 10. N.J.S.A. 40:56A-3.
 11. N.J.S.A. 13:1H-1 *et seq.*
 12. *Id.* at 1H-2 ("definitions") and 1H-7 ("limitations on state aid"); note that for a "joint commission" the \$2,500 applies to each participating municipality in a joint commission, thus permitting, e.g., a maximum of \$5,000 for a two-municipality joint environmental commission per year.
 13. *Id.* at 1H-3, -4.
 14. N.J.S.A. 40:55D-27b.
 15. N.J.S.A. 2A:35A-1 *et seq.*
 16. *Id.* at 4a.
 17. *Id.* at 3a.
 18. 702 F.2d 426 (1983).
 19. N.J.S.A. 40:56A-6.
 20. N.J.S.A. 40:56A-1.
 21. N.J.S.A. 40:56A-8b.

Chapter 5

HISTORIC PRESERVATION COMMISSION

Section A

THE LAW

INTRODUCTION

A 1986 amendment to the Municipal Land Use Law (MLUL)¹

- authorizes each New Jersey municipality to establish a historic preservation commission;
- provides for the number and “classes” of members;
- authorizes the municipality to provide funding; and
- outlines the powers and describes the duties of a historic preservation commission.²

Prior to this amendment, some municipalities established historic preservation ordinances under their general police powers. After adoption of the historic preservation commission amendment, municipalities were encouraged to bring their old ordinances into conformity with the enabling legislation.

Any municipal governing body may, by ordinance, create a historic preservation commission with five, seven or nine regular members, and not more than two alternate

members. Each commission must have at least one member from each of these two classes:

Class A — a person who is knowledgeable in building design and construction or architectural history and who may reside outside the municipality; and

Class B — a person who is knowledgeable or has a demonstrated interest in local history and who may reside outside the municipality.

A third category of members — “Class C,” including alternate members — “...shall be citizens of the municipality who shall hold no other municipal office, position or employment except for membership on the planning board or board of adjustment.”³

Following the initial appointments to the commission, regular members serve terms of four years and alternate members serve terms of two years. The mayor appoints all members “or, if so specified by ordinance, the chairman of the planning board shall appoint all members of the commission and shall designate at the time of appointment the regular members by class and the alternate members....” Thereafter, the commission “shall elect a chairman and vice-chairman...and select a secretary, who may or may not be a member...or a municipal employee.”

As with all municipal positions of trust, a strict conflict



of interest provision bars any member from acting on any matter in which he has, either directly or indirectly, any personal or financial interest.⁴ Members are subject to dismissal “for cause.” Prior to removal, a member may request a public hearing before the governing body to contest such an action.⁵

Funding for a historic preservation commission depends on an appropriation from the municipal budget, and may be supplemented by gifts and grants from other sources. The commission may hire staffing, including such “experts” as it needs, subject to available appropriations.⁶ Unless the governing body provides an appropriation for separate counsel, the commission must use the municipal attorney for any legal advice.

POWERS AND RESPONSIBILITIES

The MLUL provides for a historic preservation commission to do the following:

- a. *Prepare a survey of historic sites...pursuant to criteria identified [by the commission] in the survey report;*
- b. *Make recommendations to the planning board on the historic plan element of the master plan and on the implications for preservation of historic sites of any other master plan elements;*
- c. *Advise the planning board on the inclusion of historic sites in the recommended capital improvement program;*
- d. *Advise the planning board and board of adjustment on applications for development...;*
- e. *Provide written reports pursuant to [N.J.S.A. 40:55D-111] on the application of the zoning ordinance provisions concerning historic preservation; and*
- f. *Carry out such other advisory, educational and informational functions as will promote historic preservation in the municipality”⁷ (emphasis added).*

Clearly, the commission has an explicit duty to work closely with local development review agencies and planners.

To facilitate the commission’s advisory powers, the MLUL directs that the “planning board and board of adjustment shall refer to the historic preservation commission every application for development submitted to either board for development in historic zoning districts or on historic sites designated on the zoning or official map or in any component element of the master plan.” However, “Failure to refer the application as required shall not invalidate any hearing or proceeding.” Thereafter, the commission delegates one of its members “to testify orally...and... explain any written report which may have been submitted” to either board.⁸

A basic function of this commission is to persuade the governing body to identify historic sites or districts in the zoning ordinance. Note that the zoning ordinance may “designate and regulate historic sites or historic districts *and provide design criteria and guidelines* therefore,”⁹ (emphasis added). After July 1, 1994, all new historic sites and historic districts designated in a zoning ordinance were required to be based on identifications in the historic preservation plan element of the municipality’s master plan, unless the governing body has set forth its reasons for departing from this procedure.¹⁰

Once these sites or districts are designated, the commission exercises a limited veto power over development within them; the governing body *must* require, by ordinance, that all permit applications within such a district be referred to the historic preservation commission for “a written report on the application of the zoning ordinance provisions concerning historic preservation to any of those aspects of the change proposed, which aspects were not determined by approval of an application for development by a municipal agency [the planning board or board of adjustment] ...” in accordance with the MLUL. Following the referral of the application, the commission has 45 days to prepare and submit its report. If the report “recommends...against the issuance of a permit or recommends conditions to the permit to be issued, the administrative officer [of the municipality] *shall deny issuance* of the permit or *include the conditions* in the permit, as the case may be,”¹¹ (emphasis added). A failure by the commission to report back within 45 days constitutes approval by operation of law.

In short, the historic preservation commission has three duties: first, to educate the planning board and governing body on the need for historic site and district ordinances; second, to advise land use agencies on how pending applications affect these historic preservation efforts; and, third, to “veto” permits that might cause harm to historic values, as set forth in the relevant ordinances. The latter function obviously suggests the need to examine whether the property owner can validly claim an unconstitutional “taking” of his property before the veto is exercised in full.

Historic preservation disputes have occasionally reached the courts. One such case involved a challenge to Millburn’s historic preservation ordinance. In that situation, the court upheld the “incongruity” standard contained in the ordinance against the property owner’s claim that it was unconstitutionally vague.¹² While this decision is not the “final word” on the legality of all historic preservation efforts, it reflects a growing recognition of the importance of the preservation values to the public.

Section B

POLICY AND OPERATIONS

INTRODUCTION

In the past, municipalities often established local preservation commissions under ordinances that did not correspond completely with the terms of the state enabling legislation (within the Municipal Land Use Law, N.J.S.A. 40:55D-107 *et seq.*). A historic preservation commission ordinance *must* meet the criteria in the enabling legislation in order for the town to qualify as a Certified Local Government. Such certification allows a local historic preservation commission to apply for state-administered federal historic preservation grants, and also gives it the right to review Historic Register nominations. Additionally, to be certified, a municipality’s zoning ordinance must designate and regulate historic sites or districts, as identified in the historic preservation element of its master plan.

DUTIES AND POWERS

In a municipality that elects, by ordinance, to designate historic sites, the historic preservation commission has (limited) veto power over building permits and development applications *concerning properties that have been designated*. A commission is free to comment on applications affecting sites that have not been designated, but its opinions are not binding.

A historic preservation commission is also responsible for the preparation of a survey of its municipality’s historic assets. This can be done from scratch or by updating inventories already in existence. The survey should include buildings, sites or ruins of significance, and such things as historic sidewalks, curbing, streetlights, walls and fences, bridges, street patterns and streetscapes with contributing

components like mature trees and consistent setbacks. *For the historic designations in the local zoning ordinance to conform to state law, the planning board must adopt the survey(s), together with a statement of the criteria used for listings, as part of the town's master plan.* Inclusion in the survey constitutes identification only, and is not designation for protection, a process that must be done by ordinance.

A commission should prepare and follow a set of bylaws for its meetings and reviews of development applications. These bylaws clarify procedural issues that may not be part of the historic preservation ordinance. The voting majority of the commission adopts them and they should be stated in the commission's records (minutes of meetings). The commission must also adopt a set of clear, detailed design guidelines for review of development and building permit applications. (The commission often contracts out preparation of design guidelines to a preservation professional.) The guidelines need not be incorporated into the historic preservation ordinance, but the ordinance should contain a reference to them. The availability of such guidelines was a factor supporting Millburn Township's successful defense of its ordinance in a court challenge.

Commissions should make use of their authority to advise, educate and inform the community about historic preservation. An effective commission will arrange meetings and lectures, distribute literature and schedule community events in an effort to build local support for historic preservation. Preservation will work only in a community that understands it, and no local government can pass a good historic preservation ordinance without strong local support.

THE ENVIRONMENTAL AGENDA

Usually, in both its advisory and regulatory roles, the historic preservation commission will stress issues of historical and visual compatibility. It also can provide insight on less immediately tangible threats of damage, and the benefits to be gained by environmental protection. For example, nearby truck traffic may cause damaging vibrations to old buildings; changes in neighborhood uses may eliminate any possible adaptive reuse of historic structures. The commission must consider a broad range of factors, including highway and sewer construction and the protection of open space settings for historic properties.

Clean Air

Acid rain threatens historic buildings and artifacts. By implementing land use controls, a community may be able to minimize its contribution to further degradation of both local and regional air quality. Historic commissions can play an important part in encouraging the kind of planning that will minimize the burning of fossil fuels and the discharge of other toxic wastes into the air.

Clean Water

The preservation of historic sites is directly and indirectly affected by government's attempts to achieve other objectives. Sites on the State and/or National Register and locally designated historic districts and sites should be considered during the planning process. The impact of growth-generating infrastructure, such as roads and sewers, can destroy whole districts and preclude the future preservation of sites. Water supply and wastewater management are good cases in point. Local governments prepare wastewater management plans that control the type and density of development.

The historic preservation commission should review all infrastructure planning and submit recommendations to the local government, the planning board and the DEP. Historic sites may be buffered from necessary changes through imaginative zoning techniques that include clustering and transfer of development rights (TDR).

Land and Wildlife

The cultural and historic elements of a community are not restricted to buildings and village districts. Much of New Jersey's historic heritage is closely related to the land. For instance, in the prehistoric and historic areas of the Pine-lands, a whole culture developed around a natural ecosystem.

Local historic preservation commissions are particularly suited to coordinate the various entities responsible for open space preservation, wildlife protection and historic preservation for maximum protection of important cultural and natural assets. A commission's participation in the planning process will apprise local landowners and regulators of the need for innovative zoning and site design techniques. For example, it is possible to protect a single, biologically unique tree with historic and cultural significance, but this requires advance planning and care in regulation.

Special Protection Areas

New Jersey has solved some regional land use problems by creating powerful regional planning agencies. There are four areas in the state — the Coastal Area, the Delaware and Raritan Canal, the Hackensack Meadowlands and the Pinelands — for which the legislature has adopted laws creating governmental partnerships to achieve statewide goals. The areas involved are very different, the objectives of the laws are unique to each, and local participation varies from region to region. A historic preservation commission within one of these areas can encourage its municipality to incorporate state standards for local review of all develop-

ment. This will reduce regulatory conflict and the delays caused by multilevel reviews, and ensure that historic and cultural resources do not fall between the cracks.

For Further Information

Contacts:

DEP Historic Preservation Office, 609-984-6017

Preservation New Jersey, Inc. (Perth Amboy), 732-442-1100

The law:

Municipal Land Use Law, Legislation for Establishment of Historic Preservation Commissions, N.J.S.A. 40:55-D-107 through 112.

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1. *L.* 1985, c. 516.
 2. See *N.J.S.A.* 40:55D-107 to - 112.
 3. *N.J.S.A.* 40:55D-107c.
 4. *Id.* at 107d.
 5. *Id.* at 107e.
 6. *N.J.S.A.* 40:55D-108.
 7. *N.J.S.A.* 40:55D-109.
 8. *N.J.S.A.* 40:55D-110.
 9. *N.J.S.A.* 40:55D-65i.
 10. *Id.*
 11. *N.J.S.A.* 40:55D-111.
 12. See *Nadelson v. Township of Millburn*, 297 *N.J. Super.* 549 (Law Div. 1996).

THE BOARD OF HEALTH

Section A

THE LAW

INTRODUCTION

Long before New Jersey had a state Department of Health or Department of Environmental Protection, every municipality had a statutory duty to establish a board of health with extensive powers to protect public health. This included the authority to define and “abate” (terminate) any public “nuisance” affecting air or water within the municipal borders, and to charge the nuisance source for *all the expenses* incurred by the board in ending the nuisance.¹ Each such health board was — and remains — a powerful, if localized, environmental force.

This power was established in 1887, when, in response to serious public health problems such as epidemics in rapidly growing urban areas, the Legislature passed a law (N.J.S.A. 26:3-1) requiring the establishment of a board of health in every municipality. It gave the board powers that potentially reached into every home, business or even governmental activity affecting public health. In practice, health boards function as either autonomous or advisory bodies. Autonomous boards have broad legal authority to

adopt codes and pass ordinances, while advisory boards only advise other policymakers, and have no legal authority. Additionally, the law permits a governing body to designate itself as the board of health. Local governing bodies are generally without power to limit what an autonomous health board may do, as the health board derives most of its powers directly from state law.

MEMBERSHIP AND TENURE

In general, boards of health have not less than five nor more than seven members, each named by the governing body of the municipality in such manner as it deems appropriate, by ordinance.² (Certain larger municipalities may appoint boards with up to 10 members.)³ Each member of the board serves a term that is set by local ordinance, except in certain large municipalities where the term is four years.⁴ Board members may be compensated for their services, except that no compensation is permitted for board members “in a city of the first class” (a municipality with a population greater than 150,000).

Special provisions apply in municipalities organized under the township form of government law.⁵ These provisions address the organization and composition of the board of health in such municipalities.⁶

GENERAL POWERS AND DUTIES

Staff

A critical power of each board is the employment of professional staff.⁷ These employees reflect the wide reach of board powers and include health officers, public health nurses, health educators and sanitarians. Each employee must meet strict criteria with regard to education and experience. Health officers and sanitarians must be licensed by the state.⁸

Powers of Enforcement

Each autonomous health board has the general power “to pass, alter or amend ordinances and [to] make rules and regulations regarding the public health within its jurisdiction, for the...purposes” affecting several broad categories: (1) food, water and water supply; (2) sewage and septic systems; (3) garbage and offal; (4) slaughtering of animals; (5) midwifery; and (6) heating conditions in apartment houses.⁹ In addition, the board has power over “the sanitary condition of every building, public or private” within the community.¹⁰ Each board of health is also required to provide core public health services, including those related to communicable diseases, maternal and child health, adult health and environmental health.¹¹

Each ordinance, amendment, rule or regulation must be consistent with state law and the state sanitary code.¹² This code includes 14 chapters that were adopted by the State Public Health Council,¹³ and may be expanded to address “any subject affecting public health,” including “nuisances hazardous to human health.” Local boards may adopt regulations more restrictive than the provisions of the State Sanitary Code. However, local regulations that are less protective of public health, or that are found to jeopardize public health in another municipality, are prohibited.¹⁴

Of special note is the power of each board to “declare and define what shall constitute a nuisance in...all public or private places.” It “shall examine into and prohibit any nuisance, offensive matter, foul or noxious odors, gases or vapors, water in which mosquito larvae breed, and all causes of disease...and shall cause the same to be removed and abated at the expense of the owner” of the property where the nuisance is found¹⁵ (emphasis added). The difference between the permissive power to “declare and define” a

nuisance and the duty to “examine...and prohibit any nuisance” is perhaps explained by *N.J.S.A. 26:3-47*, which states that the power to “remove and abate nuisances...shall not depend upon whether the board has...[adopted] ordinances” on the topic. In other words, the board has a duty to ensure the abatement of any nuisance even if the board has not established rules for the control and abatement of that particular nuisance.

What Constitutes a Public Nuisance?

It may be argued that the local authority to abate nuisances duplicates the DEP’s pollution control regulations. The local law is primarily *descriptive* of the harm done, perceived to be done, or potentially done by the owners of property “unreasonably interfering” with other property and its use and enjoyment. The DEP’s rules typically quantify emission limits or specify technology for air and water pollution permits.

Odors are a prime example of traditional nuisance law as employed by a local board of health. In a 1950 decision, *State ex rel. Bd. of Health of Tp. of Saddle River v. Sommers Rendering Co.*,¹⁶ the court sustained an injunction against a fat rendering factory that had been in operation for 50 years, based upon testimony of the local board of health that it was the source of “unbearably foul and noxious odors.”¹⁷ The court found no need to show that illness would result from the odors to constitute a public nuisance: “The test is not whether the condition created by the defendant will inevitably result in disease, but whether the condition constitutes a hazard, danger or peril to the public health by its presence,”¹⁸ (emphasis added). Nor was it a defense that the complaining residents had moved into the vicinity of the factory.

The *Saddle River* holding closely follows the State Supreme Court ruling in *Bd. of Health of Weehawken Tp. v. N.Y. Central Rail Co.*,¹⁹ which sustained a public nuisance finding based upon the health department’s complaint of “the emission of smoke from Central’s power plant...of a density greater than...No. 2 on the Ringelmann Chart,” as adopted in an ordinance of the Weehawken health officials.²⁰ The high court observed that the finding of dense smoke would violate general common law standards, even in the absence of the board of health ordinance incorporating the Ringelmann Chart: “At common law, an action

of nuisance will lie for substantial discomfort or inconvenience [if it]...materially interferes with the ordinary comfort physically of human existence, not merely according to elegant or dainty modes and habits of living, but according to plain and sober and simple notions among the English people,” quoting from a 19th Century source.²¹

Despite these and other vintage cases upholding the right and duty of the health board to abate nuisances of any kind, several questions in the environmental field persist: May the holder of a DEP air pollution control permit or a DEP water discharge permit use the permit as an absolute or affirmative defense against a complaint of public nuisance? Cases such as *Saddle River* and *Weehawken* preceded these permit systems by many years. (With respect to nuisance actions against DEP-licensed landfills, case law seems to present a challenge to any board attempting to impose standards other than those found in DEP regulations.)²²

COUNTY ENVIRONMENTAL HEALTH ACT

In recent years the manner in which municipal and county governments carry out environmental protection activities has been remarkably changed through the adoption of the County Environmental Health Act (CEHA; N.J.S.A. 26:3A2-21 *et seq.*). This statute, which was enacted in 1977 and amended in 1991, recognized the inherent regional character of many environmental problems. It also acknowledged the value of engaging the competence of local health professionals.

The County Environmental Health Act calls for a countywide approach to the control of pollution and other environmental harm through a work program certified to be in conformity with performance standards adopted by the DEP. These are set forth in the County Environmental Health Standards of Administrative Procedures and Performance (N.J.A.C. 7:1H *et seq.*). The standards relate to the control of air pollution, noise, hazardous substances, solid waste, public health laboratory services, potable water supply, groundwater pollution, on-site sewer management and surface water pollution.

A certified local health agency must prepare and carry out the work program required under the Act. The certification process involves the designation of a local health

agency by the county governing body, preparation of the work program, circulation of the work program to each municipality in the county for review and comment, final work program approval by the county governing body, and review and approval by the DEP.

Counties have several options in selecting the type of local health agency that prepares and carries out the work program. The choice of a county, regional or municipal health agency depends on the way health and environmental services are organized and delivered in the county. Of the 19 CEHA-certified counties, 17 have county health departments and two have regional health commissions. The remaining two counties have not completed the certification process.

Local health agencies are responsible for a range of environmental health activities defined in the administrative agreement entered into with DEP. These can include citizen complaint investigation, facility inspection, emergency response, collection and analysis of samples, monitoring, enforcement, and public information and education. The technical skills, proximity to the problem and knowledge of the local situation are important contributions that the local health agencies offer in the detection and control of environmental problems.

In many cases the municipal board of health, under an agreement with the certified county agency, carries out some or all of these environmental functions. The DEP, in turn, supports certified local health agencies in two important ways:

- First, DEP provides no-cost or low-cost training for local health officials to develop and maintain technical skills and competencies, as well as to ensure their personal safety and health.
- Second, DEP administers a 50 percent matching grants program for “the provision of environmental health services,” as well as a 100 percent grants program to support new and expanded programs.

Fines and penalties collected from local enforcement actions pursuant to CEHA are dedicated for use in carrying out and supporting local environmental protection efforts.

POLICY AND OPERATIONS

INTRODUCTION

Threats to health and safety posed by advancing technology and increased population have expanded, or otherwise changed, the responsibilities of the board of health. The Local Health Services Act (N.J.S.A. 26:3A2-1 *et seq.*) was adopted to assure that public health services are provided efficiently throughout the state. It encourages the formation of regional health agencies, where necessary, to assure that all towns meet the Minimum Standards of Performance for Boards of Health. All boards of health undergo an annual audit to assure that they are meeting these standards for public health.

Recognizing the regional nature of environmental health programs controlling air pollution, hazardous waste, pesticides, radiation, emergency response, water pollution, solid waste and noise, the Legislature passed the County Environmental Health Act in 1977 (N.J.S.A. 26:3A2-21 *et seq.*, amended 1991) to assist the state with enforcement and crisis response. In accordance with this Act and in the interest of more efficient enforcement, DEP delegates many inspection and enforcement responsibilities to county and regional health agencies. These local health agencies are in the front lines of environmental protection with duties that range from being the first on call to respond to a hazardous waste spill to carrying out radon control programs. (The “local” board of health may be either a municipal, a regional, or a county agency. In most counties the certified agency is the County Health Department.)

Providing a healthful environment for local residents requires the coordinated efforts of the whole team of local, county and state officials. The board of health and its staff work with all members of the team to adopt and enforce local codes, enforce state laws, respond to crises and plan for the prevention of unhealthful situations. This chapter will explore ways that boards of health carry out these responsibilities.

THE ENVIRONMENTAL AGENDA

Clean Air

The 1995 amendments to the N.J. Air Pollution Control Act eliminated the authority of municipalities to pass new air quality ordinances and put severe restrictions on existing ordinances. However, local boards of health have broad power to prohibit acts that are a public nuisance or detrimental to the public health, including ordering the abatement of smoke and odors that impinge on the public good. Local boards can and should react quickly to such situations, including those that arise through violations of regulatory programs, using the powers granted to them under the Public Health Nuisance Codes.

Releases of hazardous materials into the environment as the result of accidents will involve the LEPC (Local Emergency Planning Committee). Information on hazardous substances collected in advance by the board of health and the LEPC under the *Worker and Community Right-to-Know Act* (N.J.S.A. 34:5A-1 *et seq.*) and the *Toxic Catastrophe Prevention Act* (N.J.S.A. 13:1K-19 *et seq.*) provide the basis for action. Evacuations may be necessary.

Local boards of health can contribute to the achievement of federal and state air quality goals by influencing local land use decisions. The board of health should be prepared to provide the planning board with data on existing conditions and advice on mitigation during the planning and application review process. The local governing body, responsible for enforcing land use codes, recycling programs and other waste related issues, also relies on information and assistance from the board of health.

Environmental Quality

The local health agency is the first level of action under state and local statutes that regulate noise, radiation, pesticides and herbicides. Success depends on knowing the law, informing the public and understanding the local potential for harm. Local boards can find important information contained in state permits, community right-to-know surveys

and environmental impact statements performed for development applications. Information from the board of health can help the planning board to prevent future conflicts in land use. State officials are often dependent on reports and information provided by local authorities.

Emergency preparation and response – The New Jersey Worker and Community Right-to-Know Act (*N.J.S.A.34:5A-1 et seq.*) and the Toxic Catastrophe Prevention Act (*N.J.S.A. 13K-19 et seq.*) require public disclosure of the use and storage of any of more than 2,400 hazardous substances. This information, reported directly to the Local Emergency Planning Committee (LEPC) and the DEP, is important data the board of health can use in assessing local health risks and participating in the local land use planning process.

Radiation – The New Jersey Radiation Protection Act (*N.J.S.A. 26:2D-1 et seq.*) protects citizens against certain forms of harmful radiation — from radon to microwave ovens, from certain radioactive wastes to mercury vapor lamps. With assistance from the DEP and the Commission on Radiation Protection, the local board and its agents can use information garnered in the permitting processes to identify and report conditions that endanger local residents.

Noise control – Nuisance laws are used by local boards of health to control noise that is harmful to people — loud music causing loss of sleep, for instance, or loud noises occurring at inappropriate places and times. The state Noise Control Act of 1971 (*N.J.S.A. 13:1G-1 et seq.*) delegates control of noise to the DEP, but preserves existing civil and criminal remedies and gives local government, subject to DEP approval, the right to adopt ordinances imposing more stringent noise control standards. Except in areas of federal jurisdiction, such as product standards for machinery, cars, trucks and airplanes, noise remains a local health and safety problem. Local boards should encourage the adoption of noise control ordinances that enforce sound level standards. The DEP published a Model Noise Ordinance in 1997 and distributed it to all local health departments.

Pesticide management – In New Jersey, the Pesticide Control Act of 1971 (*N.J.S.A. 13:1F-1 et seq.*) authorizes the DEP to promulgate regulations controlling the sale, use, transportation and application of pesticides. Local health

boards can use the information collected in the DEP's permitting process to learn about operators certified to use these chemicals in the community. They can work with the state and the local environmental commission to inform the public and applicators that adherence to permit restrictions will be monitored and enforced.

In New Jersey, laws have been passed and funds made available for controlling gypsy moths and mosquitoes. For the former, the Department of Agriculture is directed to provide spray programs for municipalities upon request. The state has established and funded County Mosquito Control Commissions to apply pesticides and conduct drainage programs. Because pesticides have health and environmental effects, local boards of health should monitor spraying programs to ensure that residents are given adequate notice and are not inadvertently exposed to harmful materials. In addition, health departments can encourage municipalities and their departments of public works to adopt a policy of Integrated Pest Management (IPM) for all municipal properties, structures and activities. (See Chapter 1, "Pesticides Management" section, for more information on IPM.)

Clean Water

Boards of health are responsible, in the broadest sense, for ensuring that water supplied to every resident of their communities is clean, whether it comes from the kitchen faucet, a restaurant glass or a school drinking fountain. The responsibility of health officials is much broader than merely testing and approving or condemning a water supply. They exercise other regulatory and enforcement powers to prevent pollution of ground and surface waters and also help to plan for future water supply. In a crisis they must oversee the adequacy of emergency water supplies.

Preventing water pollution is an important facet of board of health activity. By working in close cooperation with municipal planning boards, a board of health can ensure that proposed land uses will not pollute ground or surface waters and that residents will be adequately provided with potable water.

As the municipal master plan is developed or revised, the board of health should review the proposed density of development in areas requiring on-site wastewater disposal

and wells. To avoid future problems, the soils, geology and configuration of every lot must have the potential to support an on-site wastewater disposal system and an adequate well. Consultation with the environmental commission and reference to information contained in the environmental resources inventory (ERI) can help in this review process. For instance, if an area is to have a density of one unit per acre but includes places where the water table is high or rock formations preclude septic systems, it should be replanned at a more appropriate density. Master plans should not provide levels of land use that board of health standards make impossible to achieve.

Board of health participation in the subdivision and site plan review process is an important adjunct to planning board activity. Just as construction permits cannot be issued without board of health approval, the planning board approval of a proposed project should be conditioned upon board of health assurance that the project can provide non-polluting wastewater disposal and adequate water supply. During the planning and review process, boards of health work with local planning boards and environmental commissions to put in place preventive measures to protect surface and groundwater from nonpoint sources of pollution. Land uses that protect vegetated stream corridors, recharge areas and wetlands provide natural protection to the hydrologic system.

The Realty Improvement Sewerage and Facilities Act (N.J.S.A. 58:11-23 *et seq.*), also known as Chapter 199, is enforced by boards of health, which may adopt even more stringent regulations than the state's. These regulations and ordinances provide the standards under which private septic systems and wells are built, approved, licensed and periodically inspected. Building permits cannot be granted in the absence of a board of health approval for private wells and septic systems. Board of health approvals are also required for hookups to DEP-approved public systems.

The County Environmental Health Act (N.J.S.A. 26:3A2-21 *et seq.*) provides authority for certified local health agencies to serve as primary inspection and enforcement arms of DEP. The staff responds to reports of visible pollution in a waterbody and enforces state laws to stop the degradation.

Boards of health are called on to deal with water-pol-

luting incidents ranging from a highway spill of toxic chemicals to well contamination. In any of these incidents, a major concern is preventing further pollution of surface and groundwater. For instance, when health officials work with the local fire company at the scene of an accident, they can see that care is taken to avoid flushing inappropriate materials into the stormwater control system or nearby waterways. Advance planning and joint training with the LEPC assures that responses to emergencies will be more efficient, and that the water-polluting impacts of such incidents will be minimized.

Public works activities such as road repair, the storage and application of de-icing chemicals, the use of herbicides, and temporary storage of solid waste all have the potential to cause pollution of surface and groundwater. A working partnership between local health boards and public works departments furthers the planning and preventive management necessary to prevent water pollution.

Waste Management

Solid waste – Every aspect of solid waste management — collection, transportation, treatment and storage — has important health implications. The board of health has the responsibility and the power to order the removal of conditions that endanger the public health. With respect to solid waste, these dangers could include degradation of water supplies, odors or air pollution and the communication of pathological diseases.

Recycling is the most municipally oriented segment of New Jersey's solid waste management strategy. Local health boards, governing bodies and environmental commissions can work together to keep the public informed and to assure that this important program does work.

The N.J. Solid Waste Management Act (N.J.S.A. 13:1E-1 *et seq.*) specifically authorizes local boards of health and their agents to enter any solid waste facility at any time to determine compliance with permits, engineering design and applicable laws and regulations. If unsanitary conditions exist, the board of health and its staff can take action, backed by the DEP and the Solid Waste Management Act.

Local health boards have the power to pass ordinances and otherwise control the sanitary conditions in every building and every part of their jurisdiction. Local ordi-

nances must be at least as stringent as the state Sanitary Code, contained in Title 8 of the *New Jersey Administrative Code* (N.J.A.C.).

Hazardous waste – Facilities that create, store, treat or transport hazardous waste are of concern to the board of health. Direct responsibility for enforcing hazardous waste regulations and statutes lies with the EPA and DEP, but the consequences of non-compliance are a health risk to local residents and the board of health must be familiar with these activities and their proper regulation. Local boards respond to local reports of illegal dumping of hazardous wastes and must understand the DEP procedures for reporting, containment and cleanup of such hazards.

Local boards have the right of access to hazardous waste disposal facilities and the right to examine all manifest documents that relate to the way in which these wastes are transported and disposed of. Data gathered under the Worker and Community Right to Know Act (N.J.S.A. 34:5A *et seq.*) and a full knowledge of transportation routes can help the staff in its monitoring activities.

As federal and state agencies try to determine the proper remedy for hazardous sites defined as Superfund or

National Priority List sites, they include local officials and the citizenry in an elaborate process of participation. The nature of the hazard created by these sites makes the board of health the natural representative of local interests. The same can be said for non-federal sites cleaned up under the New Jersey Spill Compensation and Control Act (N.J.S.A. 58:10-23.11 *et seq.*).

When the public health is at risk, the board of health has the duty to respond, to evaluate and to solve the problem if possible. The state steps in at the call of the local health officer. While ultimate jurisdiction over a hazardous waste spill or other chemical mishap rests with DEP or EPA, the local board of health is often the first point of contact. A proper database and a response plan developed with the LEPC are helpful in responding effectively to a crisis. The board of health should obtain a copy of the DEP list of known hazardous sites.

For Further Information

Contact:

DEP Office of County and Local Environmental Management, 609-292-1305

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1. N.J.S.A. 26:3-1, 3-45 to 3-63.
 2. N.J.S.A. 26:3-3, 3-5.
 3. *Id.*
 4. N.J.S.A. 26:3-6.
 5. N.J.S.A. 26:3-9 *et seq.*
 6. *Id.*
 7. N.J.S.A. 26:3-19.
 8. N.J.S.A. 26:3-19.1, 3-21, 3-25.1.
 9. N.J.S.A. 26:3-31a-p.
 10. N.J.S.A. 26: 3-33.
 11. "Recognized Public Health Activities and Minimum Standards of Performance for Local Boards of Health," N.J.A.C. 8:52-1.1, *et seq.*, as adopted by The Public Health Council (eff. date: Jan. 1, 1987). (This health enforcement code covers such diverse topics as "Food Surveillance," "Public Health Nursing Services," "Recreational Bathing," "Reportable Diseases," "Tuberculosis Control," and "Diabetes Services." A separate entry for "Public Health Nuisances" in N.J.A.C. 8: 52- 3.6(a)(1.) includes "noxious weeds, housing, solid waste and insects and rodents" pursuant to state law.
 12. N.J.S.A. 26:3-2.
 13. N.J.S.A. 26:1A-4, 1A-7.
 14. N.J.S.A. 26:1A-9, *Public Health Coun. v. Franklin Tp. Bd. of Health*, 108 N.J. Super. 239 (App. Div. 1970).
 15. N.J.S.A. 26: 3-45, 3-46.
 16. 66 N.J. Super. 334 (App. Div. 1961).
 17. *Id.*, at 337.
 18. *Id.*, at 340.
 19. 4 N.J. 293 (1950).
 20. *Id.*, at 297.
 21. *Id.*, at 299-300.
 22. See *Bordentown Tp. Bd. of Health v. Interstate Waste*, 191 N.J. Super. 128 (Law Div. 1983). (Local board of health had standing to commence suit against a landfill operator under the Solid Waste Management Act, but the DEP's filing of a cross claim to sue for collection of penalties ousted local board of health of authority.) *Twp. of Howell v. Waste Disposal, Inc.*, 207 N.J. Super. 80 (App. Div. 1986) (In a case involving a privately owned sanitary landfill the court found that as a general rule where the DEP has failed to act in the best interest of the citizenry or has acted unresponsibly, then interested parties should be authorized to take enforcement action pursuant to the Environmental Rights Act, N.J.S.A. 2A:35A-1 *et seq.* In this case a partial remand was required to determine whether the suit should be allowed to proceed.)

MUNICIPAL UTILITIES AUTHORITIES

Section A

THE LAW

INTRODUCTION

Since 1946, every municipality in New Jersey has had the right to establish a “sewerage authority” to finance, construct and operate municipal sewage treatment facilities, if the governing body deemed that such facilities were necessary to prevent water pollution.¹ In 1957, the Legislature expanded this power, giving towns the discretion to convert an existing sewerage authority into — or to establish in the first instance — a more broadly-defined “Municipal Utilities Authority” (MUA).²

Once constituted by one or more municipalities or by a county,³ an MUA is allowed to engage in a variety of public projects and to provide certain public services that might otherwise be provided by investor-owned corporate utilities for profit (public utilities),⁴ which are regulated by the DEP and the Board of Public Utilities (BPU).⁵ These public purpose endeavors include the power to finance and develop facilities to provide the following services:

1. *water supply*: “the provision and distribution of an adequate supply of water...”;
2. *solid waste*: “the collection, disposal and recycling of solid waste...in an environmentally sound manner”;
3. *pollution control*: “the relief of lands and waters in or bordering the State from pollution from domestic, industrial and other sources...and thus the reduction and ultimate abatement of the menace to the public health resulting from such pollution”;
4. *electric power production*: “and the generation, transmission and sale of hydroelectric power.”⁶

The MUA's solid waste functions encompass recycling and resource recovery facilities. For instance, the MUA may finance a waste incinerator by extending credit to a private for-profit corporation that will own and operate the unit. A 1984 amendment⁷ defines “solid waste system” as including “facilities for the generation, transmission and distribution of energy derived from the processing of solid waste,” in addition to the landfill facilities or other property or plants traditionally associated with waste disposal, and authorizes the MUA to “extend credit for this [solid waste] purpose.” Several county MUAs used this power to engage in joint-venture, public-private development of resource recovery power plants as part of their county's solid waste plan.⁸

ESTABLISHMENT AND STRUCTURE

Establishing an MUA is a straightforward process: “Any [municipal or county] governing body may...create a public body corporate and politic” that will be known as the MUA for that political jurisdiction.⁹ The municipal body acts by ordinance (local enactment); the county board of freeholders may act by ordinance or resolution. The Local Finance Board must approve the creation of new sewerage and municipal authorities, pursuant to the N.J. Local Authorities Fiscal Control Law (N.J.S.A. 40A:5A-4).

In general, five members are appointed to an MUA, and between five and nine members are appointed to a county utilities authority, and serve staggered five-year terms.¹⁰ If the enacting municipality joins with another to establish a joint MUA or if the MUA has entered into a contract with another jurisdiction — for example, to collect and treat sewage in a neighboring municipality, and thus take advantage of “economies of scale” — then representation on the MUA board is expanded to include “one additional member...appointed by the governing body of such other [entity].”¹¹ The authorizing ordinance may also provide for “not more than two alternate members,” who may “participate in discussions of the [MUA’s] proceedings but may not vote except in the absence or disqualification of a regular member.”¹²

No requirements of specialized expertise or professional background are found in the law. Members are entitled to reimbursement for expenses and may receive compensation, apparently determined as a matter of local discretion.¹³ If an MUA replaces an existing sewerage authority, its members are transferred to the new MUA.¹⁴ In many jurisdictions an existing sewerage authority was kept in place, its responsibilities undisturbed, while an MUA was created with responsibilities other than wastewater management.

Once established, the MUA enjoys exclusive power over its jurisdiction. *No more than one MUA may exist for each municipality or county.* For example, there cannot be two MUAs in a municipality or county having responsibility for the management of solid waste.¹⁵ Also, the governing body of a municipality cannot create or join in the creation of any other sewerage authority except upon written consent of the existing sewerage authority, and according to the terms and conditions of such consent (N.J.S.A. 40:14-4 (f)).

The MUA elects its own officers and appoints its own employees in a manner independent of the municipal or county governing body¹⁶ and without regard to the state Civil Service laws, as provided by legislation in response to judicial decisions holding to the contrary.¹⁷

ENVIRONMENTAL POWERS

MUA powers closely match their purposes. In order to provide for “the relief of waters...from pollution,”¹⁸ the MUA obtains all the powers of the sewerage authority it succeeds,¹⁹ if any, and can plan, finance — through bond sales guaranteed through future “rents, rates, fees or other charges” — construct, own and operate sewage disposal systems, including “intercepting and outlet sewers,” and all real and personal property (land and equipment) associated with these activities.²⁰

The MUA can take direct action against pollution sources not connected to its system by entering “on any lands, waters or premises” to examine the condition of “septic tank[s] or other components of an on-site wastewater system” in order to investigate potential “pollution or contamination...on private property” — and can do so in the same manner as the local board of health, and with the same powers “to notify the owner and require said owner to abate” any pollution found on his or her land (presumably at the owner’s expense, as would be the case if ordered by the local health board).²¹ Likewise, the MUA may “establish an inspection program” to review on-site septic and wastewater systems at least “once every three years.”²²

The MUA may prohibit any “discharge of sewage” into a waterway if “the [MUA] has provided facilities reasonably sufficient in its opinion for the treatment and disposal of sewage which, by discharge into such waters, might cause or contribute to pollution.... Such a notice shall constitute prima facie evidence of the existence of [adequate sewerage capacity].”²³ In this way the MUA effectively compels other sources or “point dischargers” to connect to the MUA facilities, so long as the sources are located within the MUA’s district or within the jurisdiction of another municipality or county that has signed a contract for joining the sewerage system. See *Realh v. Randolph Tp. MUA*²⁴ and *Bergen County Sewer Auth. v. Hackensack Meadowlands Development Commission*²⁵.

Limits on MUA Rate-setting

As a corollary to the financing, construction and operation of a sewerage system, the MUA has plenary power over the rates charged to users, subject to certain narrow standards.²⁶

The rates charged:

shall as nearly as the [MUA] shall deem practicable and equitable be uniform throughout the district for the same type, class and amount of use or service of the sewerage system, and may be based or computed either on the consumption of water...or on the number and kind of water outlets...or on the number of persons residing or working on or otherwise connected or identified with the [user properties]....and may give weight to the *characteristics of the sewage and other wastes and any other special matter affecting the cost of treatment and disposal...*²⁷ (emphasis added).

In this way the MUA can vary its rate structure based upon the pollution hazard posed by a pollution source, due to volume or toxicity of effluent, both of which affect the adequacy of treatment,. The result is that those who impose the greatest stress on the system pay their full share of the costs. Rates charged, however, must not be “unreasonably discriminatory” against the users, or courts will strike them down. For instance, the court struck down the use of certain “connection fees” to Atlantic City casinos for want of any showing of a “rational relationship [between the charges] and the purposes for which connection fees were authorized.”²⁸

MUA rate-setting is self-regulated. Neither the DEP nor the BPU²⁹ has jurisdiction to supersede MUA decisions on rates and charges, as affirmed in two court rulings, *Petition of South Lakewood Water Co.* and *Canterbury v. Mt. Laurel Township MUA*.³⁰ These cases affirmed an authority’s decision to assume the service connection fees and exemptions set by the former investor-owned utility, purchased by the MUA, and to include them in rates.

However, MUA rate-setting must accord with statutory standards. For instance, rates must “at all times be adequate to pay the expenses of operation [including]...interest on any bonds.”³¹ The MUA must “provide evidence at [a public] hearing” on the necessity for and reasonableness of its rates, and “shall provide an opportunity for cross-examination of persons offering such evidence.” The MUA may not charge a user more than its “pro-rata

share of cost of [utility system] extensions, *Ellis v. Larchmont Pharmacy Plaza, Inc.*³²; nor may “nonusers” be compelled to pay “a minimum fee” prior to contracting for MUA services, *Ivan v. Marlboro Twp. MUA*.³³ The authority may not exact a “reservation of capacity” sewerage charge from developers if it is in excess of the regular developer connection charges, *Hamilton Twp. MUA v. Apple Tree Corp.*³⁴ (But see also, *Darrah v. Evesham Twp.*³⁵, holding that a municipal governing body may not pass its own bond issue to assist the MUA in financing a facility expansion — apparently reversed by statute.³⁶)

Regarding water supply, solid waste, hydroelectric power development, recycling and resource recovery, the MUA has much the same powers of self-financing, construction, operation and rate structures and charges that it has in the sewage treatment field. The MUA law spells out powers regarding “water and water services, facilities and products” in N.J.S.A. 40:14B-20(6); regarding the power to “extend credit or make loans...[for] any part of a solid waste system, sewage treatment system, wastewater treatment or collection system” in N.J.S.A. 40:14B-20(15); and regarding hydroelectric power and the right to sell electricity so generated “at wholesale” in N.J.S.A. 40:14B-21.1.

Eminent Domain

The MUA law prohibits an MUA from using its powers of “eminent domain” to take any real property owned by the state, or any state-owned, privately-owned or investor-owned water utility “actually serving 50 or more parcels of real property.”³⁷ In *Gloucester Tp. MUA v. Garden State Water Co.*³⁸, the court noted cryptically that each MUA “must operate within the confines of its enabling law,” including the 50-customer limit on the use of eminent domain against a water utility. The same court also disallowed an attempt by the local municipality to use its own eminent domain powers to acquire the water company for later transfer to the MUA, citing *Daarah v. Evesham Twp.* Since many small water utilities have difficulty providing adequate service to their customers, notwithstanding comprehensive BPU regulation of these utilities³⁹, the “50 connection” rule may stand as a barrier to alleviating severe water-supply-related problems in some New Jersey communities.

The MUA’s eminent domain powers are otherwise broad enough to encompass compensated taking for public

use of any “real property within or without the district...including public lands, waters, parks, roads, playgrounds, reservations and public or private rights in waters,” other than property owned by the state.⁴⁰ Property owned by a municipality or county government, or any agency thereof, is subject to the same state government exception.

Relationship to DEP

While state law establishes each MUA as a branch of local or county government, each authority is subject to DEP regulation of its water discharges in the same manner as a private discharger. For example, the N.J. Water Pollution Control Act⁴¹ defines a regulated discharge as “the releasing, spilling, leaking, pumping, pouring, emitting, emptying or dumping of a pollutant into the waters of the State

[of New Jersey]...and shall include the release of any pollutant into a municipal treatment works.”⁴² Pollutant” is defined as “any dredged spoil, solid waste, incinerator residue, *sewage*, garbage, refuse..., sewage sludge...or other residue discharged into the waters of the State.”⁴³ As a result, MUAs must comply with the DEP’s New Jersey Pollutant Discharge Elimination System (NJPDES) permit program.⁴⁴ In addition, the Water Quality Planning Act⁴⁵ mandates areawide waste treatment planning to assure adequate capacity for treatment of waste generated by a growing county or region, thereby also promoting compliance with Sec. 208 of the Federal Water Pollution Control Act (Clean Water Act).⁴⁶ Thus the MUA is both a *regulator* of pollution and a *source* of pollutant discharges; the MUA serves both to abate pollution and, in the eyes of law, as a potential source of pollution.⁴⁷

Section B

POLICY AND OPERATIONS

INTRODUCTION

A Municipal Utilities Authority (MUA) is unique among local agencies. It is a business created by the governing body to deliver public services, some of which could be provided by a private enterprise. It provides those services as a regulated industry; and it both prevents and creates pollution. The sewerage authorities that exist throughout New Jersey are essentially single purpose MUAs. An MUA is an important part of the local environmental protection team. In fact, the coordination of MUAs with local planning boards, boards of health, historic preservation commissions and environmental commissions is one of the most important elements of maintaining an acceptable environmental quality of life.

An MUA is an independent entity, created by local ordinance and governed by an autonomous board appointed by the governing bodies of the one or more participating municipalities. An MUA is able to borrow and spend money independently, and has power of eminent domain over virtually any lands not owned by the state or

local government. Rates and charges for services are set by the MUA, which must always meet all of its operating costs. MUAs are subject to all pertinent environmental regulations, except that they are not subject to “flow” violations and are not required to post bonds (as a private business might be).

As pollutants overload natural systems and the public cost of environmental degradation has risen, the responsibilities and costs of MUAs have increased dramatically. Garbage can no longer just be dumped in a hole or on a pile. Wastewater requires more than just screening and mashing before discharge. Encroaching development and point-source and nonpoint-source pollution increasingly threaten public water-supply well fields. User charges have escalated accordingly.

The MUAs are faced with a difficult challenge: protect the environment and provide economical service. Because they are an important part of the local team, MUA board members, in some ways, bear a higher level of public responsibility than their corresponding officers in

the private sector who provide services in response to publicly approved planning. Individually and collectively, MUA board members can provide important leadership in long-range planning for the environmental and economic well-being of a community.

MUA boards control the facilities and services most likely to govern development pressure. They generally expand their facilities, as a private business would, to meet new demand; more customers mean less cost per customer and happier customers, at least in the short term. In the long term, however, such expansion can be very costly to a municipality. Expansion often triggers increased development that brings increased water pollution from nonpoint source runoff, increased stormwater runoff, pressure for development in critical areas and increased environmental costs. If the expansion of infrastructure is not done in accordance with a sensible land use plan, it can ultimately increase the MUA's costs of treating wastewater and disposing of solid waste.

THE ENVIRONMENTAL AGENDA

Clean Air

Air pollution is a waste problem. Virtually every utility service provided by MUAs — incineration of solid waste and sewage sludge, wastewater treatment and the generation of electricity — poses a potential threat to air quality. The technology used to reduce this threat is expensive and does not guarantee complete success.

In New Jersey, the density of population, high traffic levels and the state's position in the regional airshed demand higher regulatory standards for stationary sources of air pollution — factories, incinerators and wastewater treatment plants. The complex chemical content of the waste stream, both liquid and solid, and the urban setting of our society further complicate the problem. The high costs of treating waste and disposing of the residuals are making it necessary to look for new solutions.

As utilities serving the public interest, MUAs have an obligation to seek cost-effective solutions that are environmentally sensitive. Strategies can include waste reduction through increased prevention, reuse and recycling; more efficient use of materials; and exclusion of certain intractable chemicals that cannot be disposed of or stored safely. Before treatment, the waste stream should be as

clean of metals and toxics as possible. This measure alone can protect the biological systems in wastewater treatment plants, decrease contamination in incinerator ash and permit the agricultural use of sludge.

In 1992, the Legislature passed the Dry Cell Battery Management Act (N.J.S.A. 13:1E-99.59 *et seq.*) requiring every county to have a plan for collecting used dry cell batteries. Today, all 21 counties encourage battery recycling; most have drop-off facilities where residents can bring their old batteries, and a few, like Somerset County, provide curbside collection of used batteries with other recyclables. Keeping these sources of heavy metals out of the incinerator can save thousands of dollars and avoid unnecessary air contamination.

The MUA has an indirect effect on the quality of the air through the construction of growth-inducing sewer collection systems. The reality of meeting costs and servicing debt while keeping user fees down may persuade MUA board members to extend a sewer line to get more customers rather than to increase rates. However, broad analysis of the effects of expansion may show that the lower public cost for sewer use might be outweighed by the increased costs of growth in the area, including traffic gridlock and resultant health effects from air pollution. A land use master plan that is sensitive to environmental limitations can encourage solutions with long-term benefits to the whole community.

Environmental Quality

MUAs have many opportunities to use their excellent facilities and technical expertise to help the community avoid environmental harm. Often, MUA costs can be cut and efficiencies of scale realized by working closely with other local agencies. The ability to make the maximum use of equipment and personnel over the long range more than justifies the cost of staff time for a coordinated planning effort.

Emergency Response – Federal and state laws require that all users of hazardous materials report annually about the chemicals they use, store and discard. These chemical surveys, combined into a Worker and Community Right-to-Know survey, can provide essential information to MUAs. Reporting entities include heavy manufacturing, lawn and garden services, gas stations, dry cleaners, hospi-

tals and schools. Their information can help maintain the safe operation of a sewage treatment plant, protect storm-water systems from contamination and help predict what materials may be in the solid waste stream.

The local emergency planning committee (LEPC), under the combined leadership of the state police and the DEP, provides coordinated response and expert assistance in the case of spills of contaminants. Cooperative planning with the LEPC can prevent inappropriate use of storm sewers during responses to accidental spills (i.e.; emergency response workers allowing chemicals to run down or be washed down storm drains).

Noise control – Noise problems can often be prevented through careful planning and mitigation. It costs much less to prevent the conflicts in land use that lead to controversy over noise than to retrofit or limit operations. To this end, an MUA should work with local planners to create buffer areas around its existing or proposed facilities. MUA boards should review projects carefully to prevent the degradation of the environment by noise during and following construction. For instance, they might reroute trucks to prevent the intrusion of noise on local residential neighborhoods.

Pesticide Management – In the course of operations, MUAs often use chemicals to control pests and weeds. These chemicals are costly and difficult to apply safely. A regular review of their use is essential. Are they being applied in accordance with federal label specifications? Is their use necessary or just a habit? Is the environmental cost worth the perceived benefit? Ideally, both the municipality and the MUA should adopt a policy of Integrated Pest Management (IPM), through which the least-toxic effective method of pest control is selected.

Clean Water

Much of the responsibility for bringing clean water to communities and treating the wastewater for discharge lies with MUAs. The MUAs provide a workable mechanism by which an urbanized society can build the capital improvements it needs to supply drinking water and dispose of wastes. The need for more and more potable water, the sprawl of development across the countryside and the intractable nature of some pollutants have made the work of the MUAs more important and more difficult.

Many potable water intakes are, of necessity, down-

stream from some wastewater discharge, making one town's wastewater another town's water supply. This situation may not be obvious to sewer customers in a single municipality because "downstream" is usually out of town.

The state regulates wastewater discharges from MUA facilities and requires high levels of treatment. MUA boards know that pollutants can be removed from wastewater and that potable water can be created from a polluted stream, but they also know that this treatment is costly and that the extracted pollutants still must be put somewhere. MUA customers are not generally aware that prevention is more economical than cleanup of discharges and that natural systems play an important role in pollution control.

MUAs have invested heavily in technology to upgrade sewage treatment plants, only to find that the streams into which they discharge wastewater are still degraded. It now is apparent that factory and wastewater treatment plant point-source discharges are only part of the problem. The nonpoint sources of pollution from urbanized areas, lawns, roads, garages, parking lots and sloppy waste disposal are a major contributor to stream degradation. In some cases an upgraded and expanded treatment plant may stimulate poorly planned growth, which then contributes more pollutants to the system than the original plant did. Expanding facilities to cover upgrade costs may be counter-productive in the long term.

The local team, including the MUA board, can insist on effective long-range land use planning; they can provide public education programs and require the use of natural systems to prevent pollution. These strategies will help an MUA meet its responsibility to protect the waters of the state, as well as the economic health of their operations. For example:

- Protecting wetlands and stream corridors not only provides animal habitat and recreation but reduces the degradation of water supplies, and may reduce the need for costly, high-tech treatment of water supplies and wastewater.
- Retrofitting every customer with water-conserving fixtures may be cheaper than increasing the capacity of a wastewater treatment plant.
- Working with local environmental commissions and boards of health to inform the public about

nonpoint source pollution prevention techniques may avoid the need for a plant upgrade.

- Providing water quality data to help local planning officials determine the development capacity of a local system may make expansion of the sewer system unnecessary.
- Providing engineering expertise for local stormwater control efforts may avoid calamitous impacts on sewer systems with combined stormwater and sanitary waste collections.
- Requiring pretreatment of industrial wastes may prevent the need to upgrade treatment plants and the costs of disposing of toxic sludge. In fact, controlling the quality of influent to a wastewater treatment plant can make the land application of sludge practical and avoid the high costs of incineration.

A sophisticated MUA can ensure that proposals for capital improvements not only reflect the real long-range public and private costs but also will be able to provide maximum service at minimum public cost. MUA board members can lead the way in using the economic and environmental efficiencies of prevention, rather than wasting money for cleanup.

Waste Management

The generation and disposal of any type of waste is a management problem. The MUA manages critical public services efficiently. In that role it often manages solid wastes much as it manages drinking water and sewage treatment services.

New Jersey law makes the counties responsible for managing solid waste and authorizes creation of a county MUA. This county agency provides utility services. In more than half the counties, the freeholders have delegated solid waste management responsibility to a county MUA (or improvement authority). The MUA either operates or oversees the operation of solid waste disposal facilities. In some cases the authority even provides collection services and operates recycling centers.

MUAs are in a position to exert pressure to reduce the size and improve the nature of the waste stream. They can strictly enforce the mandatory recycling rules and conduct

aggressive education campaigns. They can encourage waste reduction in manufacturing and recycling of chemical wastes. They must also address the acute problem presented by the amount and quality of residuals — ash and sludge — that must be accommodated safely. Cooperative efforts with economic development boards, environmental commissions, agricultural boards and governing bodies offer opportunities for MUAs to develop and carry out innovative programs that reduce the costs and the environmental impacts of waste management.

Historic Resources

MUAs make many decisions that directly or indirectly affect important parts of our cultural and historic heritage. True preservation depends on sensitive decision making — above and beyond strict adherence to laws and regulations. Although laws protect registered historic buildings and designated areas, an area can be changed and the laws waived in many non-regulatory and subtle ways.

An important example is the location and size of sewer lines. The physical impact of construction on historic sites is of obvious concern, and there are laws requiring review of publicly funded projects that will damage a registered historic site. Less obvious are the effects of changes in land use that result from the expansion of a sewer line. Increased traffic through a historic neighborhood and changes in ambience are among the threats. However, increased sewer capacity that makes possible the adaptive reuse of an important building may actually enhance preservation efforts.

The MUA services are the most potent land use altering tools that exist. The preservation of New Jersey's historic heritage should be a factor in all facility planning by MUAs. Sensitive decisions are as important as strict adherence to the historic preservation laws.

Land and Wildlife

The MUAs are in an ideal position to join local planning boards and governing officials in providing local leadership in the ethical treatment of the land. Master plans provide the local, regional and state context for MUA decisions. By providing service to areas of planned land use and by not expanding services into environmentally sensitive areas, the MUA enhances long-term protection and its own bottom line. For example, if a long-range plan directs

development to centers of mixed land use and away from wetlands, the needed utility services can be planned and the necessary permits processed efficiently. Planning that uses natural systems to absorb stormwater runoff not only reduces nonpoint source pollution, but also protects the assimilative capacity of streams and avoids expensive upgrades of wastewater treatment facilities. Often, it is cost-effective to protect wetlands, stream corridors and wildlife habitats from the development pressures that result from infrastructure investments; protection now optimizes the capacity of the natural system to sustain future growth at reasonable cost.

Thus, integration of land use and infrastructure planning enables MUAs to provide efficient, cost-effective services and to meet regulatory standards at least cost. A unified ethical approach in which the DEP, local planning boards and MUAs cooperate will save money, save time and provide a reasonably predictable future.

For Further Information

Contact:

Association of Environmental Authorities of New Jersey,
609-584-1877

1. See *e.g.*, *Camden County v. Pennsauken Sewerage Authority*, 15 N.J. 456 (1954), construing L. 1946, c. 138, N.J.S.A. 40:14A-1 et seq.
2. Municipal Utilities Authorities Law, L. 1957, c. 634, N.J.S.A. 40:14B-6. The statute is now known as the Municipal and County Utilities Authorities Law, L. 1977, c. 384.
3. N.J.S.A. 40:14B-5.
4. N.J.S.A. 48:3-13 (defined).
5. N.J.S.A. 48:3-1 et seq.
6. N.J.S.A. 40:14B-2.
7. L. 1984, c. 178 N.J.S.A. 40:14B-3(30).
8. N.J.S.A. 13:1E-1 et seq.
9. N.J.S.A. 40:14B-4a. In the case of a county, the statute refers to a "county utilities authority."
10. *Id.* at -4b(2).
11. *Id.* at -4c.
12. *Id.* at -4e.
13. N.J.S.A. 40:14B-17.
14. N.J.S.A. 40:14B-6(d).
15. N.J.S.A. 40:14B-9.
16. N.J.S.A. 40:14B-18.
17. *Matter of Pemberton Tp. MUA*, 205 N.J. Super. 31 (App. Div. 1985) and *Matter of Sussex County MUA*, 198 N.J. Super. 214 (App. Div. 1985).
18. N.J.S.A. 40:14B-19(a) ("Purposes").
19. N.J.S.A. 40:14A-1 et seq.
20. N.J.S.A. 40:14B-19(b) and -20, generally. See also, N.J.S.A. 40:14B-25 through 33, regarding the power to issue and procedures for the issuance of "bonded indebtedness" in order to finance a sewerage project or expansion.
21. *Id.* at -20(9).
22. *Id.* at -20(10).
23. N.J.S.A. 40:14B-60(a).
24. 163 N.J. Super. 501 (App. Div. 1978).
25. 129 N.J. Super. 519 (Law Div. 1974), holding that the MUA had to comply with land use requirements of the commission.
26. See *e.g.*, N.J.S.A. 40:14A-8 and 40:14B-20(3), -21, -22, and -23.
27. *Id.* at 14B-22. See N.J.S.A. 40:14A-8(b) for rates charged by sewerage authorities.
28. *Beverly Sewerage Auth. v. Delanco Sewerage Auth.*, 65 N.J. Super. 86 (1961), affirmed, 38 N.J. 354 (1962) and *Trump Plaza Corp. v. Atlantic City MUA*, 192 N.J. Super. 376 (Law Div. 1983).
29. N.J.S.A. 48:3-21.
30. *Petition of South Lakewood Water Co.*, 61 N.J. 230 (1972) and *Canterbury v. MUA of Mt. Laurel Twp.*, 124 N.J. Super. 448 (App. Div. 1973).
31. N.J.S.A. 40:14B-23.
32. 208 N.J. Super. 359 (App. Div. 1986).
33. 162 N.J. Super. 466 (App. Div. 1978).
34. 202 N.J. Super. 440 (App. Div. 1985), certif. denied, 102 N.J. 327.
35. 111 N.J. Super. 62 (App. Div. 1970).
36. See L. 1970, c. 209, N.J.S.A. 40:14B-24 b, which "authorize[s] municipalities and counties, with the consent [of MUA's] to engage in cooperative efforts," apparently including financing of facility extensions.
37. N.J.S.A. 40:14B-34.
38. 79 N.J. 87 (1979).
39. N.J.S.A. 48:3-23.
40. N.J.S.A. 40:14B-34.
41. N.J.S.A. 58:10A-1 et seq.
42. *Id.* at 10A-3e.
43. *Id.* at 10A-3n.44. N.J.A.C. 7:14A-1.9.
44. N.J.A.C. 7:14A; see also Subchapters 12 and 13; see also N.J.A.C. 7:14, Subchapter 2, DEP rules on the construction standards to be followed in wastewater facility expansion.
45. N.J.S.A. 58:11A-1 et seq.
46. 33 U.S.C.A. 1288.
47. See *e.g.*, N.J.S.A. 58:10A-10 (enforcement) and N.J.A.C. 7: 14-8.5 (regulations governing the assessment of penalties of up to \$50,000 per day of violation).

PART THREE

Environmental Protection Subjects

This part of the *Manual* describes state laws and administrative programs that have been established to protect the New Jersey's environment and natural resources. It examines the responsibilities and activities of the New Jersey Department of Environmental Protection (DEP), and how its programs relate to the work of municipal boards and commissions.

At the end of each major section there is a subsection entitled "For Further Information," which lists telephone numbers and website addresses for pertinent organizations and government agencies, citations for laws and regulations, and the titles of other written references that can be used to learn more about the subject explored in the section.

Of course, from time to time there will be organizational and telephone number changes at the DEP that will make the phone numbers listed in the *Manual* obsolete. The DEP publishes a directory called *Easy Access* which contains the names and phone numbers of the DEP's key staff, listed by division, by subject, and alphabetically. The directory can be accessed through the DEP Home Page, at <http://www.state.nj.us/dep>. Copies of *Easy Access* may also be obtained, when available, by calling DEP Publications Assistance at 609-633-1317.

Readers can use the New Jersey Legislature's Home Page, located at <http://www.njleg.state.nj.us>, to access the text of all New Jersey statutes. The USEPA's Home Page, at <http://www.epa.gov>, contains information about federal environmental laws and protection. Other websites are referenced throughout the *Manual*.

References such as the *New Jersey Environmental Law Handbook* (1997, Government Institutes, Inc., Rockville, MD) and the *Complete Guide to Planning in New Jersey* (1997, New Jersey Chapter American Planning Association, Trenton, NJ) can provide more information about the laws discussed in this section.

THE REGULATORY FRAMEWORK

New Jersey's Air Pollution Control Act (APCA), passed in 1954 with major amendments in 1967 and 1995, predates federal air quality legislation. As required by the APCA, the N.J. Department of Environmental Protection (DEP) carries out air pollution regulation and enforcement.

The federal Clean Air Act (CAA), passed in 1955, with major amendments in 1970, 1977 and 1990, establishes a system of ambient air quality standards and certain emission standards. The Act is administered by the Environmental Protection Agency (EPA). Through the State Implementation Plans (SIPs) required by the act, most of the responsibility for enforcement of the federal standards is at the state level.

The Basic Laws

The N.J. Air Pollution Control Act (APCA) and its amendments provide the central legislation for regulating non-residential emissions of air pollution from stationary and mobile sources.

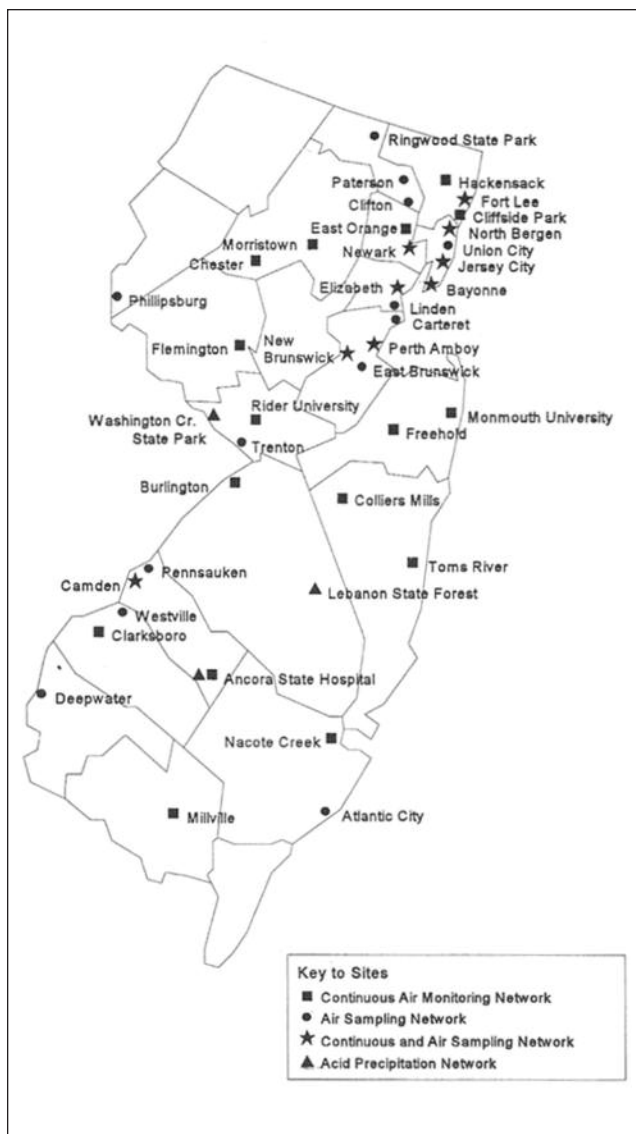
Among the law's requirements are:

- statewide air quality monitoring (see map);
- preconstruction permits and five-year certificates to operate new or altered air control equipment for factories, resource recovery plants, sewage sludge

incinerators, electric power plants and many other sources of air pollution;

- inspections of permitted equipment, every one to five years depending on the operation — more often if complaints are received;
- the promulgation of motor vehicle emissions standards and testing procedures;
- response to complaints from the public;
- the creation of the Clean Air Council, an unpaid independent advisory group that consults with the DEP on air quality issues. Its 18 members, appointed by the governor, include representatives from the departments of Agriculture, Labor, Health, and Community Affairs, as well as industry, labor unions, environmental groups and the public.

The 1967 APCA amendments allow the governor to declare an air pollution alert, warning or emergency, according to the severity of the situation, if the National Ambient Air Quality Standards (NAAQS) are exceeded for any one of six pollutants: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, lead and particulates. The Commissioner of the DEP must determine that the accumulation of air contaminants in any area in the state has



New Jersey Air Monitoring Network

reached or is reaching levels that present a threat to the health of the public. In the case of an air emergency, any or all activities that contribute air contaminants, including motor vehicle travel, industrial or commercial activity may be limited or prohibited.

The air pollution control regulations classify three levels of air pollution health emergency. They are 1) *air pollution alert* (measured pollutant levels reach 200 psi); *air pollution warning* (measured pollutant levels reach 300 psi);

and 3) *air pollution emergency* (measured pollutants reach or exceed 400 psi).

At the DEP's request, sources of air contamination must prepare standby plans for air pollution emergencies, and the DEP recommends that municipalities develop air pollution emergency procedures. No air pollution warnings or emergencies have ever been declared in New Jersey. However, ozone advisories/alerts have been issued every summer since the 1980s. The EPA, in response to the 1990 Clean Air Act Amendments, designated most areas of New Jersey as "severe non-attainment" for ozone. The number of days in which the one-hour ozone compliance standard was exceeded in the state have declined in the 1990s to an average of 13 per year (see graph page 94). (In the 1980s, ozone alerts averaged 20-40 per year.) There have also been alerts for carbon monoxide (CO) and particulate matter, though pollution control efforts have reduced the number significantly. In 1995, CO levels exceeded NAAQS on only one day. However, in 1997, the EPA tightened the NAAQ standards for ozone and particulate matter to more effectively protect the public health. As these more stringent standards are applied over the next decade, the frequency of exceedences can, initially, be expected to increase.

Other laws dealing with air pollution include the N.J. Worker and Community Right to Know Act; the federal Superfund Amendments and Reauthorization Act (SARA) Title III (Emergency Planning and Community Right to Know Act); the N.J. Toxic Catastrophe Prevention Act (TCPA); and the Office of Safety and Health Administration (OSHA) Hazard Communication Standard. Because these laws and standards also govern other kinds of pollutants, they are described in Chapter 9 on Environmental Quality.

The federal Intermodal Surface Transportation Efficiency Act (ISTEA, pronounced "iced tea") was enacted in 1991 and reauthorized by Congress in 1998 as the Transportation Equity Act for the 21st Century ("TEA-21"). These transportation funding acts were designed to tie transportation planning to the improvement of air quality. Because so many air emissions are the result of mobile sources such as cars, trucks and buses, it is logical for policy on the construction of transportation systems to be

linked to the goals of the Clean Air Act. TEA-21 is designed to assist in the attainment of National Ambient Air Quality Standards by:

- requiring regional planning and control over federal transportation funds through increased funding and authority for Metropolitan Planning Organizations (MPOs). There are three such organizations in New Jersey whose members include a representative from every county and large city within the MPO region;
- giving flexibility to state and local officials in choosing among highway, mass-transit and other transportation alternatives such as bicycle and pedestrian facilities, shared ride projects, and research and development;
- establishing a Congestion Mitigation and Air Quality Improvement (CMAQ) program, which directs funds to areas that do not meet NAAQS for CO, ozone or small particulates. Funding apportionment to states is based on the portion of the population living in non-attainment areas and the severity of the air problems;
- placing restrictions on funds used in non-attainment areas for projects that would result in a significant increase in the capacity for single-occupancy vehicle use.

Metropolitan Planning Organizations (MPOs)

- North Jersey Transportation Planning Authority, 973-639-8400
- Delaware Valley Regional Planning Commission, 215-592-1800
- South Jersey Transportation Planning Organization, 609-794-1941

Specific Regulations under the Laws

The New Jersey Air Pollution Control Act gives the DEP broad powers to promulgate and enforce air quality regulations. The regulations are to:

- prohibit the emission of substances “in such quantities and duration as are, or tend to be,

injurious to human health or welfare, animal or plant life or property or would unreasonably interfere with the enjoyment of life or property throughout the State”;

- require permits to construct and certificates to operate certain new or altered equipment emitting air contaminants. [This provision provides the DEP with one of its most important tools, *the right to require state-of-the-art equipment*, with which it can control a substantial range of contaminants without having to set standards for each one. However, equipment that was in place when the statute was adopted in 1967 may be exempt from some requirements. Also, 1997 changes in DEP regulations restricted the application of the state-of-the-art requirement to larger sources (emitting five or more tons of contaminants per year), only]; and
- prohibit certain emission increases in areas of the state where NAAQS are exceeded, unless new sources of pollution can prove they are achieving the lowest possible emission rates and can obtain equivalent emission reductions from existing sources (that is, lessen emissions from an existing source to accommodate increased emissions from the new source).

Other regulations govern specific substances and activities.

- **Open burning** is prohibited except under special DEP permit. Permits are issued for burning certain types of vegetative waste (diseased vegetation or orchard prunings, for example) and for clearing open strips to help control wildfires. The DEP also issues permits for the burning of materials too hazardous to eliminate in other ways (typically, explosives and their containers).
- **Smoke** may be no darker than a certain opacity, based on the stack diameter and heat input of the equipment generating it. (Many small operations are exempted.)
- **Particles (Particulate Matter)** carried in emissions may not exceed a certain opacity, duration and frequency. A five-year variance may

be granted for glass manufacturers if available technology cannot meet the standards.

- **Sulfur and sulfur compounds.** The regulations set maximum percentages of sulfur by weight in various fuels. These differ in different areas of the state. The DEP can require stack testing or air quality modeling, although waivers from this requirement and from sulfur content requirements may be granted if the facility can prove its emissions are predictable. The direct emission of sulfur compounds is also regulated.
- **Incinerators.** The regulations allow only certain kinds of incinerators and set emission standards for particles, smoke, odors, unburned refuse and ash particles. The DEP may require smoke tests for a year or more, as well as other testing or sensing devices. (New waste incinerators are subject to detailed permit review, with strict limitation of all contaminants.)
- **Motor vehicles.** Diesel and gasoline-powered vehicles must meet idling limits and emissions standards. Beginning in 1998, diesel vehicles, formerly owner-inspected, were required to pass an annual smoke opacity test. The tests are performed at private inspection stations licensed by the state Department of Transportation. Diesel vehicles are also subject to roadside testing for smoke opacity. Beginning in 1999, a more rigorous emissions test will be required for gasoline-powered vehicles, but vehicles will have to be tested (both for safety and for emissions) only every two years.
- **Volatile organics** and toxic volatile organics, which are used in a great variety of industries, must meet storage, transfer and emission standards; certain industries are exempted. Reasonably available control technology (RACT) is generally required.

In addition, the federal Clean Air Act regulates 189 toxic air pollutants, with enforcement at both the federal and the state level.

For Further Information

Contacts:

DEP Hotline (air quality forecasts throughout the state beginning at 10 a.m.), 800-782-0160

DEP Office of Air Quality Engineering and Technology, 609-984-1484

DEP Air Quality Management Unit, 609-292-6710

New Jersey Clean Air Council, 609-292-1413

Websites:

North Jersey Transportation Planning Authority,
<http://njtpa.njit.edu>

Delaware Valley Regional Planning Commission,
<http://www.dvr.org>

The laws and regulations:

Clean Air Act, 42 U.S.C. 7401 *et seq.*

N.J. Air Pollution Control Act, N.J.S.A. 26:2C-1 *et seq.*,
and regulations N.J.A.C. 7:27-1.1 *et seq.*

Transportation Equity Act for the 21st Century, (US) Public Law #105-178 (1998)

Written references:

"A Guide to the Congestion Mitigation and Air Quality Improvement Program," USDOT, Federal Highway Administration, Publication Number FHWA-PD-94-008.

"Transportation Enhancements" (application and information for TEA-21 funds for local transportation enhancement projects), NJDOT, published annually, 609-530-3640

MUNICIPAL ORDINANCES

The 1995 amendments to the Air Pollution Control Act effectively eliminated the authority of municipalities to pass new local air quality ordinances, and put restrictions on existing local ordinances. With few exceptions, the regulation and enforcement of air pollution is the exclusive right of the state and authorized county health agencies.

AIR QUALITY PLANNING

State Implementation Plans (SIPs)

Under the federal Clean Air Act, all states must prepare State Implementation Plans (SIPs). SIPs are large, detailed documents that describe specific strategies for maintaining air quality and meeting NAAQS within stated time frames through the control of stationary and mobile sources of air pollution. Once completed, a state's SIP is

submitted to the EPA for approval. It is common for states to negotiate and revise individual elements of their SIP in order to attain approval from the EPA. As conditions change or as new federal standards are phased in, states must adjust their SIP to maintain compliance with the Clean Air Act and retain EPA approval. A state's failure to compile and submit a satisfactory SIP may result in the loss of federal highway funds.

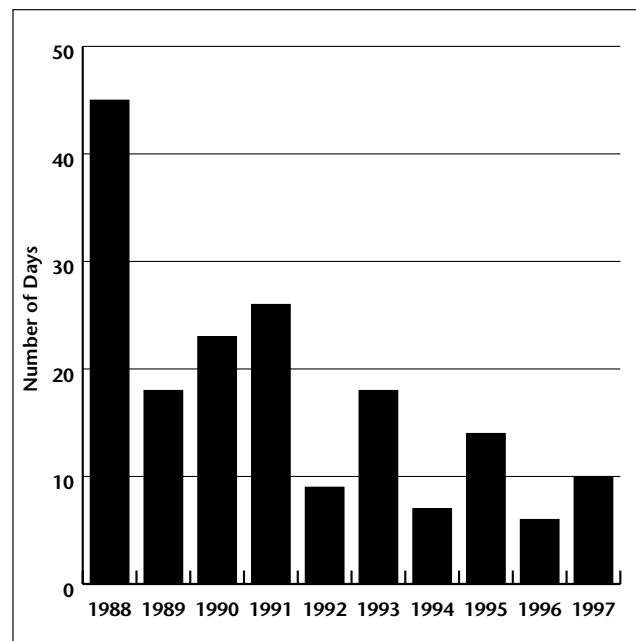
The DEP's Air Quality Management Unit develops New Jersey's SIP, with the assistance of the DOT, the Turnpike Authority, the DMV (within the Department of Transportation), the Department of Commerce, the Department of Community Affairs, regional transportation and planning groups, and other departments of state government. The Clean Air Act also permits local officials to submit information pertinent to air quality planning.

Public hearings must be held for major revisions to the SIP. The federal law also requires the state to notify the public of instances or areas in which any of the NAAQS are exceeded, and to advise the public of related health hazards and ways that it can participate in planning for improved air quality.

Currently, ozone and carbon monoxide are the major focus of New Jersey's SIP. The state has met the four other NAAQS (with occasional, isolated violations) and has largely achieved compliance with the carbon monoxide standard. However, the ozone standard is violated regularly throughout the state, as it is in most urban areas across the country. (In fact, all areas east of the Mississippi were in ozone violation until the federal government weakened the standard by one-third in 1979.) Figure on page 95 shows New Jersey's ozone non-attainment areas, their classifications, and CAA-mandated attainment dates. The EPA tightened the NAAQS for ozone and particulates in 1997, and those tougher standards will be applied over the ensuing 10 to 15 years. New Jersey's SIP will require revision to reflect and implement these new standards.

New Jersey's current SIP incorporates strategies including

- voluntary employee trip reduction programs (with tax incentives);
- clean fleet programs with incentives (available to all fleet owners, including municipalities);
- an enhanced vehicle inspection program;

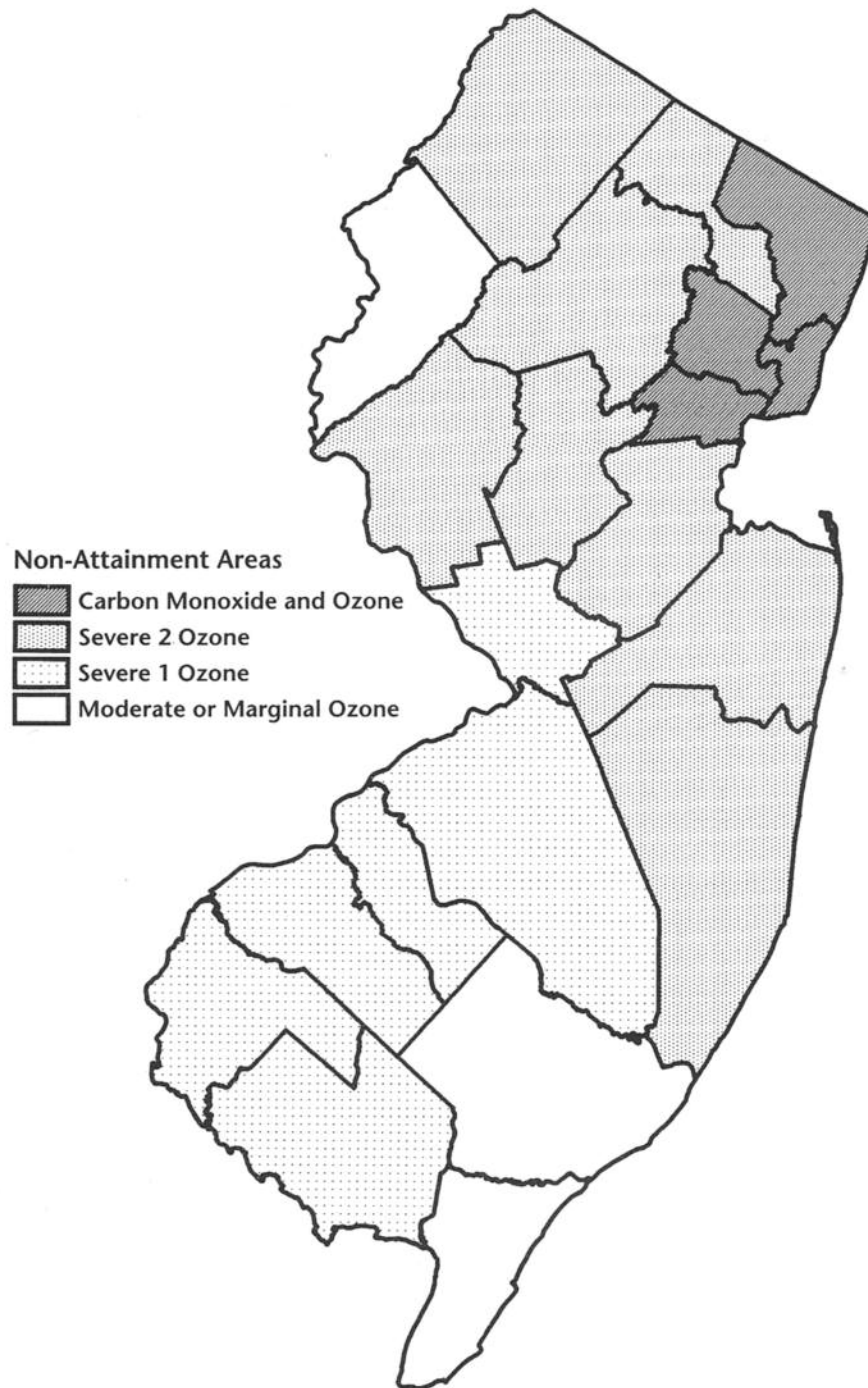


Days on Which the 1-Hour Ozone Health Standard* Was Exceeded in New Jersey 1988-1997

*1-hour standard was replaced by 8-hour standard in July 1997

- VOC content limits for surface coatings (paints, etc.) and some other consumer products;
- the requirement of RACT (Reasonably Available Control Technology) on stationary VOC sources; and
- emissions reductions expected to be gained through New Jersey's commitment to a NLEV (National Low Emission Vehicle) program, beginning with model year 1999. From that year forward, an increasing percentage of the new vehicles sold in N.J. will have to conform to new, stricter emissions standards. (The surrounding states have also committed to low emission vehicle programs.)

The most recent Clean Air Act Amendments (CAAA) required the state, through the DEP, to develop an operating permit program for approximately 500 major stationary sources of air pollution. These large sources each will operate under a single, comprehensive air permit, and pay a per-ton fee (approximately \$25 per ton) on emissions except CO (carbon dioxide). The funds collected for permits and emissions are used to operate the major facilities permit program



Ozone and Carbon Monoxide Non-Attainment Areas in New Jersey

and the Small Business Stationary Source Technical and Environmental Compliance Assistance Program.

New Jersey has established an Open Market Emissions Trading Program for air contaminants generated by major facilities. Through this system, units of emissions reductions (called “discrete emissions reductions,” or DERs) may be traded on the open market. Facilities that have achieved reductions can sell DERs to facilities that would otherwise exceed emission limits.

The CAAA also required certain facilities emitting air toxics to apply MACT (Maximum Available Control Technology) on a schedule developed by the EPA, and required the state to establish a small business assistance program to help businesses and small municipalities with air permitting and compliance issues.

If a state fails to meet CAAA deadlines, the federal government can withhold funds for highways, mandate the implementation of contingency measures, and/or reclassify an area into a higher category.

For additional information on the CAAA’s extensive requirements, contact the DEP’s Bureau of Air Quality Planning (within the Air Quality Management Unit).

For Further Information

Contacts:

DEP Air Quality Management Unit, 609-292-6710
DEP Clean Fleets Program, 609-530-4035
DOT Smart Moves for Business Program (For Employee Trip Reduction Incentive Programs), 609-530-5947
American Lung Association, 1600 Route 22 East, Union, NJ, 908-687-9340
Small Business Assistance Program (Office of Pollution Prevention and Permit Coordination) 609-292-3600

Website:

DOT Smart Moves for Business Program (Employee Trip Reduction Incentive Programs), <http://www.njcommuter.com>

The laws and regulations:

Clean Air Act, 42 U.S.C. 7401 *et seq.*
N.J. Air Pollution Control Act, N.J.S.A. 26:2C-1 *et seq.*, and regulations, N.J.A.C. 7:27-1.1 *et seq.*
N.J. Transportation Development District Act, N.J.S.A. 27:1C-1 *et seq.*
State Highway Management Access Act, N.J.S.A. 27:7-1 *et seq.*

PERMITS

In addition to the 500 or so major stationary sources that require comprehensive Operating Permits for air emissions, a wide range of facilities and equipment — including factories, apartment and office buildings with boilers, gas stations, dry cleaners, some restaurants (odors and smoke), fuel burning equipment, pollution control equipment, incinerators, and sources of volatile organics and toxic substances — must obtain air permits to construct, and five-year certificates to operate:

- any new or altered equipment capable of causing the emission of an air contaminant into the open air, and
- any stack, chimney, conduit, flue, duct, vent or similar device connected to, attached to or serving the equipment.

For such non-major sources, permit review may take from 30 days to one year, depending on the size and complexity of the source. The DEP has published time frames for review of each permit type. However, as of 1997, applicants for certain types of new or altered equipment are allowed to proceed with the equipment’s construction or use while waiting for DEP permit review to be completed. To attain this privilege, the applicant must certify that a lengthy and detailed checklist of requirements (contained in the permit application) has been met, assuring that DEP approval will follow. Once a permit is issued, construction or alteration must start within a year. Application for renewal of operating certificates must be made at least 90 days before the old certificate expires.

The DEP must deny a permit or certificate if the equipment in question

- violates any provision of the regulations or other DEP criteria;
- violates any federal or state ambient air standard;
- violates any federal “significant deterioration increment”; or
- fails to incorporate advances in the art of air pollution control.

Generally, potential violations are resolved during the permit application process. The most important tool,

which allows the DEP to regulate a broad range of contaminants without declaring standards for each one, is the authority to require state-of-the-art air pollution control equipment on larger sources.

Open burning is prohibited within the state, except by permit. The DEP may issue permits for the burning of substances that “represent an imminent hazard to the public health, welfare or safety” and cannot be disposed of otherwise. This typically refers to explosives or containers that have held explosives. The State Forest Fire Service (Division of Parks & Forestry, within the DEP) is authorized to issue agricultural burning permits needed to clear land or to dispose of prunings or infested plant materials. There is a fee for such permits. The Service also issues letters of permission for recreational or ceremonial bonfires. In most cases, notification of the county and/or local board of health is also required, and permission from the local fire department must be obtained. The DEP may not issue such permits in a municipality that prohibits open burning (under an ordinance adopted before 1995), except under the “imminent hazard” provision.

For Further Information

Contacts:

DEP Air Quality Permitting Program, 609-984-6721

DEP Bureau of Air Quality Engineering, 609-984-3023

Website:

DEP Air Quality Permitting Program,
<http://www.state.nj.us/dep/aqpp>

The laws and regulations:

Clean Air Act, 42 U.S.C. 7401 *et seq.*

N.J. Pollution Control Act N.J.S.A. 26:2C-1 *et seq.*, and
regulations, N.J.A.C. 7:27-1.1 *et seq.*

PUBLIC HEARINGS

The federal Clean Air Act requires the state to hold public hearings on proposed SIPs or major SIP revisions and to provide “reasonable notice” of the proposed plan and of the hearings.

The DEP must hold public hearings on any proposed amendments to the regulations, and may hold hearings on major permits the DEP proposes to grant, such as a permit for a solid waste incinerator.

Generally, few permit applications involve public notice and public hearing. Interested citizens or officials may request information about specific facilities or applications for open burning permits.

The only regularly scheduled hearings on air pollution questions are those the Clean Air Council is required to hold each year — usually in the spring — on various air pollution issues.

ENFORCEMENT

Where to report possible violations

Private citizens or municipal officials can call the DEP, the county health agency named as DEP liaison under the County Environmental Health Act (CEHA), or a municipal health department to report suspected air quality violations. (See Box on page 98 for County Environmental Health Agency phone numbers.) The state and county health agencies generally carry out inspection, monitoring and enforcement. Minor complaints, particularly those on open burning, can often be handled in municipal court under municipal public health nuisance codes.

What kind of information to report

When reporting a violation, include the date and time, the exact location and name of the alleged polluter, characteristics of the pollutant (color, odor, opacity, amount and duration), as well as your name, address and phone number. Callers may request anonymity.

How to follow up on a complaint

You may file the original complaint by phone or in writing. During work hours calls to the DEP should be directed to the regional office. After-hours complaints should be made to the 24-hour hotline.

When an investigator calls you, you may ask what enforcement the investigation might entail. Explain that you will check back to keep track of what has been done.

If the complaint is not resolved, call again on a regular schedule, always to the same person. If delays are unreasonable, seek out a supervisor, bureau or division chief and refile the complaint and a description of your efforts to date. It is important to keep a log of phone calls and copies of all correspondence; record the time and date of each pollution offense, and how the air pollution affected you.

**COUNTY ENVIRONMENTAL HEALTH
ACT AGENCIES**

Atlantic	609-645-5971
Bergen	201-599-6108
Burlington	609-265-5511
Camden	609-374-6049
Cape May	609-465-1209
Cumberland	609-453-2156
Essex	973-228-8152
Gloucester	609-262-4100
Hudson	201-223-1133
Hunterdon	908-788-1351
Mercer	none
Middlesex	732-745-4350
Monmouth	732-431-7456
Morris	none
Ocean	732-341-9700
Passaic	973-881-4396
Salem	609-935-7510
Somerset	908-231-7155
Sussex	973-948-4545
Union	732-382-5585
Warren	908-689-6693

Note: Mercer and Morris Counties do not have certified County Environmental Health Act agencies.

To report air quality complaints and violations, call DEP Air Quality Control Regional Offices:

- Hunterdon, Morris, Passaic, Somerset, Sussex and Warren counties, 973-299-7700
- Bergen, Essex, Hudson and Union, 973-669-3935
- Burlington, Mercer, Middlesex, Monmouth and Ocean, 609-584-4100
- Atlantic, Camden, Cape May, Cumberland, Gloucester and Salem, 609-968-2600

DEP 24-hour Hotline, 609-292-7172

For Further Information

Contacts:

DEP Air & Environmental Quality, Compliance and Enforcement, 609-984-9482

N.J. Clean Air Council, 609-292-1413

The laws and regulations:

Federal Clean Air Act, 42 U.S.C. 7401 *et seq.*

N.J. Air Pollution Control Act, N.J.S.A. 26:2C-1 *et seq.*, and regulations, N.J.A.C. 7:27-1.1 *et seq.*

ENVIRONMENTAL QUALITY

The DEP administers state regulations and programs dealing with emergency preparation and response, radiation protection, noise control and pesticides management. This chapter will deal with these four issues.

EMERGENCY PREPARATION AND RESPONSE

The Regulatory Framework

The DEP and the New Jersey State Police administer regulations governing emergency planning and response, including the federal and state right-to-know laws. The New Jersey Departments of Health and Labor are also involved.

The DEP, through its Release Prevention Element, is responsible for gathering and disseminating information about hazardous chemicals in the community and for preventing accidental releases. To accomplish these objectives, the Release Prevention Element administers the N.J. Worker and Community Right to Know Program, which requires employers having specified Standard Industrial Classification (SIC) codes to submit an annual Community Right to Know survey that lists their inventories of certain environmentally hazardous substances exceeding the reporting threshold. Over 1000 chemicals are on the list for right-to-know reporting.

The DEP publishes an annual report of data on hazardous chemicals inventoried under the Community Right

to Know program. The first report was issued March 15, 1989, and included information on 15,000 manufacturing facilities. Currently, Right-to-Know information is submitted by approximately 21,000 New Jersey facilities. In addition to data from chemical inventories, the annual reports contain basic information about the Right to Know Act and a form letter that can be used to request information about a specific facility.

The State Police Office of Emergency Management (OEM) is responsible for carrying out planning for responses to hazardous materials emergencies. The OEM sets guidelines for emergency operations plans, and provides technical assistance to Local Emergency Planning Committees (LEPCs) as they formulate their local response plans. Every municipality is required to submit an emergency operations plan to the OEM for evaluation and approval. The Office of Emergency Management also offers numerous training courses on emergency response, focusing on the safety of the responder, the public and the environment.

The Department of Health handles elements of the Right to Know program dealing with public sector worker health, including employee education and training. The DOH publishes Hazardous Substance Fact Sheets and enforces labeling requirements for both public and private sector employers.

The Department of Labor assesses fees on employers

covered under the Right to Know law (\$2 per employee, \$50 minimum) and handles employer-employee relations and complaints dealing with discrimination against employees who exercise their right to know about hazardous substances in the workplace.

The Basic Laws

The 1983 N.J. Worker and Community Right to Know Act gives workers and citizens, as well as police, fire and medical personnel, the right to obtain information about hazardous substances used, manufactured or stored in New Jersey's workplaces and communities, and about environmental releases of those substances into the air, water or soil.

The federal Superfund Amendments and Reauthorization Act (SARA), Title III, also known as the Emergency Planning and Community Right to Know Act (EPCRA) of 1986, requires facilities using hazardous substances to report their chemical inventories and releases once certain reporting thresholds are met or exceeded. It also requires municipalities and counties to develop plans to respond to local chemical accidents. Since the inventory reporting requirements of SARA, Title III, are very similar to those of the New Jersey law, the DEP has developed a combined federal/state form, the Community Right to Know Survey.

The Occupational Safety & Health Administration (OSHA) Hazard Communication Standard, implemented in 1983 under the federal Occupational Safety and Health Act, requires companies using certain chemicals to obtain Material Safety Data Sheets (MSDS) for each of those chemicals, and make them available to workers. Chemicals covered under SARA, Title III, are listed in the OSHA standard.

The N.J. Toxic Catastrophe Prevention Act ("Bhopal Act") of 1986 regulates facilities that use extraordinarily hazardous substances and is aimed at preventing chemical accidents. The act requires such facilities to develop risk management programs and emergency response contingency plans, and requires that accidental releases be investigated.

Specific Regulations Under the Laws

The New Jersey Community Right to Know Program took effect in 1984 but has undergone several changes since the adoption of the federal SARA, Title III, in 1986. Federal

and state right-to-know laws require chemical inventories, toxic release inventory reports, labeling of chemicals and employee training, as detailed below.

Chemical inventories – Public sector employers and certain private sector employers, including manufacturers and non-manufacturers, are required to report annually on the chemicals they produce, use or store. Manufacturers exceeding certain reporting thresholds must also report on chemicals they have released into the air, soil or water, their chemical disposal practices, and their pollution prevention progress.

Employers covered under state law include lawn and garden services, automotive sales and service shops, gas stations, dry cleaners, hospitals, schools, all levels of government except federal, commercial testing labs, utilities, communication companies, industrial facilities, transportation companies (including airports), pipelines, and others designated under the law through the federal business classification system known as Standard Industrial Classifications (SIC). EPCRA, Section 312, applies to facility owners/operators having chemicals in quantities of at least 10,000 pounds.

The Community Right to Know Survey form is used for all inventories required under federal and state programs. To gather data, survey forms are sent to over 30,000 private employers subject to New Jersey's law and to additional employers subject to the federal laws. Companies must return the surveys to the DEP by March 1st of each year and must also send copies to local fire, police and emergency planning officials, as well as to county emergency planning agencies.

Toxic Release Inventory Reports – Manufacturers with 10 or more employees who manufacture, process, import or otherwise use any of more than 600 toxic chemicals on the federal SARA section 313 list at or above certain thresholds must also submit federal toxic release reports (Environmental Protection Agency Form R) and the supplemental New Jersey Release and Pollution Prevention Report. In New Jersey, more than 800 companies filed 1987 reports; more had to do so in 1988 and 1989, as the reporting thresholds were progressively reduced. In recent years, this number has dropped, and for the 1995 reporting year was under 700. The EPA enters the information on toxic release reports into a national database.

Labeling and training – Employers are required to label containers and to train employees (on company time) about hazardous substances. Manufacturers must follow federal rules, while other employers follow state regulations. The N.J. Department of Health administers the provisions of the state law, and issues Hazardous Substance Fact Sheets on specific substances giving health hazards, safe levels of exposure, symptoms of overexposure and how to deal with spills or other chemical emergencies.

The New Jersey Toxic Catastrophe Prevention Act requires:

- **Registration of facilities** using extraordinarily hazardous substances above certain threshold amounts. Currently, 109 chemicals are on the reporting list, each with a specific threshold. Facilities must file a registration form that includes a description of the location of the hazardous substances (including proximity to people and water supplies), risk management information and insurance details.
- **Risk management or risk reduction plans** and accident risk assessments from registered facilities. These documents must address technical, human or natural factors that might precipitate an emergency involving extraordinarily hazardous substances, and the measures each facility will take to reduce the potential for such accidents.
- **Penalties** – The DEP may assess penalties ranging up to \$50,000 per day for repeated violations of this act, depending on the nature of the violation.
- **Local involvement** – The regulations require facilities to coordinate emergency response plans with local officials.

SARA, Title III, requires:

- **Chemical inventories** (described above under state and federal Right to Know requirements).
- **Emergency response commissions** – The governor of each state must establish a State Emergency Response Commission (SERC) to designate emergency planning districts. In 1987, New Jersey created its SERC (co-chaired by the DEP commissioner and the State Police

Workers, officials and the general public may obtain chemical inventories and release reports from the DEP's Bureau of Chemical Release Information and Prevention at 609-292-6714, or from county Right-to-Know coordinators:

Atlantic	609-645-5971
Bergen	201-599-6150
Burlington	609-265-5515
Camden	609-374-6046
Cape May	609-465-1187
Cumberland	609-453-2156
Essex	973-228-8152
Gloucester	609-262-4200
Hudson	201-223-1133
Hunterdon	908-788-1351
Mercer	609-989-6497
Middlesex	732-494-6742
Monmouth	732-431-7456
Morris	973-285-6113
Ocean	732-341-9700
Passaic	973-225-3643
Salem	609-935-7510
Somerset	908-231-7000
Sussex	973-948-4545
Union	908-654-9890
Warren	908-689-6693

All requests must be in writing. The state has 30 days to respond. Hazardous Substance Fact Sheets are available from the state Department of Health (609-984-2202).

superintendent) and designated the state's 21 counties and 566 municipalities as local planning districts. Each district/municipality must establish a Local Emergency Planning Committee (LEPC) whose members are appointed by the mayor. LEPCs are responsible for developing emergency plans and identifying emergency facilities as well as transportation routes that handle extremely hazardous substances. They appoint emergency coordinators and establish training programs, emergency procedures and evacuation plans.

How to Obtain Right to Know Information

Private sector employers must send their completed chemical inventories annually to the DEP, county health agencies, and local fire, police and emergency planning officials, including LEPCs.

Individuals may request chemical inventory information from the DEP for any reason. This information can be used:

- to get specific facts about chemical use in a community;
- to make sure all companies are reporting as required;
- to make sure local emergency personnel are prepared for accidental chemical releases, fires or explosions;
- to help local officials develop contingency plans in the event of an industrial accident;
- to assist in land use planning decisions;
- to encourage reductions in the use and release of chemicals;
- to recommend improved regulation;
- to help discuss potential health effects with a physician;
- to help decide where to seek or accept employment.

For Further Information

To report accidental releases

DEP 24-hour Hotline, 609-292-7172

EPA National Response Center, 800-424-8802

EPA Region II (NJ) 24-Hour Hotline, 908-548-8730

Contacts:

State agencies

DEP Release Prevention Element, 609-984-3641

DEP Bureau of Chemical Release Info. & Prevention (Right to Know and SARA, Title III), 609-292-6714 or 609-984-3219

Department of Health, Right to Know Program, 609-984-2202

Department of Labor, Division of Workplace Standards, 609-292-7036

State Emergency Response Commission (SERC)
State Police Office of Emergency Management,
609-882-2000
DEP, 609-984-3219

Federal agencies

US EPA RCRA, Superfund, EPCRA Information Hotline, 800-535-0202

US EPA Region II, Edison, 908-321-6620

U.S. Department of Labor, Occupational and Health Administration (OSHA) Region II, 212-337-2350

Other

N.J. Right-to-Know & Act Coalition (223 Park Ave, Atco, NJ 08004), 609-866-0920 or 609-767-1110

Websites:

DEP, <http://www.state.nj.us/dep>

EPA Toxics Release Inventory,
<http://www.epa.gov/opptintr/tri/index.html>

Environmental Defense Fund's Chemical Scorecard,
<http://www.scorecard.org>

The laws and regulations:

Safety and Health Act, 29 U.S.C. 651-678

Written references:

"Emergency Planning and Community Right to Know Act - State & Federal Reporting Requirements for New Jersey," NJDEP Bureau of Hazardous Substances Information, 609-292-6714.

"Title III Fact Sheet on Emergency Planning and Right-to-Know," EPA, 1993, and other free pamphlets from EPA's RCRA, Superfund, and EPCRA Information Hotline, 800-535-0202.

RADIATION PROTECTION

The Regulatory Framework

The federal government has primacy in the regulation of radiation, and the U.S. Nuclear Regulatory Commission (NRC) regulates major sources of radiation including by-product materials, source materials and special nuclear materials. Within its borders, the state of New Jersey regulates other radioactive materials that are naturally occurring or accelerator-produced. The NRC regulates nuclear power plants, but the state is responsible for nuclear emergency response plans to deal with any accident or incident at one of these plants.

The U.S. Food and Drug Administration (FDA), Center for Devices and Radiological Health, regulates the

design and manufacture of electronic products that produce radiation. The state of New Jersey requires the registration of x-ray machines, particle accelerators, and radio frequency radiation-producing heaters and sealers, and inspects these devices in use. The FDA also administers the Mammography Quality Standards Act, but contracts with New Jersey to inspect the mammography facilities in the state for compliance with their standards.

The Basic Laws

The New Jersey Radiation Protection Act governs defined radiation sources and radioactive materials. It requires registration of sources of radiation, and licenses to possess and use them. The DEP's Radiation Protection Element is responsible for the administration and enforcement of radiation regulation, and must review the design of facilities where certain radiation sources are used, to ensure proper safety and shielding. DEP has the authority to enter and inspect any site and to embargo any material or device that constitutes a health threat.

The Radiation Protection Act creates the Commission on Radiation Protection, which has the power to write and adopt, amend or repeal regulations. The commission must also review any proposed municipal ordinances.

The Radiologic Technologist Act creates the Radiologic Technology Board of Examiners, a body charged with the establishment of educational and licensure standards for technologists, and accreditation standards for educational programs in radiologic technology. According to the act, only a licensed chiropractor, dentist, medical doctor, podiatrist, registered dental hygienist, or New Jersey licensed radiologic technologist is permitted to operate any type of equipment that emits ionizing radiation, or to position human beings for a radiological procedure. A student who is attending an approved radiologic technology program may also be permitted to perform such tasks.

The Radiation Accident Response Act mandates that the DEP and the State Police Office of Emergency Management develop, implement and maintain a comprehensive Radiological Emergency Response Plan for dealing with accidents at fixed nuclear facilities located in the state. This plan is developed with guidance from the Federal Emergency Management Agency (FEMA) and the

EPA. The act also requires that the municipality and the county in which a nuclear facility is located must develop and implement an emergency response plan for nuclear emergencies.

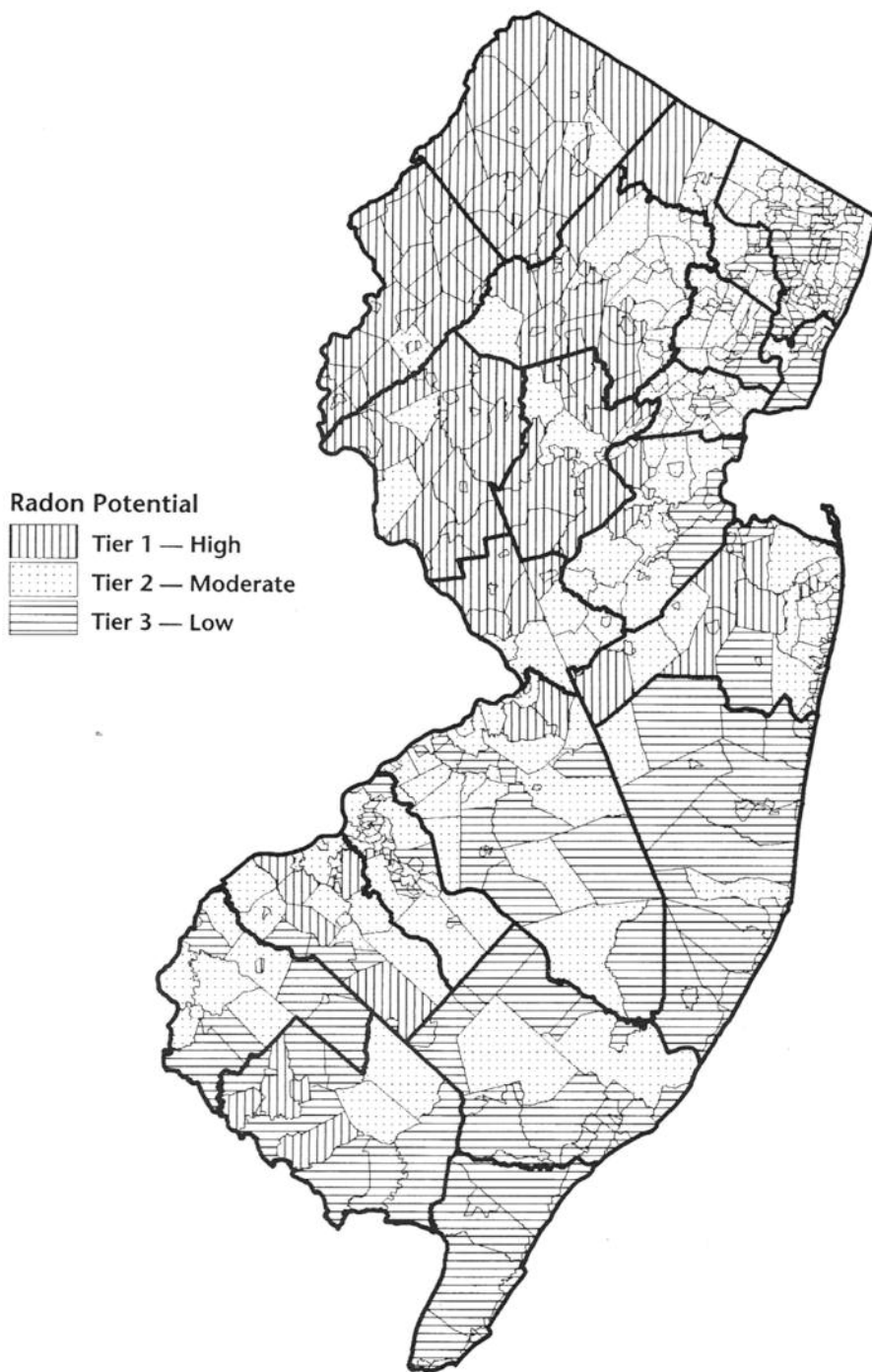
The Radiation Protection Act was amended in 1985 to deal with naturally occurring radon gas and radon progeny. The amendments require the DEP to study the dangers posed by radon, identify which areas of the state are most affected, maintain a public outreach program, develop a cost-effective testing strategy, and recommend ways to reduce the dangers posed by radon. The act also requires the state Department of Health to study the lung cancer risk posed by radon and to maintain a voluntary registry of persons at risk for radiologic cancer.

The 1985 amendments also require the DEP to establish a program for certifying commercial firms that test for or provide mitigation measures for radon. While they prohibit public disclosure of the address and owner of a nonpublic building tested for radon, they require a seller who has tested to provide a prospective buyer with those test results. The tester also must report these to the DEP, and the DEP may supply them to the Department of Health.

The state Uniform Construction Code, administered by the Department of Community Affairs (DCA), was amended in 1989 to include the radon subcode. After technical investigation, the DCA concluded that it is more cost-effective for builders to install radon-reduction systems in all new residential construction in high-risk areas, than to test each site individually for radon hazard. Therefore, all new homes and schools in radon high-risk areas must now be constructed to minimize health threats from radon gas. The subcode also protects builders who use the new construction standards from any liability for radon contamination.

Specific Regulations Under the Laws

Regulations promulgated under the laws cover the registration of radioactive materials and devices, the registration of machine sources (x-ray machines), the licensing of operators or medical technicians whose work involves sources of radiation, emergency planning and reporting, standards for devices, facilities and workers, and the disposal of radioactive waste.



DEP Radon Tiers

Registration and licensing – Sources of ionizing radiation not subject to federal licensure must be registered with DEP. These include x-ray tubes, radioactive materials, fluoroscopes, CAT scanners, therapeutic radiation units, industrial and research machine sources, electron beam welding units, electron microscopes, baggage inspection systems and particle accelerators. Naturally occurring or accelerator-produced radioactive materials, including static eliminators, high voltage electron tubes and spark gap tubes, and air ionizers, must be licensed. Exceptions include facilities owned or operated on behalf of a federal agency and materials below specified concentrations of radioactivity. Operators and nuclear medicine technologists who administer radiopharmaceuticals for diagnosis or therapy must meet safety and licensing standards.

Standards for devices, facilities and workers – All radiation sources, all equipment for radiation detection or instrument monitoring, all facilities where these devices or materials are used and records of their use must be available for DEP inspection or testing. Records of radioactive materials must be kept for two years after the final disposition of the material. Medical and industrial radiation devices must meet certain standards (including permissible leakage, shielding and detection requirements, and calibration schedules) and may be subject to spot checks. Requirements are more stringent for medical devices installed after October 1, 1987.

Working procedures must be designed to minimize radioactive contamination of personnel or work areas. Acceptable radiation exposure levels are established for those working in radiation controlled areas (excluding patients undergoing diagnosis or treatment). Records of surveys of radiation levels must be kept for 10 years. Radiation areas must be posted, and equipment and containers must be labeled. Exceptions to this include areas where patients are treated with radioactive materials if personnel are present, and controlled areas containing radioactive materials for fewer than eight hours.

Detailed employee radiation exposure records on workers in controlled areas must be maintained and made available upon request to past or present employees, or to the DEP, and kept on file for at least 10 years after termination of employment.

Mercury vapor lamps (indoors and outdoors) and radio

frequency devices such as microwave ovens are regulated to prevent excessive radiation exposure to short-wave ultraviolet radiation and microwaves.

Disposal – Sewer disposal and air emissions of radioactive materials below certain concentrations, averaged over periods as long as one year, are permitted. Incineration, and/or surface (groundwater or soil) disposal are permitted only by specific written permission from the DEP. Wastes may be transferred to radioisotope disposal services approved by the DEP or to persons licensed by the DEP, the federal government or other states having agreements with the DEP. Application may be made to the DEP for other methods of disposal.

The permanent disposal of high-level radioactive waste, such as spent nuclear fuel, by-products of uranium mining or waste materials from nuclear weapons facilities, is the responsibility of the federal government. No high-level waste disposal site will be located in New Jersey. Transportation of spent fuel and certain nuclear waste is monitored by the N.J. State Police and the DEP, whose Bureau of Nuclear Engineering has been designated by the Governor to receive notification of any transport of spent fuel or nuclear waste through New Jersey.

The federal Low-Level Radioactive Waste Policy Act requires the individual states, or groupings of them in compacts, to find ways to dispose of their low-level wastes within their own borders. Low-level wastes include plastics, paper, equipment and building materials that have been contaminated by exposure to radioactive material. Currently, New Jersey has no low-level radioactive waste facility, so wastes generated within the state are either shipped out of state or stored at the sites where they are generated.

In order to comply with federal law and to solve the state's disposal problems, New Jersey entered into the Northeast Interstate Low-Level Radioactive Waste Management Compact. To fulfill the state's responsibilities under the Compact, the Legislature passed the Regional Low-Level Radioactive Waste Disposal Facility Siting Act. It created the New Jersey Low-Level Radioactive Waste Disposal Facility Siting Board to investigate potential sites within the state. The Board sought a suitable site and a receptive community for nearly a decade, with no success. In the late 1990s, the Board observed that, since the

passage of the Siting Act, generators had made substantial efforts to reduce the volume of the low-level waste they produce, and many had constructed temporary, on-site waste storage areas at their facilities. In 1998, the Board suspended the siting process, having determined that no pressing need existed at that time for a new major disposal facility in New Jersey.

Emergency planning and reporting – Radiation Emergencies must be reported immediately to the DEP's hotline or the New Jersey State Police Office of Emergency Management. All thefts of radioactive materials or radiation incidents exceeding certain dosages or releases must be reported to the DEP by telephone or telegraph within 24 hours to 30 days depending on the severity of the incident. Incidents involving excessive radiation exposure must be reported to the DEP, which may require direct testing of affected individuals.

Owners of substantial amounts of radioactive materials must evaluate potential hazards, including theft and natural disasters, and prepare emergency plans that must be available to the DEP upon request.

The state maintains a comprehensive nuclear emergency response organization. The DEP's Bureau of Nuclear Engineering is the lead state agency for assessing radiation exposure risk. In the event or the threat of any incident at one of the nuclear power plants affecting New Jersey, Bureau staff assess the danger and provide immediate public health and safety guidance. Four nuclear power plants are operating at two sites in New Jersey. Oyster Creek is located in Lacey Township, Ocean County. Salem 1 and 2 and Hope Creek are located at Artificial Island in Salem County.

The federal Nuclear Regulatory Commission (NRC) has complete authority to regulate the nuclear power industry. However, states are increasingly involved in evaluating the operational safety and environmental impact of nuclear power plants operating within their borders. The expertise gained in reviewing technical documents and accompanying NRC inspectors at the plants helps the nuclear engineers in making recommendations if an accident should occur.

The Bureau of Nuclear Engineering serves as the contact for license change requests from any of the nuclear

TO REPORT RADIATION EMERGENCIES

**DEP Radiation Protection Program
609-987-6402**

**State Police Office of Emergency
Management
609-882-2000**

**DEP Radon Hotline
800-648-0394**

power plants in the state. The Bureau makes a determination regarding the safety of the requested change, and forwards its findings to the NRC, which makes the final ruling on the license change.

The Bureau oversees extensive surveillance programs to measure environmental radiation levels at and around the nuclear power plants, with continuous readings from 29 stations, weekly air and water sampling, and quarterly milk, fish and vegetable sampling. The DEP participates in the EPA's Emergency Radiation Ambient Monitoring System, a nationwide sampling network of air, water and milk samples.

For Further Information

Contacts:

DEP Radiation Protection Program, 609-984-5636

DEP Radon Information Hotline, 800-648-0394

Northeast Compact, Glastonbury, CT, 203-633-2061

EPA Radon Hotline, 800-SOS-RADON

X-ray Machine Licenses and Technologist Certification,
609-984-5890

X-ray Machine Registration Information, 609-984-5370

Department of Community Affairs, Construction Code
Element (information about the radon sub-codes),
609-530-8857

Website:

DEP, <http://www.state.nj.us/dep>

EPA Radon, <http://www.epa.gov/docs/ledweb00/radon/index.html>

The laws and regulations:

Radiation Protection Act, *N.J.S.A. 26:2D-1 et seq.* and
regulations, *N.J.A.C. 7:28 1.1 et seq.*

Radiologic Technologist Act, *N.J.S.A. 26:2D-24 et seq.*

Radiation Accident Response Act, *N.J.S.A. 26:2D-37 et seq.*

Radon sub-code, supplement to the state uniform construction codes, *N.J.S.A. 52:27D-123a et seq.*

Regional Low Level Radioactive Waste Disposal Facility Siting Act, *N.J.S.A. 13:1E-177 et seq.*

Federal Low Level Waste Policy Amendments Act of 1985, *42 U.S.C. 2021 et seq.*

NOISE CONTROL

The Regulatory Framework

The DEP is authorized by state law to administer noise control programs in New Jersey. However, because the DEP lacks sufficient resources to operate an office for this purpose, noise control programs are largely administered by municipalities and CEHA-certified local health departments. The DEP refers technical inquiries about noise to the Rutgers Noise Technical Assistance Center at Cook College, Rutgers University. The State Police Marine Law Enforcement Bureau enforces noise standards for motor boats under regulations established in 1979 by the New Jersey Boat Regulation Commission.

Federal involvement in noise control is minimal. Since 1981, when the federal administration withdrew all funding, federal noise regulations concerning railroads, interstate trucks, and portable air compressors have not been enforced in New Jersey. Building berms and barriers along highways is the main federal program for controlling transportation noise.

The Federal Aviation Administration (FAA) is responsible for regulating aviation noise, with limited advice or comment from the EPA and the public. However, the federal government has generally neglected enforcement. Although without regulatory authority in this area, the DEP has acted as ombudsman for the public, assisting citizen groups and state and federal representatives in getting the FAA and the Port Authority of New York and New Jersey to reduce aircraft noise.

The Basic Laws

The federal Noise Control Act mandates standards for new products and new sources of noise, with specific regulations adopted in 1974 and 1976 for railroads, interstate trucks and portable air compressors.

The N.J. Noise Control Act grants the DEP broad regulatory powers to guarantee “an environment free from noise that unnecessarily degrades the quality of life.” The Act recognizes the potential negative effects of excessive noise on human health, safety, welfare and/or the environment. Under the act, the DEP has the authority to:

- promulgate and enforce regulations to prevent sources from increasing their noise emissions;
- impose curfews and zoning provisions restricting noisemaking activities to particular areas or times of day;
- prohibit unmuffled machines;
- establish, after consultation with the Department of Motor Vehicles, standards for the control of noise from motor vehicles;
- require permits and licenses for the installation and operation of noisemaking machinery;
- conduct research and establish educational programs;
- establish enforcement procedures, including inspections, to determine compliance.

Specific Regulations Under the Laws

The N.J. Noise Control Act allows the DEP to set and enforce noise standards for almost all facilities and activities, except for occupational noise involving employer-employee relationships (for example, machinery in plants). Among the facilities controlled under the act are industries, public and private offices, schools, recreational facilities, sewage plants and recycling centers, including municipal operations.

The act permits DEP to set standards for motor vehicles, residences and construction activities, among others, but the DEP has adopted regulations only for industrial, commercial, and public service/community service facilities. Under those regulations, the DEP established a daytime (7 a.m. to 10 p.m.) continuous airborne sound standard of 65 decibels, and an evening (10 p.m. to 7 a.m.) standard of 50 decibels, measured at the residential property line. Impulsive sound is restricted to 80 decibels or less. The numerous exceptions to these noise standards

include agricultural activities, emergency devices, aircraft, racetracks and public roadways.

Boat noise standards, enforced by the State Police Marine Law Enforcement Bureau, are set at 90 decibels for an engine operating at the lowest throttle setting in neutral gear. This restriction does not apply to marine vessels registered and participating in racing events or tune-up periods for such events. In these cases, a Race Test Permit must be obtained for a specific event, and the times and number of tune-up periods are limited. Any marine vessel suspected of exceeding the noise standards might be required to submit to a noise emission test.

Municipal Ordinances

Municipalities have the authority to adopt their own noise control ordinances for stationary sources. The standards contained in local ordinances may not be less strict than those found in the N.J. Noise Control Act and related regulations, and all noise ordinances must be approved by the DEP before they can be adopted as law.

The DEP has prepared and distributed a Model Noise Control Ordinance, revised in 1997, that can be adopted, as is, by a municipal governing body without further review by the Department. The ordinance has provisions on industrial-commercial activities, residential and construction noise, and portable or personal vehicular sound amplification devices, which the state regulations do not. If a local governing body makes substantive changes to the model ordinance before adopting it, the DEP must approve those changes.

The Model Noise Control Ordinance contains provisions for establishing municipal noise control officers to enforce noise standards, review all public and private projects for compliance, and grant permits for variances under certain conditions. Under the Ordinance, noise control officers would be authorized to issue summonses and abatement orders, and to impose penalties of between \$25 and \$500 per offense.

Permits

The only permits required under noise regulations are for racing boats at tune-up. The State Police Marine Law Enforcement Bureau issues such permits.

For Further Information

Contacts:

DEP Office of County and Local Environmental Management, 609-292-1305

Boat Regulation Commission, 609-882-2000, ext. 2759

Rutgers Noise Technical Assistance Center, Cook College, Rutgers University, New Brunswick, 732-932-8065

County Environmental Health Act agencies, many of which administer DEP-approved noise programs (See List of CEHA Agencies, page 98)

The laws and regulations:

Federal Noise Control Act, U.S.C. 4901 *et seq.*

N.J. Noise Control Act, N.J.S.A. 13:1G-1 *et seq.*, and regulations, N.J.A.C. 7:29-1.1 *et seq.*

Procedures for measuring noise from stationary sources, N.J.A.C. 7:29, B

Boat noise regulations, N.J.A.C. 7:6-6.3

PESTICIDES MANAGEMENT

The Regulatory Framework

Because of the dangers to humans and the environment associated with pesticides, federal and state laws have been enacted to control the types of pesticides sold, as well as their application and disposal.

The DEP's Pesticide Control Element enforces all federal and state pesticide laws. It administers licensing examinations; registers applicators, businesses and products; evaluates the effects of pesticides on the environment; and conducts inspections and investigations of complaints.

The DEP's Office of Hazardous Waste Regulation in the Division of Environmental Regulation controls pesticide waste disposal. The state Department of Health answers questions about the effects of pesticides on human health and about specific occupational exposures. The DEP also has a variety of publications on pesticide issues.

The Basic Laws

The 1972 federal Insecticide, Fungicide and Rodenticide Act (FIFRA), amended in 1986, establishes permitting and labeling requirements for pesticides:

- FIFRA requires the EPA to retest 600 potentially dangerous chemicals among the nearly 50,000

pesticides now in use. Many were registered as long ago as the 1940s. Before the 1986 amendments, only 25 were retested each year. The amendments call for all chemicals registered before 1972 to be retested by 1995. As of 1997, the EPA was far behind in achieving this goal. Inert ingredients that carry the pesticides must also be tested. To fund the retesting, manufacturers pay fees ranging from \$50,000 to \$150,000 for each active ingredient.

- Pesticide manufacturers must make public the information about the health, safety and environmental characteristics of their products. The EPA must restrict permits for new uses of existing pesticides until all health and safety testing has been completed.
- FIFRA requires the EPA to issue rules and new training requirements to protect people who use pesticides in their work. The law also requires the EPA to protect the public from aquifer contamination by pesticides.

The 1971 N.J. Pesticide Control Act authorizes the DEP to:

- regulate the use, transportation, storage, sale and disposal of pesticides and their containers, with consideration given to the effectiveness, safety and long-term environmental effects of pesticides;
- enter any facility, except private residences, to investigate violations;
- detain or embargo any pesticide being sold, labeled or used in violation of regulations;
- conduct research programs on pesticides, primarily through Cook College at Rutgers.

The act created the Pesticide Control Council, an independent advisory group to the DEP. This council studies and holds public hearings on pesticide issues and reviews proposed regulations.

Specific Regulations Under the Laws

The N.J. Pesticide Control Act regulations use a variety of legal tools to control pesticide use and human exposure to pesticides:

Annual registration of pesticides and pesticide products – Product registrations must include a complete copy of the label (labeling requirements are contained in FIFRA), and in some instances, a complete formula, cleanup procedures and sampling methodology. Following a public hearing, the DEP may refuse or cancel a registration for not meeting state and federal requirements, or if continued use would present a significant risk.

Restrictions on certain pesticides – The EPA restricts the use of certain pesticides. Only certified pesticide applicators or people working under their direct supervision can purchase or use restricted pesticides. The states are allowed to be more stringent than the federal government and may restrict pesticides that are not restricted by the EPA. In New Jersey, the DEP bases its decision to restrict a pesticide on the substance's toxicity to human health, chronic health effects, persistence in the environment, potential for water contamination and history of use and regulation.

Use requirements – DEP permits are required for area-wide mosquito control and most aquatic use (except for agricultural purposes, or for programs conducted under state mosquito control statutes). Service vehicles must be designed to prevent leakage and must carry equipment to handle emergencies. All employees handling pesticides must have access to safety equipment. The regulations also contain specific use restrictions for gypsy moth control, applications to blueberry fields, fumigants, pesticides containing diazinon, applications in or around schools, termiticides and aerial applications.

Storage requirements – Except for personal use in private residences, restricted pesticides must be in secure enclosures posted with signs, and the owner must send an annual inventory to the local fire company. Pesticides may not be stored in private residences, multifamily residences, or commercial buildings if fumes can reach areas where people live or work, or if the storage presents a significant risk. Restricted-use fumigants are not permitted to be stored in multifamily residences or multi-unit commercial buildings.

Disposal of pesticide containers – Homeowners may send household-use-size containers to regular landfills, but County Hazardous Waste collection days are becoming prevalent. Larger users must pay haulers to take containers to special landfills.

Notification procedures – Various specific requirements cover the timing and type of notification required (for example, signs, newspaper notices or direct contact) for area-wide applications, household or structural pest control, turf or ornamental applications, golf courses, schools, institutions, parks, beekeepers and farmworkers.

Reporting spills – An applicator or business must notify the DEP by phone, with a written follow-up within 10 days for “reportable spills,” as defined in the regulations. For interior spills, a reportable spill is more than one gallon of either mixed or pure pesticide. For exterior locations, a reportable spill is one involving more than one pound of active ingredient.

Certifications and Registrations – Persons using pesticides for hire, or using restricted pesticides to raise an agricultural commodity, must be licensed with the DEP. Examinations are required to obtain these licenses. Applicators must recertify every five years, either by obtaining sufficient educational credits or retaking the examination. Continuing education is strongly recommended to ensure that applicators are keeping abreast of the latest developments in pesticide technology.

Commercial applicators must keep records of all applications for three years, including the type, amount, location (the exact field and crop, for agricultural applications), and date of application. For termiticides, the records must be kept for five years and must also include a diagram of treated areas, locations of wells, streams, ponds, drainage systems, name of applicator and a separate list of federal registration numbers of the pesticides used. All records must be available to DEP and medical personnel, upon request, and to customers by written request.

For Further Information

Contacts:

DEP Pesticide Control Program, 609-530-4070
DEP Office of Hazardous Waste Regulation 609-633-1418
EPA Pesticides and Toxic Substances, Edison, 732-321-6765
N.J. Poison Information and Education System,
800-962-1253
National Telecommunications Pesticide Network,
800-858-7378

Website:

DEP, <http://www.state.nj.us/dep>

The laws and regulations:

Federal Insecticide, Fungicide and Rodenticide Act, 7
U.S.C. 136 *et seq.*
N.J. Pesticide Control Act, N.J.S.A. 13:1F-1 *et seq.*, and
regulations, N.J.A.C. 7:30-1 *et seq.*

CLEAN WATER

WATER QUALITY PLANNING

The Basic Laws

New Jersey's water quality planning is based on the federal Water Pollution Control Act (known as "the Clean Water Act") and its amendments, the New Jersey Water Quality Planning Act (1977), and the New Jersey Water Pollution Control Act (1984), which had to conform with the federal Clean Water Act.

The 1972 Clean Water Act amendments aimed "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." This may seem like a common-sense goal today, but marked an aggressive change in water policy at that time.

The amendments prohibited the discharge of pollutants that violate federal standards, established the National Pollutant Discharge Elimination System to control the dumping of contaminants into surface and groundwaters, and made the states responsible for meeting the Act's goals. The Act directed the federal Environmental Protection Agency to develop standards for a list of pollutants. Subsequent amendments lengthened the list, but it still includes only a small percentage of the total number of chemicals and contaminants.

Federal grants for sewer construction were a major tool for implementation of the 1972 Act, as they had been since 1948. The 1987 federal Water Quality Act terminated the

grant program, which closed in 1990; it was replaced by a revolving loan fund, which operated until 1994. Federal money for sewer construction is now passed to the states, which administer low-cost revolving loan programs.

The federal and state water quality planning laws are similar in goals and procedures. Under the federal law, states and their regional planning agencies must develop Water Quality Management Plans (WQMP). In New Jersey, county governments manage some of the state's 12 planning areas, and others are managed by the DEP. WQMPs are also called "208" plans because they are required under Section 208 of the federal law. The statewide WQMP is a compilation of the regulations for regional water quality management plans.

Regional WQMPs should cover a 20-year horizon. They must reflect current conditions and are amended when more than minor changes occur in wastewater facilities planning, or when the designated planning agency or the DEP deem an amendment necessary. The DEP reviews all proposed amendments and can seek comments from any public or private group before it opens the amendments to public review.

Each 208 plan must include:

- an inventory of point and nonpoint sources of pollution (including solid waste runoff, saltwater intrusion, pollution from agriculture, silviculture,

Planning Area	WQM Planning Agency
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Sussex County	Sussex County
Northeast	NJDEP
Upper Delaware	NJDEP
Upper Raritan	NJDEP
Lower Raritan/ Middlesex County	Middlesex County
Monmouth County	NJDEP
Mercer County	Mercer County
Ocean County	Ocean County
Tri-County Area	Delaware Valley Regional Planning Commission
Atlantic County	Atlantic County
Lower Delaware	NJDEP
Cape May County	Cape May County

Source: New Jersey Department of Environmental Protection,
Division of Water Resources, Bureau of Water Quality
Planning, March 1990.



Water Quality Management Planning Areas

mining and other industries, and pollution from land development) and a regulatory program to control that pollution;

- a process that coordinates water quality planning among federal, state, regional, county and local water resource and land use agencies and that secures meaningful public participation throughout the planning process;
- an assessment of the economic, social and environmental costs of the plan.

The Clean Water Act requires municipalities and/or wastewater authorities to have Wastewater Management Plans (WMP) that must be consistent with the area-wide WQMP. These plans are needed to address the point sources of pollution identified in the regional WQMP. The plans must explain how the municipality or authority will take care of their wastewater management needs for the next 20 years. The plans must delineate sewer service areas and the areas that will rely on septic systems.

The Wastewater Management Planning Area is much smaller than the WQMP area. In many cases it is a single municipality; in others it is a sewer authority serving several towns. An approved WMP:

- qualifies the municipality or authority for low-interest construction loans;
- is required to renew or amend discharge (NJPDDES) permits; and
- must be incorporated as amendments into the area-wide WQMP.

The federal Clean Water Act also includes:

- Section 305, requiring each state's environmental agency (NJDEP) to prepare a "State Water Quality Inventory Report" on surface and groundwater every two years;
- Section 209, requiring planning agencies within the same river basin to coordinate their water quality plans, with the state mediating any conflicts;
- Section 319 of the 1987 amendments to the Act, emphasizing the need to control nonpoint source pollution.

The state's Water Quality Planning Act also requires the NJDEP to put together a program for protecting aquifer recharge and to make it available to municipalities. As the legislation requires, the DEP has published a method for mapping and ranking aquifer recharge areas, is working on a statewide recharge map, and has created model land use regulations to protect recharge areas and to restrict activities that cause groundwater contamination.

The state legislation also requires that local or regional water quality plans be consistent with state plans (with the N.J. State Development and Redevelopment Plan taking precedence) and outlines a Continuous Planning Process (CPP) to keep statewide water quality planning up to date and consistent at all levels of government.

The federal Clean Water Act and the subsequent state Water Pollution Control Act also require an anti-degradation policy that prohibits adding to the pollution of any surface or groundwaters. The control of point-source pollution (from industries, utilities or other identifiable single sources) has improved substantially under the clean water laws, but nonpoint pollutants (largely from development and the resulting contaminated runoff from homes, businesses and roads) is now, according to the EPA, the most serious water pollution problem. Many local environmental groups, especially New Jersey's many watershed and land trust associations, are focusing on this problem and the state is addressing it through the development of watershed-based planning. Currently, DEP regulates point-source discharges through the N.J. Pollution Discharge Elimination System (NJPDDES), a permitting system required by federal law. Nonpoint discharges are regulated only for industrial sites.

The Regulatory Framework

Under the provisions of the Water Quality Planning Act, New Jersey adopted a Statewide Water Quality Management Plan in 1985. The policies and regulations of the statewide plan are contained in *N.J.A.C. 7:15* (Title 7, Chapter 15), adopted in 1984 and revised in 1989 and 1993. This chapter implements the Water Quality Planning Act and the N.J. Water Pollution Control Act (both 1977). The Office of Environmental Planning is the lead agency for surface and groundwater quality planning.

Title 7 of the *New Jersey Administrative Code* (N.J.A.C.)

contains all NJDEP regulations. Nineteen of the approximately 70 chapters within Title 7 pertain to water issues, including use and allocation, flood and stormwater control, grant and loan programs for infrastructure, permits for discharges to surface and groundwater, pollution, drinking water, shellfish beds and lake management.

Water Quality Management Planning Areas

Statewide water quality planning is now divided into 12 management planning areas, but DEP plans to replace these with 20 watersheds. The DEP estimates that the complete changeover to watershed-based planning will require almost a decade.

The new *watershed-based* planning approach will address nonpoint and point discharges, review them on the basis of their cumulative effect on the watershed's hydrogeological regime, and tie water quality management to land use management. Environmentalists want this changeover to be implemented quickly to protect the state's water resources against the irreversible impacts of continuing rapid development.

Of the current 12 planning areas, six are counties—Atlantic, Cape May, Mercer, Middlesex (and the Lower Raritan basin), Ocean and Sussex Counties, where county freeholder boards are the designated planning agencies. (Some of these county areas extend beyond county lines, for instance following the lower Raritan watershed outside Middlesex County.) The other six follow sewer service or watershed boundaries—the Northeast area (mainly the Passaic and Hackensack River watersheds), the Upper Raritan basin, the Monmouth area, the Upper and the Lower Delaware areas, and the Tri-county area (Burlington, Camden and Gloucester). The DEP is the designated planning agency in five of these, except the Tri-county area, where the Delaware Valley Regional Planning Commission does the job.

Watershed-Based Planning

The January 1997 draft Statewide Watershed Management Framework Document for the State of New Jersey delineates the 20 watersheds that will replace the current 12 planning areas. These are regional watersheds, containing the state's 95 sub-watersheds.

The DEP draft explains the benefits of watershed-

based planning. By using nature's boundaries, watershed management provides a "holistic, rather than site specific" approach to manage all water resources, to provide "continuous improvement," and to achieve "real ecological results." A watershed approach provides a better understanding of water resource management priorities because it recognizes the interconnections between surface waters, groundwaters and wetlands, and all activities on the land.

Watershed management will eventually be expanded to include total resource management, including water supply and quality, air quality (and air deposition of pollutants that affect water quality), land use, solid and hazardous waste, flood protection, open space and recreation, wildlife protection, and implementation of the State Development and Redevelopment Plan. Water quality planning is to be based on stewardship and on long-term solutions, instead of the reactive, site-specific planning that has characterized the process in the past.

The DEP will initiate a statewide watershed management framework and preliminary watershed management plans for the 20 watersheds. In each watershed, partnerships of "the stakeholders," including local and county governments, environmental groups, business and industry, academic groups and citizens, will help create and carry out the management/stewardship plan.

The formation and effectiveness of these partnerships is not well defined in the DEP draft but rather left to the initiative of the various stakeholders. The DEP will provide the background data, ongoing monitoring and management recommendations for each watershed plan, and the statewide plan will be the ruling document, as is now the case. The 20 watersheds are:

1. Upper Delaware River
2. Walkill, Pochuck, Papakating
3. Pompton, Pequannock, Wanaque, Ramapo
4. Lower Passaic, Saddle
5. Hackensack, Pascack
6. Upper Passaic, Whippany, Rockaway
7. Elizabeth, Rahway, Woodbridge
8. North and South Branch Raritan
9. Lower Raritan, South River, Lawrence Brook
10. Millstone River
11. Central Delaware Tributaries
12. Monmouth Watersheds

13. Barnegat Bay Watersheds
14. Mullica, Wading River
15. Great Egg Harbor, Tuckahoe
16. Cape May Watersheds
17. Maurice, Salem, Cohansey
18. Lower Delaware Tributaries
19. Rancocas Creek
20. Crosswicks Creek

To make DEP permitting more efficient, New Jersey's 20 watersheds are grouped into five basins. Permits in each region will be issued and renewed in the same year, on a five-year cycle. The five regions are:

1. Passaic (including the Hackensack and Hudson)
2. Lower Delaware
3. Raritan (including the Arthur Kill)
4. Upper Delaware
5. Atlantic Coastal

The DEP has established pilot watershed projects in the Whippany River basin, the New York/New Jersey Harbor, the Delaware and the Barnegat Bay estuaries, and the Musconetcong and Rancocas watersheds, and has conducted some nonpoint pollution and riparian restoration projects such as in the Navesink River basin.

Wastewater Management Plans

Wastewater Management Plans (WMPs) describe sewer and septic districts and facilities and are part of Water Quality Management Plans. The designated planning agency must file or amend the WMPs whenever there are proposals for new sewage treatment works (if the plant needs a N.J. Pollution Discharge Elimination System permit and discharges directly to surface water or land, or if the plant has a capacity of more than 20,000 gallons per day), expansions of existing works beyond the capacity described in the Water Quality Management Plan, or extensions of sewer service areas involving more than 100 acres or 20,000 gallons per day, or new sewer districts.

Certain new or modified sewer facilities do not need a WMP or amendment. These include state or federal government projects; solid waste facilities; public prisons, schools or health facilities (although WQMPs must be amended to show increases in groundwater discharges for such facilities based on permitted 20,000 gallons per day (gpd) increments); or additions of less than 10 acres to an

existing sewer district (if the development is partially within the original district).

WMPs must show existing wastewater facilities, the existing population type and size of development served by each, future sewer and septic service areas and certain environmental features. Like WQMPs, they must be updated regularly.

For Further Information

Contacts:

DEP Office of Environmental Planning (surface and ground water planning), 609-292-2113

Watershed Management Regions:

Atlantic Coast and Delaware River, 609-633-3812

Passaic/Hackensack/Hudson and Raritan Arthur Kill, 609-633-1179

The laws and regulations:

Federal Water Pollution Control Act (Clean Water Act), 33 U.S.C. 1251

N.J. Water Quality Planning Act, N.J.S.A. 58:11A

Statewide Water Quality Management Planning regulations, N.J.A.C. 7:15

N.J. Water Pollution Control Act, N.J.S.A. 58:10A

Surface Water Standards

The DEP uses the surface water regulations to regulate discharges so that they do not exceed water quality standards. The state's policy for surface water aims to maintain and restore water quality, protect human health, scenic and ecological values, and enhance uses.

Existing uses are to be protected. Where the state has designated other uses requiring higher water quality, those uses are to be attained as soon as possible. If that proves impossible, the state can redesignate and lower the standards (following public comments) to "accommodate important social or economic development."

The surface water standards cover contaminants and characteristics including:

- bacteria, including fecal coliform
- suspended solids
- dissolved oxygen
- total dissolved solids
- pH
- sulfate

SURFACE WATER CLASSIFICATIONS

The State classifies all surface waters based on the water's characteristics and uses, and on water quality. As listed in *N.J.A.C. 7:9B-1.15*, these classifications include:

Fresh Waters (FW)—all nontidal and tidal waters with salinity equal to or less than 3.5 parts per thousand at mean high tide.

FW1—fresh waters that originate in and are wholly within federal, interstate, state, county or municipal parks and forests, US Fish and Wildlife lands, and other special holdings. These waters are to be preserved for posterity and maintained in their natural state and not be subject to any man-made wastewater discharges. Freshwater classifications are further categorized as trout production, trout maintenance, or non-trout waters. FW1 always indicates waters that enjoy the strictest protections against degradation (see "Nondegradation Waters").

FW2—general surface water classification applied to fresh waters that are not designated FW1 or PL (see "Pinelands Waters"). FW2 are given trout designations of either trout production, trout maintenance, or non-trout waters, but these waters do not enjoy as stringent protection from degradation as do classifications of FW1.

Pinelands Waters (PL)—all waters within the boundaries of the Pinelands Area, as established in the Pinelands Protection Act and shown on Plate 1 of the November 1980 Pinelands Comprehensive Management Plan. PL is a special classification and is different from FW1, although these two classifications enjoy the strictest protection.

Outstanding Natural Resource Waters (ONRW)—waters to be preserved for posterity. This classification includes FW1 and PL waters only

Trout Maintenance Waters (TM)—waters that can support trout throughout the year.

Trout Production Waters (TP)—waters that can be used by trout for spawning or nursery purposes during their first summer.

Nontrout Waters (NT)—not suitable for trout, but suitable for a wide variety of other fish.

Saline Waters—waters with a salinity greater than 3.5 parts per thousand at mean high tide.

SC—general surface water classification of saline coastal waters

SE—general surface water classification of saline estuarine waters.

Shellfish waters—waters that support or have the potential to support shellfish, as defined within the Coastal Areas Facility Review Act (CAFRA) (subclassifications include Approved, Seasonally Approved, Special Restricted, Seasonally Special Restricted, or Condemned).

Category One Waters (C1)—waters not designated FW1 but which, because of their clarity, color, scenic setting or other exceptional ecological, aesthetic, recreational, fishery or water supply significance, are to be protected from measurable changes in water quality. These include waters that originate or are wholly within federal, interstate, state, county or municipal parks and forests, fish and wildlife lands, and other special holdings that have not been designated FW1 and also FW2-TP and their tributaries, FW2-TM and FW2-NT that are upstream of FW2-TP, shellfish waters of exceptional value, and other waters flowing through or bordering parks and special holdings.

Category Two Waters (C2)—waters not designated as FW1, Pinelands or Category One. Under federal law, degrading pollutants can be added to these waters for important social or economic reasons.

Nondegradation Waters—waters set aside for posterity because of their clarity, color, scenic setting, unique ecological significance, exceptional recreational or water supply significance, including FW1, PL, and C1 waters. This is not a classification but rather a statement of the state's policy regarding these waters.

- phosphorous
- nitrate-nitrogen
- radioactivity
- temperature
- turbidity
- toxic substances
- floating, colloidal, and settleable solids, including petroleum products and other oils and greases
- taste and odor-producing substances

The different standards for different classifications of surface waters are based on existing or designated uses. The standards have three purposes:

- to protect aquatic life (with special criteria for Trout Production waters);
- to insure that fish and water are safe for human consumption;
- to insure that the water is safe for “primary contact recreation,” such as swimming or other in-water sports.

Antidegradation policies for surface water

These policies apply to all surface waters of the state. Generally all existing uses shall be maintained and protected. No changes shall be allowed in waters classified as:

- Outstanding Resource waters
- Nondegradation waters
- Pinelands waters
- Category One waters

Category Two waters shall be maintained within a range of quality that protects the existing or designated uses.

N.J.A.C. 7:9B-1.15(c)-(g) lists surface water classifications by the major watersheds. Actual classifications often are a combination. For instance, McCormick Pond on Egg Island, within the Delaware Estuary, has both fresh and saline waters and is classified FW2-NT/SE1 (C1). The Little Flat Brook, within the Delaware Basin in Sussex County, has different designations on different stretches, being FW1-TP in some places and FW2-TP (C1) in others.

Groundwater Standards

Groundwater Standards are listed in Table 1 of N.J.A.C. 7:9-6. These standards cover a list of characteris-

GROUNDWATER CLASSIFICATIONS

N.J.A.C. 7:9-6 establishes three major classifications of groundwater, based on hydrogeologic characteristics and designated uses. The classifications are regional and may be altered by local geology or contaminants.

Class I—waters with special ecological significance.

Class I-A—watersheds of FW1 surface waters and waters under certain natural areas (the list of 30 Natural Areas includes, for example, Cape May Point, Black River, Farny, Island Beach and Ken Lockwood Gorge).

Class I-PL—Pinelands groundwater in the Cohansey and Kirkwood geological formations and in the Pinelands Preservation Area.

Class II—potable water supply (existing or potential, needing treatment or not)

Class II-A—all groundwater except Classes I, II-B, or III.

Class II-B—polluted groundwater and polluted groundwater that cannot be practicably restored, or that is not expected to be a potable water supply or near a potable water supply for 25 years, and that poses no significant risk to the public or to Class I or II-A groundwaters. In some cases, natural attenuation may bring these waters up to standards; the uses of these waters cannot exacerbate the pollution or impede attempts to improve water quality.

Class III—other uses, waters not suitable for potable use due to natural hydrogeological characteristics or natural water quality (for instance, saline groundwater).

Class III-A—water in aquitards (aquifers partially or largely sealed off by layers of impervious clays) of at least 100 acres whose primary use is supplying other ground or surface water formations.

Class III-B—water with 3,000 mg/l of chloride or 5,000 mg/l of total dissolved solids.

tics and contaminants similar to the list for surface waters. As with surface waters, the broad policy is to prevent degradation of groundwater, but the implementation of this policy is based on the water’s existing characteristics and uses, with the aim of protecting drinking water and human health.

Groundwaters Class I-A and I-PL are nondegradation

waters, where human activity is not allowed to degrade natural quality or impede its restoration. In PL areas, however, permitted activities are controlled by the Pinelands Comprehensive Management Plan. For Class II-A (potable), drinking water standards are based on the state's Safe Drinking Water Act (N.J.S.A. 58:12A) and on EPA risk assessments or other scientifically sound assessments. For Class III, criteria are on a case-by-case basis, unless the DEP determines there is a risk of the Class III waters migrating to higher ranked groundwaters. In that case, the Class III waters must adhere to the criteria of the higher ranked classification downgradient of the Class III area. Certain discharges are allowed into groundwater. For instance, if the amount of any contaminant is below the levels permitted by the standards, discharges of that contaminant may be permitted based on a percentage of the total amount by which the contaminant falls below the standard. For groundwaters associated with FW1, PL and other special surface waters (Class I groundwaters), no further contamination is permitted. For potable water (Class IIA), 50 percent of the total difference is permitted. For polluted waters or waters otherwise unsuitable for human use (Class IIB and III), 100 percent (to bring the contaminant to the standard). If a standard is met or exceeded, no further contamination is allowed.

For Further Information

Contacts:

DEP Office of Environmental Planning, 609-292-2113
(surface and ground water classifications and standards, and all issues pertinent to water quality planning).

N.J. Geologic Survey, Bureau of Groundwater Resource Evaluation, 609-984-6587.

The regulations:

Surface water standards *N.J.A.C. 7:9B*

Groundwater Quality Standards *N.J.A.C. 7:9-6 et seq.*

Financial Aid for Wastewater and Stormwater Facilities

In New Jersey, there are several sources of financial assistance for wastewater and stormwater facilities, and in the near future, for water supply facilities. The regulations for these programs are found in *N.J.A.C. 7:22*.

The Wastewater Treatment Fund was established under the \$190 million Wastewater Treatment Bond Act of 1985. This DEP program provides no-interest loans for up to 50 percent of construction costs for wastewater or stormwater projects;

The N.J. Environmental Infrastructure Trust (formerly the Wastewater Treatment Trust, but now also funding stormwater projects and, soon, water supply projects) is an independent agency within the DEP also established under the Wastewater Treatment Bond Act of 1985. This agency provides municipalities with low-interest loans (at half the market rate) and guarantees local bonds for 50 percent of the costs for construction, rehabilitation or maintenance of sewer and wastewater projects.

Additional funding for both the Wastewater Treatment Fund and the Environmental Infrastructure Trust has been provided by the \$50 million Stormwater Management and Combined Sewer Overflow Bond Act of 1989, the \$50 million Green Acres, Clean Water, Farmland, and Historic Preservation Bond Act of 1992, and by about \$60 million each year since 1987 in federal money used to capitalize the state loan funds.

The N.J. Sewage Infrastructure Improvement Act of 1988, a \$31.5 million grant program, finances up to 90 percent of the inventory, mapping, planning or design costs for sewage upgrades. These include management of stormwater and Combined Sewer Overflows (CSOs, when large amounts of stormwater overload a sewer system and cause untreated sewage to leave the plant), and water quality monitoring at sewer plant outlets. The DEP administers this program, paying special attention to certain municipal systems in Monmouth, Ocean, Atlantic and Cape May counties, where point and non-point discharges enter salt waters. The grants require abatement of CSOs and nonpoint source pollution. Funding has come from the 1989 Stormwater Management and CSO Abatement Bond Act, but this program will probably be discontinued around the year 2000.

The Pinelands Infrastructure Trust Bond Act of 1985 established a \$30 million grant and loan program for up to 100 percent of construction costs on wastewater treatment projects in the Pinelands Regional Growth Areas and included in the Pinelands Infrastructure Master Plan, which includes a prioritized funding list. The DEP

administers the program, but the Pinelands Commission decides where the money is spent. Because most of the original money was given in grants, only about \$1-2 million is available in loans (at half market rate) every two years.

Additional funding for stormwater and nonpoint pollution may be available through the Office of Environmental Planning.

For Further Information**Contacts:**

DEP Municipal Finance and Construction Element,
609-292-8961

DEP Office of Environmental Planning, 609-292-2113

N.J. Environmental Infrastructure Trust, 609-219-8600

Pinelands Commission, 609-894-9342

The laws and regulations:

N.J. Wastewater Treatment Bond Act of 1985, *P.L.* 1985,
c. 333

N.J. Wastewater Treatment Trust Act of 1985, *N.J.S.A.*
58:11B

Pinelands Infrastructure Trust Bond Act of 1985, *P.L.* 1985,
c. 302

N.J. Sewage Infrastructure Improvement Act of 1988,
N.J.S.A. 58:25-23

Financial Assistance Program for Wastewater Treatment
Facilities, *N.J.A.C.* 7:22

Sewage Infrastructure Improvement Act Grants, *N.J.A.C.*
7:22A

WATER QUALITY REGULATION**Point Source Pollution**

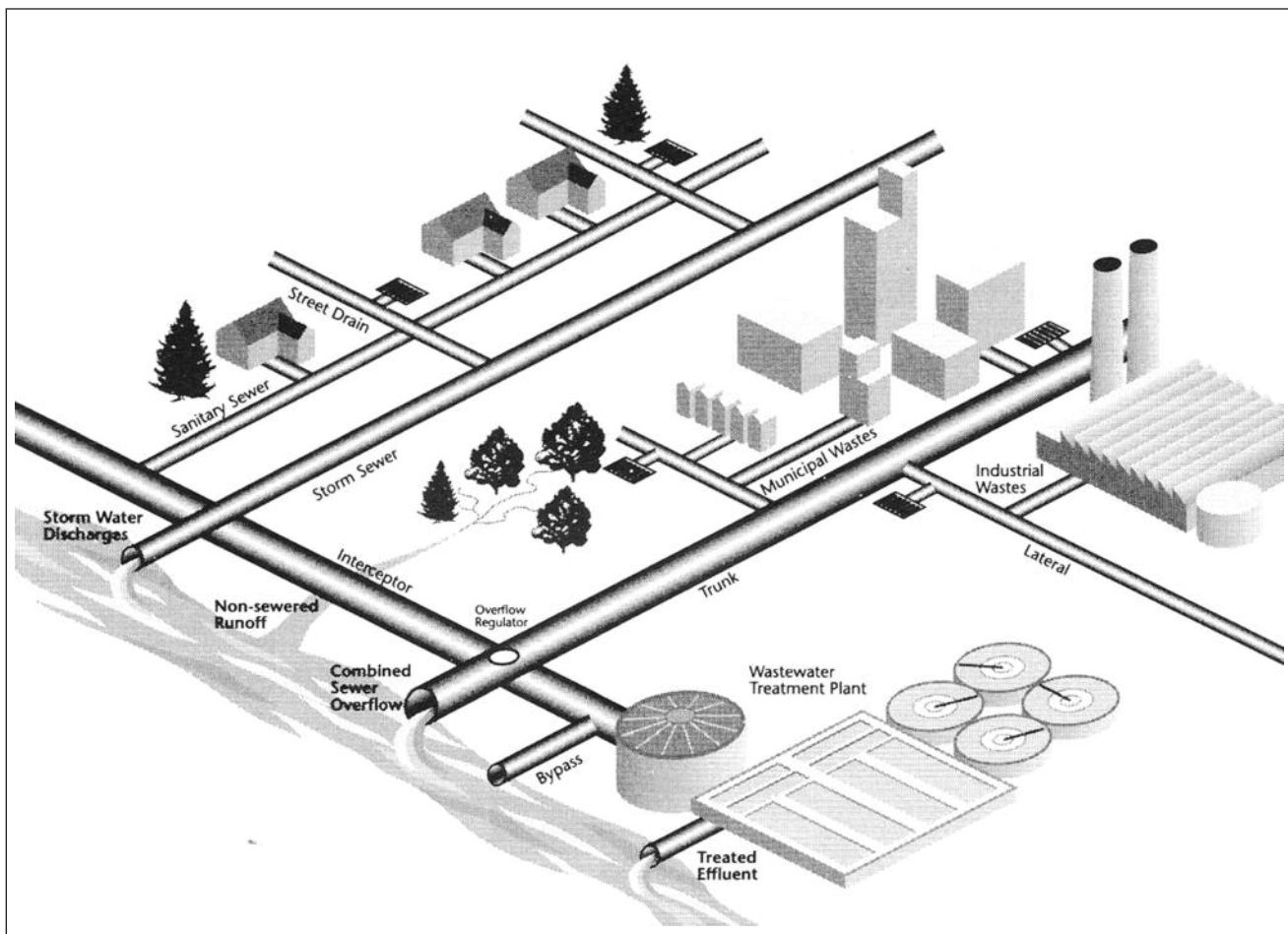
The New Jersey Pollutant Discharge Elimination System (NJPDES, pronounced “ne-jip-deez”) is a key element in the state’s water quality protection program. The federal Water Pollution Control Act amendments of 1972 established National Pollution Discharge Elimination System regulations for discharges to surface water. The state’s program, NJPDES, was established under the 1977 N.J. Water Pollution Control Act and pertains to discharges to both surface and groundwater. NJPDES permits are required for:

- all municipal or industrial discharges to surface and groundwater;

- land application (by irrigation, overland flow, or infiltration lagoons) of municipal or industrial wastewater;
- discharges from solid waste management facilities (leachate from landfills);
- discharges into injection wells;
- discharges from intensive animal feeding or intensive aquatic animal production facilities;
- point-source discharges from aquaculture or silviculture;
- discharges of stormwater to surface water, including storm sewers;
- discharges from site remediation projects;
- discharges from domestic sewage treatment works, including land application;
- treatment, storage or disposal of hazardous waste that is not regulated by Hazardous Waste Management regulations, and the storage of any liquid or solid pollutant that should not enter waters;
- discharges of pollutants by “significant industrial users” (SIUs) (users contributing sizable amounts of wastewater to municipal or private wastewater treatment facilities).

Exempt from the NJPDES permitting requirements are:

- normal discharges from boats, including sewage, gray water, and effluent from properly operating engines;
- fill or dredge materials that are not under federal regulation;
- discharges from site remediation projects that are under the control of an on-site cleanup official;
- nonpoint discharges from agriculture or silviculture;
- discharges into privately owned treatment works (although the DEP may choose to regulate these in some cases).



Sources of Discharges to Surface Water

There are special requirements for discharges to groundwater:

- monitoring wells in each aquifer that the discharges could affect, usually at least one upgradient and three downgradient;
- monitoring of effluent quality;
- a description of sampling procedures and list of contaminants to be monitored;
- testing to make sure the treatment works will function as designed;
- any other structures or procedures the DEP may require;
- one or more monitoring programs that may include leak detection, nonpoint monitoring, or others.

NJPDES applications require extensive technical information. The DEP recommends that applicants schedule a pre-application conference to make sure they meet all requirements.

NJPDES permits are granted for a maximum of five years. They may be modified or amended at any time to reflect changes or expansion of the discharging facility. Fees range from \$500 to \$500,000, based on the quantity of pollutants discharged and the relative risk associated with those pollutants. NJPDES permits regulate more than 150 potential pollutants, ranging from heat (non-contact cooling waters), pH and total dissolved solids, to volatile organics and other toxics. NJPDES permits specify the conditions under which the applicant will be allowed to operate.

The DEP issues a draft permit, which is reviewed by other federal, state and local agencies and by the applicant.

Copies of the draft are sent to local officials including the health department, environmental commission and sewerage authority. Public notice is printed in newspapers, giving the public 30 days to comment. The DEP may hold public hearings if there are substantial comments.

Under the Clean Water Enforcement Act, the DEP is required to inspect NJPDES dischargers at least once each year and must impose fines of \$1,000 for each “serious” violation and \$5,000 for each “significant” violation. The act also establishes criminal penalties for intentional violations of up to 25 years’ imprisonment and fines of up to \$1 million.

Complete information about any NJPDES application or permit is available to the public through the Division of Water Quality. Suspected violations can be reported to the DEP hotline, 609-292-7172.

TO REPORT WATER QUALITY VIOLATIONS

- DEP Office of Water Compliance and Enforcement, 609-984-5855
- *Northern Region* (Hunterdon, Morris, Passaic, Somerset, Sussex, & Warren counties), 973-299-7592
- *Metropolitan Region* (Bergen, Essex, and Hudson counties), 201-699-3900
- *Central Region* (Mercer, Middlesex, Monmouth, Ocean, and Union counties), 609-584-4200
- *Southern Region* (Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Salem), 609-968-2640

For Further Information

Contacts:

DEP 24-Hour Hotline, 609-292-7172

DEP Division of Water Quality, 609-292-4543

DEP Office of Water Compliance and Enforcement, 609-984-5855

DEP Watershed Permitting Element, 609-292-4543

DEP Bureau of Point Source Permitting (Region 1, which includes watersheds 1-6, and 11-13 from the list on page 114), 609-633-3869

DEP Bureau of Point Source Permitting (Region 2, which includes watersheds 7-10 and 14-20 from the list on page 114), 609-292-4860

DEP Bureau of Non-Point Pollution Control, 609-633-7021

Website:

DEP Division of Water Quality,
<http://www.state.nj.us/dep/dwq>

The laws and regulations:

Water Pollution Control Act, N.J.S.A. 58:10A

N.J. Pollutant Discharge Elimination System Regulations, N.J.A.C. 7:14A

Written references:

“Division of Water Quality Program Guide,” 1997. DEP
Division of Water Quality, 609-292-4543

Individual Septic Systems – Private septic systems serve 14 percent (about 400,000) of New Jersey homes. Improperly functioning systems can contaminate surface or groundwater and threaten human health. Under the N.J. Realty Improvement Sewerage Facilities Act of 1954, the DEP sets minimum standards for the location and construction of septic systems. The regulations were revised under new rules adopted in 1989 (found in N.J.A.C 7:9A, known as “Chapter 199”).

The state regulations specify soil suitability, permeability testing, system location, design and construction, operation, maintenance and repair. They also require that septic owners receive educational information that explains how a septic system works, how improper use and maintenance can impair water quality and human health, how to properly maintain the leaching area, when to pump, signs of and remedies for poor performance and malfunction, the effects of excessive water use, and substances prohibited for septic disposal.

Municipalities may adopt stricter requirements, and some have adopted septic management ordinances mandating the licensing of septic tanks, pump-outs on a three-year basis, or licensing of septic contractors. The DEP originally proposed these requirements and a requirement for manholes on septic tanks under the Chapter 199 rules, but they fell to pressure from industry groups. Such stricter local ordinances (and the technical basis for the ordinance) must be filed with the DEP, which can support the municipality in the event of a legal challenge.

Local boards of health are responsible for approving plans for septic systems (conforming to state and local regulations) and for enforcing septic maintenance and repair. Systems in use before the new 1989 rules may continue to

operate, as long as they conform to the standards in effect when they were built and do not malfunction.

For Further Information

Contacts:

Municipal or County Health Departments (See page 98 for CEHA offices)

DEP Division of Water Quality, 609-292-4543

DEP Bureau of Nonpoint Pollution Control, 609-633-7021

Small Flows Clearinghouse, University of West Virginia,
Dept. of Technology Education, 800-624-8301

Website:

DEP Division of Water Quality,
<http://www.state.nj.us/dep/dwq>

The laws and regulations:

N.J. Realty Improvement Sewerage and Facilities Act of 1954, N.J.S.A. 58:11-23 *et seq.*

Standards for Individual Subsurface Sewage Disposal Systems, N.J.A.C. 7:9A.

Written references:

"A Homeowner's Manual for Septic Systems," 1997. DEP Division of Water Quality, PO Box 029, Trenton, NJ 08625, 609-292-4543

Underground Storage Tanks – Millions of gallons of gasoline, heating oils, and other hazardous substances are stored in underground storage tanks (USTs) throughout New Jersey. A significant number of these tanks leak as a result of corrosion or improper installation or operation. This is a common cause of groundwater contamination.

The state's 1986 Underground Storage of Hazardous Substances Act (based on the federal Hazardous and Solid Waste Amendments of 1984 under the Resource Conservation and Recovery Act) requires the registration and systematic testing and monitoring of USTs, in order "to detect leaks and discharges as early as possible and thus minimize further degradation of potable water supplies."

In 1994, the state's regulations were amended to parallel federal regulations more closely. These changes strengthened the regulations in some areas but weakened them in others. The biggest change was that residential USTs containing heating oil became exempt from regulation, although any spills from those tanks must be reported to the DEP and remediated.

Under DEP regulations, USTs used for motor fuel, heating oil or other petroleum products, waste oil, hazardous chemicals or hazardous waste must be registered with the DEP's Bureau of Underground Storage Tanks. Residential heating oil tanks, commercial heating oil tanks of 2,000 gallons or less, and farm or residential motor fuel tanks of 1,100 gallons or less are exempt. Also exempt are septic tanks, pipelines, surface impoundments (these are regulated under other programs) and tanks in basements or similar areas that are above the floor, have secondary containments, and can be inspected visually.

New tanks must be made of non-corrodible materials, must have spill and overfill protections (unless they are refilled in increments of 25 gallons or less), and must have containment chambers or catch basins for all piping.

Certain tanks also must have secondary protection systems (usually a double-walled tank). These include tanks containing certain hazardous materials (excepting petroleum products and waste oil, unless they meet other reporting or leak detection requirements), and tanks containing gasoline or non-petroleum hazardous substances within 2,000 feet of a public or non-public community water supply. These "well-head" protections, introduced under the 1994 amendments, represent a strengthening of the law.

Under the 1984 federal and 1986 state laws, some existing tanks were to have been upgraded by 1993-1995, and tanks containing hazardous substances (except petroleum products and waste oil) were to have both primary and secondary containments by the end of 1998. All deadlines except for those pertaining to leak detection systems were extended to December 1998. Upgrades include spill and overflow protection, a monitoring system, the marking of all fill ports to identify contents, and leak detectors and shut-down devices on tanks with non-conforming piping. About 86,000 USTs in New Jersey are affected by this 1998 deadline. The required upgrades are estimated to cost as much as \$250,000-500,000 for a facility such as a gas station with three underground storage tanks.

In the case of an accidental release, the owner/operator of a UST must determine the source, remove all hazardous contents, file an initial report within seven days, and submit a final professional report within 120 days to the

local health department and the DEP. The report must include detailed descriptions of the land, the community, and water bodies and wells within certain distances, the amount and migration route of the discharge, a schedule of corrective action, and other information.

While federal regulations require owner-operators of USTs to demonstrate financial responsibility for cleanups from leaks, the state currently has no such regulations. Federal regulations exempt tanks containing heating oil for on-site consumption (including residential tanks, which are also currently excluded from the state's regulations) and say nothing about assuming responsibility for injury to other people or properties. Some older homeowner insurance policies covered USTs, but newer policies usually specifically exclude them. In many cases, residential heating oil customers can purchase UST insurance from their full-service oil supplier for between \$100 and \$200 per year.

The DEP also regulates tank closures, although no permit is needed if the owner follows the state's technical requirements to the letter and informs the DEP 30 days before closure. Tanks empty for more than 12 months must be closed. Within 90 days of closure, a thorough report is due at the DEP.

Permits from the DEP and from the local construction official are required for UST installations, except (under the 1994 amendments) if the tank is double-walled and all the piping and other requirements meet the letter of the law, in which case the owner must only register with the DEP and does not need a formal permit.

DEP regulations for USTs supersede local ordinances. However, municipalities may regulate smaller USTs and may seek DEP approval for stricter municipal ordinances.

Two funding sources are available for USTs: the 1993 Hazardous Discharge Site Remediation Fund, which can pay for cleanups from UST spills (including remediation for contaminated wells); and the 1997 UST Remediation, Upgrade, and Closure Fund, which offers low-interest loans and grants. These funds are available to homeowners, small businesses, municipalities and schools.

UST releases or spills may be reported to the DEP's 24-hour hotline at 609-292-7172

For Further Information

Contacts:

DEP Bureau of Underground Storage Tanks, 609-292-8761

The laws and regulations:

Underground Storage of Hazardous Substances Act of 1986, N.J.S.A. 58:10A-21 *et seq.*

Underground Storage Tank Improvement Fund, N.J.S.A. 58:10A-36 and 37

Underground Storage Tank Systems Technical Requirements and Procedures, N.J.A.C. 7:14B-1 *et seq.*

Written references:

"Don't Wait Until 1998: Spill, Overfill, and Corrosion Protection for Underground Storage Tanks Regulated in New Jersey," DEP and EPA, 1995, DEP Site Remediation Program, PO Box 028, Trenton, NJ 08625, 609-292-8761

Nonpoint Source Pollution

Nonpoint source (NPS) pollution comes from a variety of diffuse sources. Most of it is carried in stormwater runoff from roads, construction sites, farmlands, lawns, driveways and parking lots. Faulty septic systems also contribute to NPS pollution. The DEP defines NPS as "a contributing factor to water pollution that cannot be traced to a specific discernible confined and discrete conveyance" [such as a discharge pipe or outlet] (N.J.A.C. 7:15-1.5).

In rural areas, NPS pollution comes from agricultural sediment, fertilizers, herbicides and animal wastes. These degrade both surface and ground water with elevated levels of nutrients (which promote plant and algae growth and disrupt fish life), sediments and bacteria. In urban areas, NPS pollution comes from lawns, paved or impervious surfaces (including sidewalks, roads, driveways, parking lots and roofs), and commercial or industrial sites. This runoff may travel overland, seep into the soil or be carried through storm sewers. It usually contains hydrocarbons, heavy metals, organic and inorganic debris, sediment, lawn chemicals and animal wastes.

There are many programs for controlling NPS pollution at the federal, state and local levels, but these programs have generally been voluntary. However, in 1989, the DEP published the Nonpoint Source Assessment and Management Program Report, a first step toward a statewide NPS control plan. The DEP's new watershed-based planning and regulatory programs also emphasize the need to control NPS

pollution and to understand its wide-ranging effects on all water resources. The DEP's Office of Environmental Planning operates a Nonpoint Source Pollution Prevention Program that administers an NPS Control and Management Implementation Grants Program. These grants are made to local entities for the purpose of forming partnerships to improve watershed management practices.

The Stormwater Management Act is a 1981 amendment to New Jersey's Municipal Land Use Law. Under its authority, the DEP adopted Stormwater Management regulations for stormwater control from new development in 1983. All stormwater management plans and ordinances in New Jersey must comply with the standards established in the Stormwater Management rules. The DEP will propose updated standards in 1999.

The Statewide Stormwater Permitting Program (Phase I, 1993) targets the open containers and exposed materials at industrial sites and requires such facilities to devise NPS pollution prevention plans and source reduction strategies. Phase II will target commercial and municipal facilities. The DEP is now reviewing proposed federal EPA regulations for Phase II, which is due to be implemented in 1999.

The Coastal Area Facilities Review Act (CAFRA) (N.J.A.C. 7:7 and 7:7E) addresses NPS pollution as part of the planning and review process in the state's coastal areas (see also Chapter 14).

The Coastal Wetlands Permit Program (N.J.A.C. 7:7 and 7:7E) addresses NPS within regulations for coastal wetlands (see also Chapter 14).

The County Environmental Health Act (N.J.A.C. 7:1H) authorizes county, municipal or regional health agencies to act as the DEP's agent for regulations concerning water, air, noise, solid waste and emergency response. Nineteen counties are now DEP-certified (including some municipalities as sub-contractors and two regional health agencies, in Union and Hudson counties) and receive annual grants of approximately \$100,000–150,000. This program has operated since 1977. Much of the water regulation work done by counties under this program involves inspecting public, non-community water systems, which include water companies with fewer than 25 hook-ups, and wells serving small businesses where the public drinks the water. Other work includes investigating citizen complaints and illegal discharges.

The Freshwater Wetlands Permit Program (N.J.A.C. 7:7A) regulates activity in wetlands and adjacent transition or buffer areas (see also Chapter 13).

The Pinelands Protection Act (N.J.S.A. 13:18A) makes NPS pollution control a central part of the management plan for the million-acre Pineland National Reserve and its underlying 17-trillion gallon aquifer (see also Chapter 14).

The Soil Erosion and Sediment Control Act (N.J.A.C. 2:90-1) requires the state's 16 Soil Conservation Districts to control erosion and sedimentation from non-agricultural activities, unless municipalities require developers to prepare and adhere to erosion and sediment control plans.

The Stream Encroachment Program (N.J.A.C. 7:13) regulates development and land use in flood hazard areas (see also Chapter 13).

The Wellhead Protection and Aquifer Recharge Protection Programs promote local restrictions on land use within a certain distance of major water-supply wells and recommend the protection of important recharge zones.

Federal and state clean water laws also help control NPS pollution through Water Quality Management planning and through NJPDES permitting. Other regulations affecting NPS include the Solid and Hazardous Waste Management programs, the Individual Subsurface Sewage Program (septics), the Pesticide Control Program, and the Animal Control Program (N.J.S.A. 40:48-1), which allows municipalities to enact "pooper-scooper" ordinances.

For Further Information

Contacts:

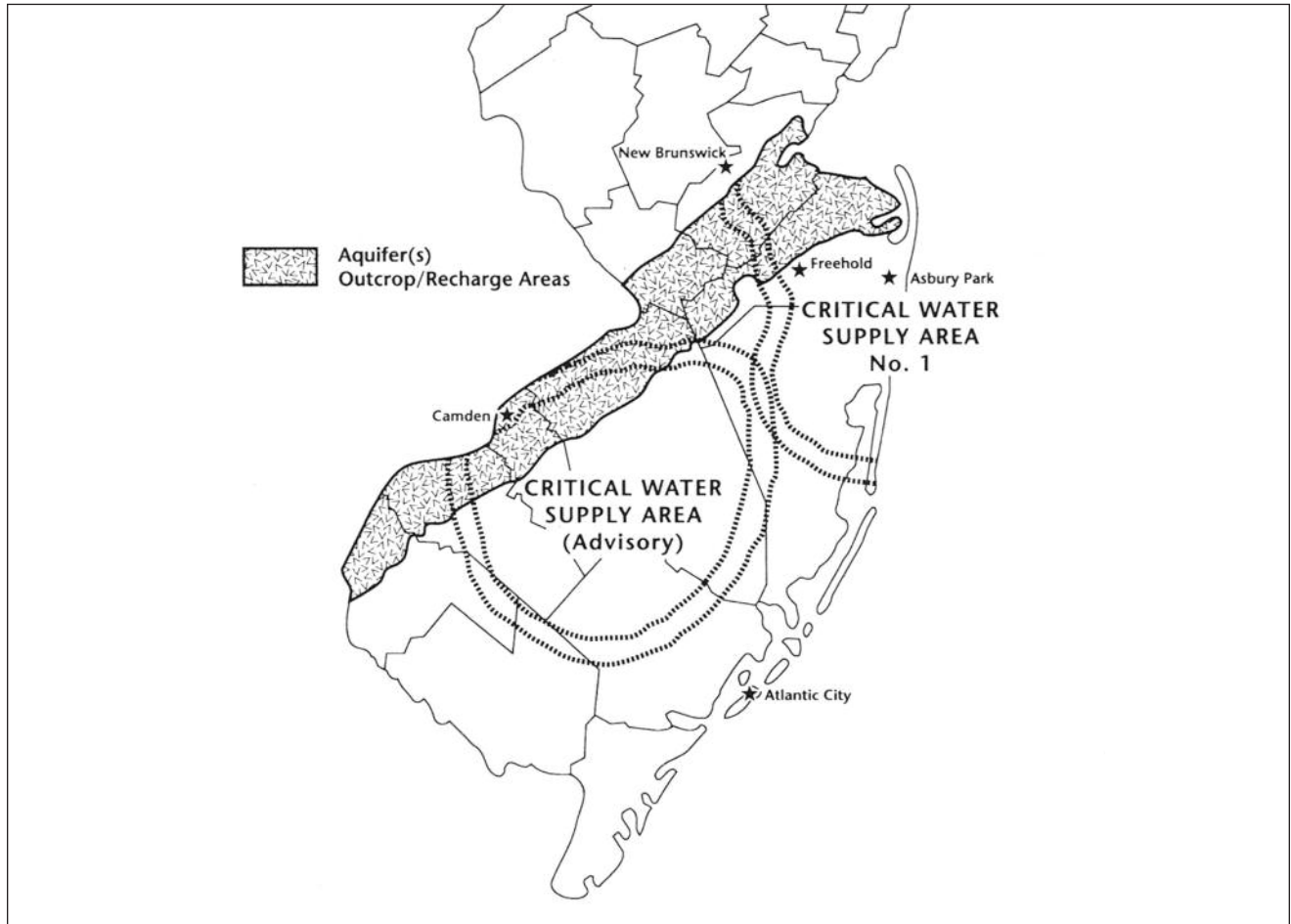
DEP Bureau of Non-Point Pollution Control, 609-633-7021
DEP Coastal and Freshwater Wetlands, 609-292-1235
DEP Pesticide Control Bureau, 609-530-4070
DEP Pesticides Public Outreach and Education, 609-984-5014
Coastal Area Facilities Review Act (CAFRA), 609-292-0060

The laws and regulations:

Stormwater Management Regulations, N.J.A.C. 7:8

Written references:

"Planning for Clean Water" Municipal Guide, 1998. DEP, Office of Environmental Planning, PO Box 418, Trenton, NJ 08625, 609-292-2113



New Jersey Water Supply Critical Areas

WATER SUPPLY

Planning and Regulation

In 1981, the state legislature, recognizing that water is not an unlimited resource, passed several laws making major changes in the regulation of water supply in New Jersey.

The Water Supply Management Act directed the DEP to adopt a uniform water diversion permit system and fee schedule for withdrawals of more than 100,000 gallons per day (gpd) from surface or ground water, and to require permits for all new public or domestic wells. (Agricultural or horticultural uses require a certification rather than a permit.) Under this legislation, the governor may proclaim water emergencies if the DEP commissioner finds that a water supply problem endangers the public health, safety or welfare. The commissioner is empowered to transfer water, make emergency interconnections or impose emergency

restrictions on use. Water emergencies were declared several times during the 1980s.

Water Supply Critical Areas – Regulations developed under the Water Supply Management Act also provide for the mapping of water supply critical areas. Currently, there are two, both in the Coastal Plain, where land development has caused aquifer depletion, which in turn has caused salt water to intrude into those six large aquifers. Critical Area #1 includes all of Monmouth County and parts of southern Middlesex and northern Ocean counties. Critical Area #2 includes large portions of Burlington, Camden and Gloucester counties and small parts of Salem, Ocean, Monmouth, Cumberland and Atlantic counties. These two critical areas cover most of the southern half of the state, with the exception of Cape May County and most of Cumberland, Salem and Mercer counties. In 1997,

the state imposed use restrictions in Critical Area #1, in some cases reducing allocations by 50 percent. The restrictions are based on formulas found in the 1993 revisions to the Water Supply Management Act. They pertain only to users of 100,000 or more gallons per day, mostly commercial and industrial users and public water suppliers. Those users are allowed to find alternate water sources. In Critical Area #1 those sources are the Manasquan Reservoir System and a pipeline from the Raritan River; in Area #2, the major alternate source is the Delaware River.

For Further Information**Contacts:**

Water Supply Element, 609-292-7219

Bureau of Water Allocation (critical areas information),
609-292-2957

The laws and regulations:

Water Supply Management Act, N.J.S.A. 58:1A and
regulations (including allocation permits, critical areas, and
water emergencies), N.J.A.C. 7:19-6

Agricultural or Horticultural Use of Water, N.J.A.C. 7:20A

The Statewide Water Supply Plan

The **Water Supply Management Act** mandates a Statewide Water Supply Plan that identifies existing sources and current use, projects future demand, recommends construction or improvement of water supply facilities, and emphasizes the need for watershed protection, which is “indispensable to the long-run success of the water supply plan.” The Plan quantifies water availability and demand in 23 water supply planning areas (based on watersheds), and in each municipality. Although the Statewide Water Supply Plan does not link the numbers to land use issues, local officials or residents can use them as a basis for local zoning and development that reflects the land’s natural carrying capacity.

The Statewide Water Supply Plan identifies several major issues in water supply planning: critical areas, salt water intrusion, meeting stricter drinking water standards, and identifying contaminated or threatened well fields. It emphasizes watershed planning and conservation, and taking a preventive approach to protecting water supply.

Prior water supply plans were concerned with how to find enough water to supply whatever development

occurred, to the extent of moving vast quantities of water between watersheds. However, the improvement in estimates of use and availability of water in the last decade—which reveal many areas of the state to be in deficit or headed in that direction—has radically altered and improved the state’s approach to water supply planning. The concept of moving water from basin to basin is no longer considered good planning.

The state has no control over new water supply facilities, as it does over new wastewater facilities. Municipalities are left to make those judgments, but few of them base their decisions on the kind of real data now available in the Statewide Water Supply Plan. The Plan was first adopted in 1982 and was revised beginning in 1989, with the revisions adopted in 1996.

Conservation

State regulations under the Water Supply Management Act require water companies pumping more than 100,000 gallons per day to meter all users. Metering encourages users to conserve and also helps to monitor leakage. In some companies, leaks account for as much as 40 percent of the usage. The DEP’s Water Supply Element offers a model ordinance that includes recommended restrictions during droughts or other emergencies. One commonly imposed strategy is a restriction or prohibition on lawn watering and car washing. To help conserve water, plumbing codes now require low-flow fixtures in new construction and in plumbing replacements. Water use in toilets has decreased dramatically; older toilets used five to seven gallons per flush, which was then cut to 3.5 gallons under new codes, and is now 1.6 gallons.

Water Supply Bond Act – This bond referendum provided \$350 million for projects included in the Statewide Water Supply Plan and also for three loan programs to construct or rehabilitate water supply facilities, to interconnect existing facilities in emergencies or to augment water supply, and to provide remedial supply in case of groundwater contamination by replacing contaminated private wells with public supply lines. (Grants for filtration systems on contaminated private wells may also be obtained from the DEP’s Environmental Claims Administration under the Spill Fund, which also pays for larger site remediations.) The DEP administers the Water

Supply Bond Act funds.

New Jersey Safe Drinking Water Act – Under this act, the DEP establishes standards for drinking water, whether delivered through private or public systems. Public systems must monitor water quality, maintain records, and notify customers if standards are not met.

Subsurface and Percolating Waters Act – This act regulates the installation, use and sealing of wells. Well drillers and pump installers must be licensed and must obtain a permit to drill any well. Local boards of health are responsible for insuring that a well permit is obtained from the DEP. A report must be filed after the well has been drilled, describing location, size, depth and yield. The DEP uses this information in mapping aquifers and in reviewing water diversion permit applications under the Water Supply Management Act.

The N.J. Geological Survey (NJGS) is working on a 10-year project to map the state's major aquifer recharge areas. As required under the state's Water Quality Planning Act, NJGS published the mapping methodology in 1994-5. Thus far, maps are published on Middlesex County, and four other counties are in process—Cape May, Monmouth, Bergen and Morris. Only Hudson County will not be mapped, since it is fully developed, has no published soils map on which to base a recharge map, and uses minimal groundwater. The DEP is hoping to contract the federal Natural Resources Conservation Service to complete the mapping, in which case the work may be completed in less than 10 years.

NJGS is also in the midst of publishing new geologic maps of the state, including aquifers and recharge areas (scale 1:100,000) to help all levels of government in making land use decisions. The project should be completed by 1999, and the maps will be available on the computerized Geographical Information System (GIS).

NJGS is also working on printing U.S. Geological Survey maps of New Jersey (scale 1:24,000 or 1 inch equals 2,000 feet). There are 179 maps for the whole state, with a few dozen now available.

Other Water Supply Agencies

The New Jersey Water Supply Authority, created in 1981 by the Legislature, is made up of the DEP commissioner and six public members representing various water supply groups, including industrial and residential users and water-

shed organizations. The members are appointed by the governor for three-year terms. This independent authority, under the DEP umbrella, is responsible for managing existing and future water supply facilities owned by the state, including Spruce Run and Round Valley reservoirs, the Delaware and Raritan Canal, the Manasquan Reservoir, other small reservoirs in Monmouth County, and projects called for in the Water Supply Master Plan.

The Delaware River Basin Commission (DRBC), created by the legislature in 1961, is a planning and regulatory agency that oversees water supply in the Delaware River watershed. Representatives come from the federal government, New Jersey, Pennsylvania, New York and Delaware. Both DRBC and the DEP's Bureau of Water Allocation issue permits for water diversion in this basin.

For Further Information

Contacts:

DEP Water Supply Element, 609-292-7219
DEP Bureau of Safe Drinking Water, 609-292-5550
New Jersey Geological Survey, 609-292-1185
DEP Maps and Publications Sales Office, 609-777-1038
DEP Natural and Historic Resources Program, 609-292-3541
New Jersey Water Supply Authority, 908-638-6121
Delaware River Basin Commission, 609-883-9500
DEP Bureau of State Case/ Environmental Claims Administration (Spill Fund), 609-633-0719

The laws and regulations:

Water Supply Management Act, *N.J.S.A.* 58:1A
Water Supply Management Act, *N.J.A.C.* 7:19-6
Water Supply Bond Act of 1981, P.L. 1981, c.261
Water Supply Bond Loan Programs, *N.J.A.C.* 7:1A
N.J. Water Supply Authority Act, *N.J.S.A.* 58-1B
N.J. Water Supply Authority, *N.J.A.C.* 7:11
Federal and state Safe Drinking Water Acts, 42 U.S.C.-300f and *N.J.S.A.* 58:12A.
Safe Drinking Water Act, *N.J.A.C.* 7:10.

Written references:

"DEP Maps and Publications Price List," N.J. Geological Survey, PO Box 438, Trenton, NJ 08625, 609-777-1038
"The Vital Resource – N.J. Statewide Water Supply Plan, Executive Summary," DEP Office of Environmental Planning, 1996, 609-984-0058

WASTE MANAGEMENT

Section A

SOLID WASTE

THE BASIC LAWS

The federal Resource Conservation and Recovery Act (RCRA) defines solid waste and establishes standards and guidelines for solid waste disposal facilities, but the management of solid waste is largely the responsibility of state and local government. In New Jersey, the regulation of solid waste management is established through the Solid Waste Management Act (SWMA), initially passed in 1970. This legislation underwent major revision in 1976 and has been amended several times since then.

The Solid Waste Management Act required the New Jersey Department of Environmental Protection (DEP) to develop a statewide solid waste master plan and to update that plan every two years. The state plan centers on four interrelated strategies, which are source reduction, recycling, resource recovery and landfilling.

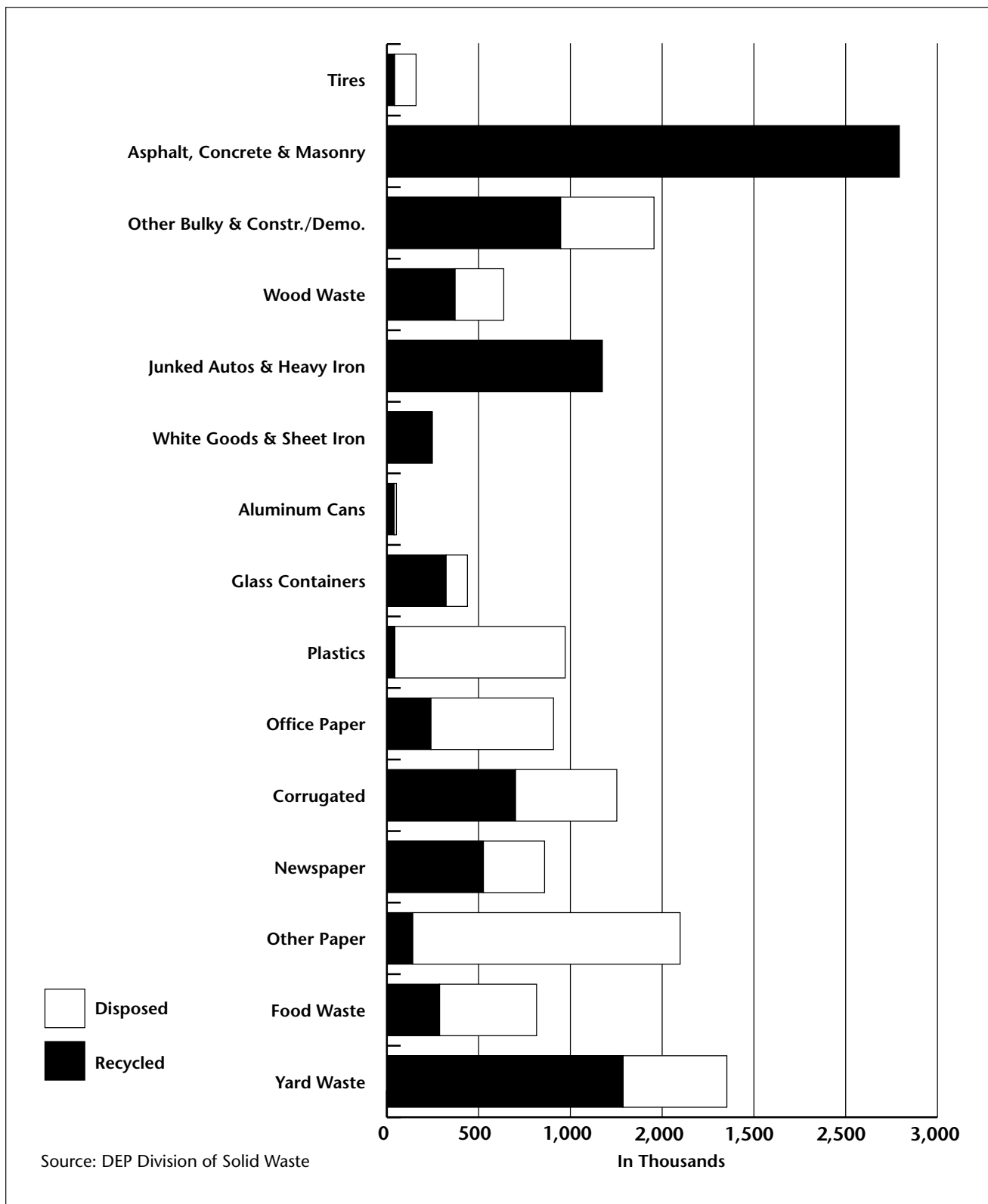
The Emergency Solid Waste Assessment Task Force, in its final report of August 1990, called for measures to reduce the volume, weight and toxicity of solid waste, and raised the state's recycling goal to 60 percent of the *total*

waste stream. Solid waste disposal facilities were to be regionalized to manage the remaining waste.

New Jersey adopted a goal of solid waste disposal self-sufficiency, meaning that non-recycled solid waste generated within the state would have to be disposed of within the state, either through incineration or landfilling. The resulting system of state (DEP) solid waste "flow control" to achieve self-sufficiency has since been ruled unconstitutional. The Supreme Court determined that, because it prevents out-of-state contractors (landfills and incinerators) from bidding on waste disposal contracts, flow control violates the Interstate Commerce Clause of the U.S. Constitution. With over 30 percent of New Jersey's solid waste now going to out-of-state facilities, and a likelihood that even more will be shipped out in the future, the incinerators and other solid waste facilities that were built in New Jersey when flow control guaranteed them a steady supply of trash are facing financial problems.

Planning

The Solid Waste Management Act classified New Jersey's 21 counties plus the Hackensack Meadowlands as solid waste planning districts. Each of these 22 districts is charged with drafting, adopting and executing a ten-year solid waste master plan that incorporates adequate disposal



1995 New Jersey Material Specific Recycling Rates

facilities (including recycling facilities, resource recovery plants and sanitary landfills) to meet the district's needs. Districts in the same region are encouraged to share facilities. All 22 districts now operate under DEP-approved solid waste master plans. Because of the Supreme Court decision restricting state flow-control, all of these solid waste master plans will need to be revised.

Municipal governing bodies are responsible for local recycling, and most also provide for regular waste collection. The DEP is responsible for certifying county plans, making permitting decisions for solid waste facilities, and for registering and licensing waste haulers and facility operators. Municipalities, counties and the DEP share responsibility for enforcing solid waste regulations.

Specific Regulations Under the Laws

The Solid Waste Management Act provides the following division of responsibility between the DEP and the 22 waste management districts.

The districts are required to:

- develop a 10-year solid waste master plan;
- implement the approved plan;
- select appropriate technology;
- select sites for solid waste disposal facilities; and
- plan financing of the projected work.

The DEP is required to:

- prepare a statewide plan;
- review and certify district plans and amendments;
- issue permit decisions for construction and operation of solid waste facilities;
- regulate waste flow (The practice of state "flow control," as presently carried out in New Jersey, was deemed unconstitutional by Supreme Court decisions in 1994 and 1997.);
- provide enforcement; and
- provide state funding.

How It Works

Each district has a designated implementing agency appointed by the board of chosen freeholders. This agency may be a department in the county planning board, an

improvement authority or a utility authority. The implementing agency assists the freeholders in developing a solid waste management plan, which may include proposals for new transfer stations, resource recovery facilities and sanitary landfills. The proposed plan is presented at a public hearing. Following the hearing, the freeholders may adopt the plan, with or without modifications, by resolution.

In addition to the implementing agency, each district has a Solid Waste Advisory Council (SWAC), an appointed body that advises the freeholders on the development of a solid waste management plan. The SWAC members include representatives from the municipalities in the district, the solid waste industry and the environmental community. Amendments to the district plan are subject to review by the SWAC and to a public hearing. Any individual who files a written objection at the public hearing may challenge the plan or individual amendments in Superior Court within 30 days of adoption.

The solid waste management plan, with complete background data, records of consultations with the SWAC and with government agencies, and transcripts of all public hearings, is sent to the commissioner of the DEP for review. The entire proposed plan or plan amendment is then circulated to at least 16 state and federal agencies for review and comment. After comments are received, the DEP commissioner approves, rejects or modifies the plan or plan amendment.

Permits

Only after an approved site or technology for a waste disposal facility is found to be consistent with the district's plan may a county or applicant submit an application for a solid waste facility permit to the DEP. The application includes a registration statement, an Environmental and Health Impact Statement (EHIS) and engineering designs.

When the applicant has fulfilled all submission requirements and the application is determined to be administratively complete, the DEP notifies officials of the municipality in which the facility is proposed and of any municipality within one mile of the site. Copies of the permit application are sent to municipal clerks, county clerks and appropriate federal and state agencies, including those with jurisdiction over air quality, water and wildlife resources.

Within six months of receiving the administratively complete application, the DEP must either deny, reject as technically incomplete, or tentatively approve it, based on technical evaluation and the comments received from appropriate federal and state agencies. Meanwhile, interested persons may make an appointment to review the application in the DEP offices or purchase a duplicate copy.

Within 45 days of granting tentative approval, the DEP must conduct a public hearing on the proposed facility, followed by a 15-day period of public comment. Public notice of the hearing, including a fact sheet of detailed information about the proposed facility, is mandatory. Proceedings of the public hearing are transcribed or recorded, and become a permanent part of the public record. All interested parties must be given the opportunity to appear and comment. At the hearing, DEP will attempt to address written questions received no later than five days before the hearing. In addition, written questions may be submitted to the DEP no later than 15 days after the hearing.

The DEP estimates that it takes between a year and a year and a half to complete the permit process. For a sanitary landfill, the full project (siting, design, permitting, construction and start of operations) takes about three years. For a major resource recovery facility (incinerator), the project could take five to six years.

Enforcement and Penalties

Codes, rules and regulations governing the collection and disposal of solid waste in New Jersey are enforced by the DEP and by local and county boards of health. Inspectors from municipal and county boards of health or the DEP have the right to inspect solid waste facilities *at any time*. If a facility is operating improperly, or violating any applicable regulations, municipal or county inspectors or DEP field inspectors may issue a summons and/or file a complaint against the operator of the facility. Enforcement procedures and fines for violations are spelled out in the Solid Waste Management chapter of the New Jersey Statutes (N.J.S.A. 13:1E-9).

Financial Aid

A number of different tax and surcharge structures are used to fund solid waste activities such as solid waste planning

and landfill closures, and to reduce resource recovery facility user fees. Such surcharges are incorporated into the per-ton user fees ("tipping fees") paid at landfills, resource recovery facilities or transfer stations in New Jersey.

The 1981 Sanitary Landfill Facility Closure and Contingency Fund Act imposed a \$.50-per-ton surcharge on landfill tipping fees to cover the costs of damages resulting from the operation or closure of a sanitary landfill. The Act also required landfill operators to establish an escrow account, funded by a \$1.00 per ton surcharge, to ensure adequate closure and post-closure measures for the facility, as approved by DEP. One result of the financial and technical requirements of this legislation is that over 40 percent of the 350 sanitary landfills operating at the time of its enactment were closed.

The McEnroe Act, passed in 1985, provides financial support for a number of solid waste projects by adding the following charges to the tipping fees charged at most disposal facilities:

The Solid Waste Services Tax. Started in 1985 as a 50-cent-per-ton charge, this tax has increased by five cents annually. The funds are distributed to the counties to prepare and revise district plans and to support projects such as household hazardous waste collection, waste flow enforcement, recycling programs and resource recovery development. Each county gets a minimum of two percent of the funds collected each year. The amount is based on district waste generated in accordance with grant application requirements.

Host Municipality Benefits. Host communities of solid waste facilities receive the proceeds of a special surcharge on the tipping fee. This payment, which is intended to offset the host municipality's costs and to compensate for the negative impacts of the facility (such as additional truck traffic, flyaway trash and odors), also provides an incentive for siting such facilities. Host municipality surcharges are a minimum \$1 per ton on waste deposited at a landfill or resource recovery facility, and a minimum of \$.50 per ton at a transfer station. Host communities are currently receiving funds ranging from \$1.00 to \$7.00 per ton.

The 1980 Natural Resources Bond Act and the 1985 Resource Recovery and Solid Waste Disposal Facility Bond Act provide funds for low-interest or interest-free loans to

counties or local governments for new, environmentally sound sanitary landfills or resource recovery facilities.

For Further Information

Contacts:

DEP Division of Solid & Hazardous Waste, 609-984-6900
DEP Bureau of Recycling and Planning, 609-984-3438
DEP Bureau of Hazardous Waste Regulation, 609-292-7081
DEP Bureau of Economic Solid Waste Regulation,
609-984-2080

Website:

DEP Division of Solid & Hazardous Waste,
<http://www.state.nj.us/dep/dshw>

The laws and regulations:

Federal Resource Conservation and Recovery Act (RCRA),
42 U.S.C. 6901 *et seq.*, Subtitle C deals with hazardous
waste, subtitle D with solid waste.
Solid Waste Management Act (SWMA), N.J.S.A. 13:1E-1
et seq. and regulations N.J.A.C. 7:26-1 *et seq.*
McEnroe Act, 1985, N.J.S.A. 13:1E-1 *et seq.*
Solid Waste Services Tax, N.J.S.A. 13:1E-136, 138
Host Municipality Benefits, N.J.S.A. 13:1E-28
Natural Resources Bond Act, P.L. 1980, c.70
Resource Recovery and Solid Waste Facility Bond Act, P.L.
1985, c. 330
Sanitary Landfill Facility Closure and Contingency Fund
Act, N.J.S.A. 13:1E-100 *et seq.*

SOURCE REDUCTION

An important element of New Jersey's solid waste strategy is to reduce the volume and weight of the solid waste that is produced. This requires efforts to minimize the material used in manufacturing and packaging products, so that the consumer buys as little extraneous matter as possible. Packaging represents approximately 30 percent of the waste stream. Cutting back on excessive packaging could remove up to 10 percent of the solid waste stream.

Encouraging manufacturers to pare down the needless fluff surrounding their products is public policy at the federal and state level. (In some states beverage container deposit legislation, sometimes called "bottle bills," encourage the return of recyclable or refillable containers as one aspect of source reduction.)

At the local level, communities can promote source

reduction through public awareness campaigns, by adopting bare-bones purchasing practices for municipal needs and by encouraging local businesses to adopt reusable, recyclable, more degradable and less bulky materials for food service, wrapping and packaging. These strategies can influence manufacturers to streamline their products.

Municipalities can have garbage collection systems where charges are based on the amount of solid waste that residents throw out. Called a "per-container fee" or "unit pricing," this system charges for each can or bag set out, rather than imposing a flat fee that covers any amount of garbage. Per-container fees give residents an incentive to reduce their waste and recycle more.

For Further Information

Contact:

DEP Bureau of Recycling and Planning, 609-984-3438

Website:

DEP Bureau of Recycling and Planning,
<http://www.state.nj.us/dep/dshw/recycle>

Written references:

"Pay as You Throw - Lessons Learned about Unit Pricing,"
USEPA Publication #530-R-94-004

"Implementing Per-Unit Pricing for Municipal Solid Waste
Collection," DEP, Div. of Solid & Hazardous Waste, 1995,
609-984-6900

"How to Reduce Waste & Save Money/ Case Studies from
the Private Sector," DEP, 1996

RECYCLING

The New Jersey Statewide Mandatory Source Separation and Recycling Act (Mandatory Recycling Act) of 1987 made New Jersey the first state to institute mandatory recycling as a solid waste management strategy. Recycling is a cost-effective form of solid waste management. The greatest savings are realized by the disposal costs (incineration, landfilling) that are *avoided* when materials are recycled. Revenues generated by resale of materials also may help offset handling costs. In 1981 the New Jersey Recycling Act required the DEP to prepare a recycling plan for the state. It provided funding for recycling programs from a per-ton surcharge (since discontinued) on solid waste disposal. The Bureau of Recycling and Planning is part of the DEP's Division of Solid and Hazardous Waste.

The Basic Law

The 1987 Mandatory Recycling Act required counties to adopt a district recycling plan and to:

- appoint a recycling coordinator;
- designate at least three materials as the county's recyclables;
- establish plans for municipal leaf composting;
- develop a plan for collecting, marketing and disposing of source-separated recyclables in each municipality;
- make maximum use of existing private and volunteer recycling organizations;
- set a goal of recycling at least 15 percent of the previous year's total municipal solid waste stream by the end of the first full year of the plan, and increase that goal at the end of the second full year to at least 25 percent of the base year's solid waste total.

In 1992, state recycling goals were increased to 50 percent of the total municipal solid waste stream, and to 60 percent of the *total* solid waste stream by 1995.

Under the Mandatory Recycling Act, each municipality must:

- designate a recycling coordinator;
- provide for collection of recyclables;
- pass ordinances requiring source separation of designated materials;
- revise planning and zoning ordinances to include recycling, and update these ordinances every three years;
- submit a tonnage grant report to the DEP Bureau of Recycling and Planning by July 1 of each year, documenting the amounts of recyclable materials collected;
- publicize the recycling program at least once every six months; and
- provide for the collection of leaves and require that they be kept separate from the municipal solid waste stream.



Permits

Recycling centers that handle traditional recyclable materials (glass, metal, paper, plastic or cardboard) are not required to obtain special registration or approvals from the DEP. Such centers are subject to local site plan and zoning regulations. The DEP must approve centers handling materials such as construction debris, wood waste, coal ash, tires, tree stumps or other nontraditional recyclable materials.

Composting facilities must obtain a Class "C" Recycling Center Approval from the DEP. In addition to the general permit regulations, leaf-composting facilities have special engineering requirements. However, in an effort to encourage municipal composting, the state revised regulations to allow some small, local composting operations to be exempt from certain fees and registration requirements.

Funding

From 1987 through 1997, county and municipal recycling programs received financial assistance from the state in the form of tonnage grants. The grants were funded by a per-ton surcharge on solid waste deposited in landfills in New Jersey. The surcharge also provided money for recycling education programs, and low-interest loans for businesses to pursue recycling market development and research. The legislation that created the surcharge expired in December 1996, and was not readopted. Local recycling programs do not currently receive financial assistance from the state, but many break even or make a profit from the sale of recyclable materials. The money saved as a result of *not* having

to incinerate or landfill recyclable materials generally makes recycling a cost-effective strategy for solid waste management, whether or not it is subsidized by surcharges.

The Mandatory Recycling Act and its amendments contain provisions for market incentives to encourage the use of recycled materials. The Act stipulates that recycled paper should make up at least 65 percent (by cost) of the State's paper purchases, that counties and municipalities may cooperatively buy recycled paper procured through the DEP's Division of Purchase and Property, that the Department of Transportation must encourage the use of recycled materials in highway construction, and that priority should be given to the use of leaf compost in maintenance of public lands.

To assist counties and municipalities seeking to market materials or to expand into recycling other materials, the DEP's Bureau of Recycling and Planning publishes a "New Jersey Directory of Recycling Markets." This publication contains general recycling market information and a county-by-county directory of trade associations, dealers and businesses that handle a wide variety of recyclable materials.

For Further Information

Contacts:

DEP Bureau of Recycling and Planning, 609-984-3438
Association of New Jersey Recyclers, 908-722-7575

Website:

DEP Bureau of Recycling and Planning,
<http://www.state.nj.us/dep/dshs/recycle>

The law and regulations:

New Jersey Statewide Mandatory Source Separation and Recycling Act, N.J.S.A. 13:1E-99.32 *et seq.*
Recycling Regulations, N.J.A.C. 7:26A
Recycling Loans and Grants N.J.A.C. 7:26-15.1 *et seq.*
Leaf Composting, N.J.A.C. 7:26A-1.1 through 4.5, plus Appendix A

Written references:

"New Jersey Directory of Recycling Markets," DEP Division of Solid & Hazardous Waste, 1995
"New Jersey's Manual on Composting Leaves & Management of Other Yard Trimmings," Strom & Finstein, Cook College/N.J. Agr. Experiment Station, available from DEP Bureau of Recycling & Planning, 609-984-3438
"The Municipal Guide to Business Recycling," ANJEC, 1991

"Recycling Handbook for N.J. Businesses," ANJEC, 1991

"Strength in Numbers: Recycling in Multifamily Housing," ANJEC, 1988

"Spreading the Word: A Publicity Handbook for Recycling," ANJEC, 1986

RESOURCE RECOVERY

Resource recovery facilities, which include burning with energy recovery (trash-to-energy incinerators), materials processing and recovery, and composting, are another element of the New Jersey Solid Waste Management Plan. During the 1980s the state of the art for resource recovery was focused on incineration with energy recovery as a technically reliable method for disposing of solid waste.

Incinerators can reduce the volume of solid waste as much as 90 percent, with a 70 percent reduction in weight. The incineration process can produce marketable energy in the form of electricity, steam or hot water. Residual ash from the incineration of solid waste is generally landfilled, although other techniques are being tested in pilot projects within the state. One such project incorporates treated ash (with ferrous materials removed) into a low-quality construction material. If incinerator ash tests as hazardous waste, it must go to a landfill that is authorized for such disposal.

The two predominant incineration methods are mass-burn systems and refuse-derived fuel (RDF) systems. Mass-burn systems incinerate garbage as it is delivered to the plant, with only minimal preliminary processing to separate out bulky, non-combustible, or potentially dangerous items. For RDF systems, the waste is pre-separated and shredded into a uniform, highly combustible fuel that may be burned on site or shipped to another location. Currently, incineration facilities in New Jersey all utilize the mass-burn process.

Specific Regulations Under the Law

In New Jersey, all municipal solid waste incinerators must have three kinds of air pollution control equipment located between the boiler and the stack: an acid gas reduction system, a particulate control mechanism and a mercury control system. The unwanted acid gases are sulfur dioxide, which forms a relatively low percentage of the emissions from solid waste combustion, and hydrogen chloride, which may be present in significant amounts because of

polyvinylchloride plastic in the waste. Particulates (particulate matter), also known as fly ash, are fine bits of dust caught up in the flue gases from the furnace.

Among the many environmental issues that must be addressed in the Environmental and Health Impact Statement of a resource recovery facility permit application are: air emissions, disposal of the residual ash from waste combustion, noise of plant operation, on-site and off-site truck traffic, the overall operations of the facility, pests, odors and the visual impact of the plant.

Public concern about incinerators tends to focus on potential harmful effects of possible emissions, most notably on a group of organic compounds known as the dioxins (polychlorinated dibenzo-p-dioxins, or PCDDs) and furans (polychlorinated dibenzofurans or PCDFs), suspected carcinogens. There are no formal U.S. standards for acceptable levels of PCDD-PCDF emissions. Concern also has been voiced about cadmium and mercury (found in the incinerator ash and in stack emissions) due to the possibility that these metals might leach into the ground or be released into the air. Most airborne lead emissions are now removed through carbon injection systems, required on New Jersey incinerators since 1994.

Some experts feel that with proper operation of incinerators and landfills, the solubility and mobility of the metals in residual ash can be controlled. New Jersey has the most stringent residual ash testing and management requirements in the country. Since the residual metals in the ash and air emissions equal the total metals in the solid waste, the DEP's Pollution Prevention program is focusing on reducing the metals in solid waste. Programs that provide for separate municipal or county hazardous waste collections (for items such as automobile batteries) to remove them from the waste stream can produce significant benefits regardless of the type of facility in which waste is disposed. In 1991, the Solid Waste Management Act was amended to prohibit the disposal of lead acid batteries as solid waste.

National air quality standards, promulgated as part of the federal Clean Air Act, set acceptable ambient levels of particulate matter, sulfur oxides, carbon monoxide, nitrogen dioxide, lead, ozone and emissions of a number of other chemicals, gases and trace metals that might be present in incinerator exhaust gases. The New Jersey Air

Pollution Control Act authorizes the DEP to regulate air pollution from all sources and set standards that are more stringent and more protective than the national standards. In 1983 the DEP established specific regulations for emissions from resource recovery facilities.

In addition to the general solid waste facility permit application requirements, applications for a resource recovery facility permit are subject to the provisions of N.J.A.C. 7:26-2B, which contains additional engineering design and operational requirements.

For Further Information

Contacts:

DEP Bureau of Resource Recovery and Technical Programs,
609-984-6664

DEP Bureau of Recycling and Planning, 609-984-3438

DEP Bureau of Air Quality Engineering, 609-984-3023

The law and regulations:

Engineering and operational requirements for thermal destruction facilities N.J.A.C. 7:26, Subchapters 2 and 2B

Disposal of lead acid batteries N.J.S.A. 13:1E-203 *et seq.*

Emission standards for incinerators N.J.A.C. 7:27-11.3

Mercury emissions from MSW incinerators N.J.A.C. 7:27-27.1 *et seq.*

LANDFILLS

To provide funds for proper closure and maintenance of landfills, the Sanitary Landfill Closure and Contingency Fund Act (1981) imposes a surcharge on all solid waste deposited in New Jersey landfills. The 1985 revisions to the Solid Waste Management Act provided further funding sources.

New Jersey now has only 12 large landfills, which receive approximately 75 percent of all solid waste disposed of in the state. (In 1994, about one-third of our waste was shipped out of state for disposal.) There are also 26 smaller, sole-source landfills, privately owned and operated, each serving a single facility or industry. The last remaining municipal landfill, located in Linden, is scheduled to close around the year 2000.

The modern sanitary landfill is designed with a series of synthetic liners (called geomembranes) and layers of clay that block the flow of leachate (the liquid runoff that seeps from the landfill) into the ground water. The liner system

has a primary and secondary liner, with each liner consisting of a geomembrane directly on top of a clay liner (called a composite liner). This system has built-in redundancy and protection due to the low permeability of the geomembrane and the attenuation capacity of clay. The liner system works in conjunction with a drainage system, designed to collect leachate, which is pumped out of the landfill and treated. There is a leak detector system between the primary and secondary liners. Monitoring wells at the edges of the landfill enable operators to keep a watch on the quality of the groundwater. Incoming solid waste is covered daily with appropriate cover material. At some landfills, the methane, which is produced when organic material in the landfill breaks down, is captured and distributed for use as a fuel.

Tipping fees, the charges paid for disposal at a sanitary landfill, have risen from an average \$3 per ton in the late 1970s to an average of \$60 per ton for in-state landfill disposal, and more than \$100 per ton in some waste management districts that use out-of-state landfills. Included in the tipping fees are surcharges that fund landfill closure programs, as well as fees payable to the “host” community.

For Further Information**Contacts:**

DEP Bureau of Landfill & Recycling Management
609-984-6650

DEP Bureau of Resource Recovery & Technical Programs,
609-984-6985

DEP Bureau of Solid Waste Compliance & Enforcement,
609-584-4180

The law and regulations:

Solid Waste Management Act *N.J.S.A. 13:1E-1 through 18, 28, 171, 176*

Solid Waste Facility Regulations *N.J.A.C. 7:26 Subchapters 2 and 2A*

Transfer Stations, Waste Collection and Waste Flow

All trash collectors and trash haulers must be licensed and registered by the DEP, which collects fees for these services. The DEP also registers and inspects vehicles used in the transport of solid waste.

New Jersey’s 1983 Disclosure Act (also known as the A-901 Disclosure Act) requires all people connected with the solid or hazardous waste industries to disclose full information about their backgrounds. Any person or firm with a criminal record or lacking reliability, expertise or competence may be denied a license.

Transfer stations are centralized collection depots that accept truckloads of waste and compact it for shipment in larger trucks to a more distant landfill or resource recovery facility. Transfer stations operate under permit from the DEP, like any other solid waste facility. The rules and regulations governing their design, construction and operation are found at *N.J.A.C. 7:26-2B*.

In the past, the DEP controlled waste flow — where the garbage from each New Jersey town is deposited and how it gets there. The DEP, through its power to approve district waste management plans, controlled the flow of waste (“flow control”) from one district to another and had final approval over where wastes were incinerated or deposited. However, a 1994 Supreme Court ruling declared that, to the extent that out-of-state solid waste facilities are excluded from bidding on contracts for solid waste disposal, state “flow control” violates the Interstate Commerce Clause of the Constitution. As a result of this ruling, the DEP made revisions to its solid waste regulations in 1997 to allow for an open bidding process.

The Supreme Court’s ruling on flow control will affect the future of expensive incinerators and other solid waste facilities that were built on the assumption that flow control would continue, guaranteeing a steady in-state supply of trash. The debt that was incurred by the counties that built these incinerators (and the transfer stations needed for flow control) is estimated at more than a billion dollars.

For Further Information**Contact:**

DEP Bureau of Hazardous Waste Registration, Licensing and Registration Unit, 609-292-7081

The law and regulations:

1983 Disclosure Act, *N.J.S.A. 13:1E-126 et seq.*, and regulations on disclosure and licensing, *N.J.A.C. 7:26-16.1 et seq.*

Collection and Haulage Regulations, *N.J.A.C. 7:26-1 et seq.*

MEDICAL WASTE

The New Jersey Comprehensive Regulated Medical Waste Management Act of 1989 required the DEP, in consultation with the Department of Health (DOH), to adopt the rules and regulations promulgated by the EPA under the Medical Waste Tracking Act of 1988. The DEP and DOH must jointly implement and enforce the provisions of the comprehensive act. New Jersey's regulations are included in the solid waste chapter of the New Jersey Administrative Code (N.J.A.C. 7:26 and 7:26A).

The medical waste management system includes a state tracking system for the transport of all medical waste, no matter how small the amount. For every shipment, a manifest must be completed that contains a record of who generated the waste, who transported it, any intermediate handlers, and the final destination/facility. Regulated medical waste must be labeled and kept separate from other solid waste. Transporters must register with the DEP and must also notify the EPA of intent to transport regulated medical waste. Fees assessed to generators, waste handlers and destination facilities are dedicated to support the program.

Regulated medical waste covered under the act includes cultures and stocks of infectious agents, human blood and blood products, used and unused "sharps" including syringes, human pathological and isolation waste, and animal waste. Medical waste that has been treated to reduce or eliminate its potential for causing disease may be taken to any transfer station or sanitary landfill in New Jersey authorized to accept regulated medical waste. Generators with on-site incinerators must keep a detailed log of incinerator operations.

For Further Information

Contact:

DEP Medical Waste Program, 609-984-6620

The law and regulations:

The Comprehensive Regulated Medical Waste Management Act, N.J.S.A. 13 1E-48.1 *et seq.* and regulations, N.J.A.C. 7:26 Subchapter 3A

Medical Waste Tracking Act, 1988, 42 U.S.C. 6903

Section B

HAZARDOUS WASTE

THE REGULATORY FRAMEWORK

The 1976 Resource Conservation and Recovery Act (RCRA), substantially revised and expanded by the Hazardous & Solid Waste Amendments (HSWA) of 1984, is the major federal law governing hazardous waste management. The Act outlined national policy goals including the minimization of hazardous waste generation, the minimization of land disposal of hazardous waste, and the recovery of valuable materials and energy resources from the hazardous waste stream. The Act gave the EPA broad powers of regulation and enforcement, and mandated a

cradle-to-grave manifest system for tracking hazardous waste. The New Jersey Department of Environmental Protection (DEP) has since been authorized to carry out the federal RCRA program in New Jersey.

The federal Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) established a \$1.4 billion "Superfund" for the cleanup of abandoned hazardous waste dumps and toxic spills. The 1986 Superfund Amendments and Reauthorization Act (SARA), renewed CERCLA and raised the funding to \$8.5 billion. This legislation, and the funding for it,

expired in 1998, and must be reauthorized by Congress in order for the cleanup of over 100 Superfund sites in New Jersey (and many more nationwide) to continue.

New Jersey also manages hazardous waste under a series of state laws:

- The 1970 Solid Waste Management Act and its amendments give the DEP broad authority to regulate and manage all types of waste, including all hazardous waste; to design and operate hazardous waste facilities; and to operate the manifest system for tracking hazardous waste shipments.
- The 1976 Spill Compensation and Control Act requires that all spills or discharges of hazardous substances, including petroleum products, must be reported to the DEP. The Act also provides a fund, derived from a per-barrel tax paid by oil and chemical manufacturers, for immediate remedial action and compensation.
- The 1981 Major Hazardous Waste Facilities Siting Act provides for the siting, construction and operation of environmentally acceptable major hazardous waste facilities.
- The Industrial Site Recovery Act of 1993 (ISRA) replaced the Environmental Cleanup Responsibility Act (ECRA) of 1983. ISRA requires notification to the DEP of an industrial facility's intent to close or transfer ownership, so that the DEP can assess the need for a cleanup of residual toxic or hazardous waste at the site before the change occurs. This legislation was put in place to prevent the abandonment of contaminated facilities and to prevent the unlawful shirking of responsibility for cleanups through property transfers or sales. Under the Act, a remediation agreement or a remediation action workplan with DEP approval must be in place before a contaminated facility may close down or change hands. ISRA also contains provisions for reduced levels of cleanup at sites where only non-residential use is planned. (Formerly, all sites had to be remediated up to a residential standard.) ISRA was designed to encourage cleanups, discourage abandonment of contaminated sites,

and spur "brown fields" redevelopment, without endangering the public health.

Two divisions within the DEP, the Division of Responsible Party Site Remediation and the Division of Publicly Funded Site Remediation carry out state management of hazardous site cleanups.

Local governments have limited involvement in hazardous waste management. However, several DEP programs respond to the concerns of residents and public officials about hazardous waste in their communities:

- The Site Information Program, Bureau of Community Relations, responds to queries from prospective home buyers, lending institutions, industry or government agencies seeking information on known or suspected hazardous sites near the properties of interest to them. This office maintains and can provide a list of known hazardous sites within the state.

For Further Information

Contacts:

DEP Division of Solid & Hazardous Waste, 609-292-8341

DEP Site Information Program, 609-984-3081

Website:

DEP Site Remediation Program,
<http://www.state.nj.us/dep/srp/index.htm>

The laws and regulations:

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. 9601 to 9675.

Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901, Subtitle D

Solid Waste Management Act, *N.J.S.A. 13:1E-1 et seq.*

Spill Compensation and Control Act, *N.J.S.A. 58:10-23.11 et seq.*

Major Hazardous Waste Facilities Siting Act, *N.J.S.A. 13:1E-49 et seq.*

Industrial Site Recovery Act, *N.J.S.A. 13:K-6 et seq.*

Discharges of Petroleum and Other Hazardous Substances, *N.J.A.C. 7:1E*

Hazardous Waste, *N.J.A.C. 7:26G*

Solid Waste, *N.J.A.C. 7:26-1.1 et seq.*

Siting Criteria, Policies and Procedures for New Major Commercial Hazardous Waste Facilities, *N.J.A.C. 7:26G-14 and 15*

Defining Hazardous Waste

Regulation of hazardous waste is a complex segment of environmental law. It is continually evolving. Dozens of federal and state laws have been enacted, often in response to specific environmental perils. As a result, definitions and classification of hazardous and toxic substances may vary significantly from one set of regulations to another. Toxic means poisonous. In general, toxic wastes are considered more dangerous than “normal hazardous” or “very hazardous” wastes.

RCRA defines hazardous waste broadly as:

A solid waste, or combination of solid wastes, which because of its quantity, concentration or physical, chemical or infectious characteristics may — (A) cause, or significantly contribute to, an increase in mortality or increase in serious irreversible, or incapacitating reversible, illness; (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed.

The EPA regulations that were drawn up to enforce RCRA and other environmental legislation define hazardous waste more narrowly. To the EPA, waste is hazardous if it is specifically listed on the EPA’s lists of hazardous wastes (referred to as the “F,” “K,” and “P” lists) or if it exhibits any of four general hazard characteristics — ignitability, corrosivity, reactivity or toxicity, and is not otherwise excluded from the regulations. Detailed descriptions of these four waste hazard characteristics are found in the *Code of Federal Regulations* at 40 C.F.R. 261.20-24. The EPA also identifies and lists some 400 specific substances as hazardous wastes. They are grouped into three categories: non-specific source wastes, specific source wastes, and specific commercial chemical products. EPA-listed wastes, numbered and coded according to their source and the type of hazard they pose, are found in at 40 C.F.R. 261.30-33.

The New Jersey criteria, identifications and listings of hazardous wastes are in the regulations at N.J.A.C. 7:26G. These are based on the *Code of Federal Regulations’* letters and numbers designating waste types and categories. (Prior to 1996, New Jersey classified some additional substances, such as waste oil, as hazardous under the state’s own unique classification system. As of 1996, the DEP adopted the federal hazardous waste classification system in its entirety,

and those additional substances were reclassified for regulation as solid waste, not hazardous waste.) The DEP’s Bureau of Resource Recovery & Technical Programs provides advisement to hazardous waste generators and facility operators.

Tracking Hazardous Waste

In New Jersey, any facility that generates more than 100 kilograms of hazardous waste per month (or *one kilogram of acutely hazardous waste*) must use a Hazardous Waste Manifest. The Hazardous Waste Manifest System tracks the off-site movement of hazardous waste into, out of, and throughout the state. Manifested wastes make up only a small portion of the hazardous waste produced in New Jersey. The majority, largely aqueous waste, is treated on site by the chemical and pharmaceutical industries that produce it, and is therefore not subject to the manifest system.

For Further Information

Contacts:

DEP Division of Solid & Hazardous Waste, 609-984-6900

Website:

DEP Division of Solid & Hazardous Waste,
<http://www.state.nj.us/dep/dshw>

The laws and regulations:

Federal Hazardous Waste Classification, 40 C.F.R. 261.20-261.24, 261.30-261.33

N.J. Hazardous Waste Management Regulations, N.J.A.C. 7:26-G

Resource Conservation and Recovery Act (RCRA) 42 U.S.C. 6901

PLANNING AND SITING MAJOR HAZARDOUS WASTE DISPOSAL FACILITIES

New Jersey’s 1981 Major Hazardous Waste Facilities Siting Act mandated the creation of a Hazardous Waste Facilities Siting Commission. This independent, nine-member panel must include representatives from industry, government and public interest/environment groups. The Governor appoints its members, subject to Senate approval. The Commission is charged with assessing the state’s current and future hazardous waste generation and hazardous waste

facility capacity, in order to determine the number and type of new major hazardous waste facilities that will be needed in New Jersey. (The Act also mandated a 17-member Hazardous Waste Advisory Council within the DEP, but the Legislature did not fund the Council for fiscal years 1994 through 1998.) The Commission is required to prepare a hazardous waste facilities plan for the state, and to update that plan at least every three years.

In 1985, the Siting Commission published its first “Major Hazardous Waste Facilities Plan.” The plan proposed five waste management priorities: source reduction, recycling, recovery, treatment or incineration, and secure disposal. It called for building at least one hazardous waste incinerator and one land emplacement facility (landfill) to meet the state’s hazardous waste disposal requirements for the next 20 years.

In the decade following the 1985 Plan, many aspects of the hazardous waste situation in New Jersey changed. Pollution prevention efforts such as waste minimization, reuse and recycling, in addition to the high cost of disposal, resulted in a reduction in the amount of hazardous waste generated. In addition, the federal government’s hazardous waste policy shifted away from requiring individual states to be self-sufficient (or regionally self-sufficient), to a strategy of assuring adequate national capacity through interstate shipments. This strategy depends on the existence of a large network of responsible hazardous waste facilities, and the EPA requires that each state must participate in efforts to maintain adequate national capacity.

During this period (1985 to the present), the Siting Commission was unable, due to the geology of the state, negative public response and the strictness of regulatory siting criteria, to establish an acceptable location for a hazardous waste landfill in New Jersey. The Commission also considered and subsequently eliminated 11 potential hazardous waste incinerator sites around the state. As of 1995, New Jersey had six operational commercial treatment facilities (including one incinerator), seven transfer/storage facilities, and seven oil recovery/fuel blending facilities.

New Jersey exported to other states approximately 410,000 tons of primary manifested hazardous waste in 1993 and 300,000 tons in 1994. Imports were approximately 380,000 tons in 1993 and 371,000 tons in 1994. The *1995 Hazardous Waste Facilities Plan Update* reported

the Commission’s conclusion that, “...For 1997, the total projected combination of available capacity from both in-state and out-of-state commercial facilities continues to more than satisfy the projected generation of hazardous waste in New Jersey.” However, the Commission also noted the dynamic and unpredictable nature of the hazardous waste market due to changing technologies, changing regulations, and the pace at which contaminated site cleanups are carried out. For this reason, the Commission recommends continued close monitoring of the hazardous waste situation.

In 1988, the GAF Chemicals Corporation proposed a large commercial rotary kiln hazardous waste incinerator in Linden. In accordance with the provisions of the Major Hazardous Waste Facility Siting Act, the Commission’s consideration of the siting application included a high degree of public participation, including public meetings and hearings. The City of Linden was granted \$100,000 in state funds to offset the cost of investigating and mounting a defense against the siting. The City has questioned the necessity of an additional incinerator in New Jersey, based on the decreasing generation of hazardous waste within the state. The case is pending as of the spring of 1998. If the siting is ultimately allowed, the Siting Act requires that two members of the affected community join the Commission to assure local participation.

Hazardous Waste Facility Standards

Hazardous waste facilities must be designed, built, maintained and operated to prevent any “unauthorized discharge of pollutants onto or into the land, surface water, groundwater, or air.” They must include monitoring systems to detect leaks of any sort, including monitoring wells in the area surrounding the facility. Regulations require that facilities contain all necessary emergency equipment. Facility operators must draw up contingency plans in agreement with local police, fire department, hospitals and emergency response teams, and assure that outside emergency workers are familiar with the facility’s layout and the properties of the hazardous waste handled there.

Regulations require the owners and operators of facilities that treat, store or dispose of hazardous wastes to develop and maintain detailed plans for testing and monitoring all phases of their operation and to keep records of

the results. These requirements include:

- detailed chemical and physical analysis of samples of incoming waste;
- standards for hazardous waste containers, and for storing, cleaning and reusing them;
- standards for handling ignitable, reactive or incompatible wastes;
- a written schedule for inspecting monitoring equipment;
- a training program for personnel including emergency and shut-down procedures;
- security provisions that include 24-hour surveillance and a barrier to control entry to the facility;
- a written operating record listing the type and amount of each waste received, how it was treated, stored or disposed of, and the location and amount of each hazardous waste in the facility (copies of the disposal location and quantity records to be submitted to the DEP on closure of the facility).

To enforce these standards, the Bureau of Hazardous Waste Compliance and Enforcement carries out comprehensive annual or biennial RCRA inspection of facilities through regional field offices. Major facilities also receive weekly checklist inspections, as required by the Solid Waste Management Act.

The procedure for closing a hazardous waste facility must follow a plan submitted with the original permit application. Provisions for a 30-year period of post-closure care include groundwater monitoring as well as maintenance of monitoring and waste containment systems.

**HAZARDOUS WASTE MANAGEMENT
REGIONAL ENFORCEMENT OFFICES**

Northern Office, 973-299-7571

Metro Office, 973-669-3960

Central Office, 609-584-4250

Southern Office, 609- 968-2601

Financial assurance of an operator's ability to carry through the closure and post-closure care plans must be backed by a trust fund, surety bond, letter of credit, or insurance.

Permits

One objective of RCRA is to control present management of hazardous waste facilities to avoid future environmental problems. Facilities that generate over 100 kilograms of hazardous waste per month need a generator number, issued by EPA. About 200 facilities hold generator numbers in New Jersey. The DEP's Bureau of Hazardous Waste & Transfer Facilities issues RCRA permits.

Procurement of a permit to operate a hazardous waste facility requires the filing of a two-part application with the DEP and submission of an Environmental and Health Impact Statement (EHIS). Part A of the application is a basic description of the business, the types of hazardous waste and treatment involved, and a list of other permits the facility would require. Part B includes detailed chemical analysis; plans for security, emergency preparedness; contingency plans; engineering plans; detailed topographic, geologic and hydrologic maps and studies; groundwater monitoring plans; and a personnel training program.

After the application has been determined to be administratively and technically complete, the DEP will prepare a draft permit or a draft permit denial. (A permit denial can turn into a draft permit after the applicant makes required changes or additions.)

At this point, DEP gives public notice of the draft permit determination, and sends out fact sheets describing the project. Those notified include the EPA, state and federal agencies with environmental or historic preservation concerns, the county freeholders and municipal officials of the communities affected by the facility, and local newspapers. The public comment period is 45 days. If a public hearing is scheduled, the hearing notice will be issued with the draft permit determination and the hearing will be held on the 30th day of the public comment period. A tape or transcript of the hearing will be made available to the public.

A Hazardous Waste Facility Permit is valid for five years. To renew the permit, the facility operator must repeat the process of application, DEP review, public notice, hearing and comment.

For Further Information

Contacts:

Hazardous Waste Facilities Siting Commission, 609-292-1459
Bureau of Hazardous Waste & Transfer Facilities,
609-292-9880

The laws and regulations:

Major Hazardous Waste Facilities Siting Act, *N.J.S.A.*
13:1E-49 *et seq.*

Siting Criteria, Policies and Procedures for New Major
Commercial Hazardous Waste Facilities, *N.J.S.A.* 13:1E-57,
and *N.J.A.C.* 7:26G-14 and 15

Requirements for Hazardous Waste Facilities, *N.J.A.C.* 7:26-
9 *et seq.*

Written references:

"New Jersey Hazardous Waste Facilities Plan Update 1995"
Hazardous Waste Facilities Siting Commission

"The Municipal Guide to Siting Hazardous Waste Facilities"
Hazardous Waste Facilities Siting Commission, 1986

REMEDIATION OF CONTAMINATED SITES

Since the shocking revelations in the 1970s of the existence of hundreds of leaking hazardous waste deposits around the state, New Jersey has worked to clean up those sites. Billions of dollars of federal, state and private funds have been poured into a national hazardous site remediation effort, in which New Jersey is at the forefront.

Contaminated sites range from a few 55-gallon drums abandoned outside a warehouse to major landfills leaking thousands of gallons of contaminants into surface or ground water. A total of more than 10,000 known or suspected sites are to be investigated or cleaned up.

Superfund Sites are those sites nominated by the states and accepted by EPA for inclusion on the National Priorities List (NPL) of the country's most highly contaminated sites. New Jersey currently has 105 Superfund sites on the NPL and, to date, leads all states in the amount of federal funding received for cleanups. (The original 116 New Jersey Superfund sites have been divided into 367 subsites, approximately 40 percent of which have been completely remediated and require no further action. Some form of remedial work is in progress at all but four of the remaining subsites.)

Site cleanup is a lengthy process of multi-phased

activity. Often it begins with a remedial investigation/feasibility study (RI/FS) to evaluate the problem and develop plans to address it (24-36 months). Next comes an engineering design, which tailors the cleanup alternatives to specific site conditions (12-24 months).

Actual physical work on site — either immediate or long-term — is a third phase. Immediate cleanup action is undertaken when a hazardous site requires priority action to mitigate immediate threats to public health and the environment. This may include the following activities:

- segregating reactive wastes and removing hazardous materials from a site to an approved, licensed hazardous waste facility for treatment, containment or destruction;
- recycling, reuse or neutralization;
- destroying or treating the waste on-site using incineration or other technologies;
- containing the waste safely on site to eliminate further problems;
- identifying and removing the source of groundwater contamination and halting further movement of the contaminants;
- supplying an alternate source of drinking water if necessary.

Long-term cleanup actions often follow the immediate work, but not before more extensive studies are completed. These long-term efforts may include all of the above activities in addition to implementing extensive engineering controls to dredge, excavate, regrade, remove waste containers, install gas venting systems, collect and treat site runoff and leachate, pump and treat contaminated groundwater and provide alternate water supplies when needed.

The final stage, monitoring and maintenance of the site, could continue for as long as 30 years, depending on the nature of the site and the hazardous substances it contains. The DEP's Bureau of Community Relations holds meetings, briefings and information sessions with local officials and residents to gather information and discuss plans for site cleanup. These programs usually take place as needed during the various stages of a cleanup, including the beginning and completion of the RI/FS, to discuss the

alternative courses of action before a decision is made. At this point there is a 30-day comment period during which copies of the RI/FS are available at local municipal buildings or libraries.

Responsible party cleanup – Based on the “polluter pays” principle, the Responsible Party Cleanup Program aims to obtain all cleanup costs from the companies that are responsible for the contamination, whether at an NPL (Superfund) site or at a small industrial facility. In this program, whenever possible, the responsible party pays for the cost of each phase of the cleanup — study, engineering design and actual cleanup. In an increasing number of cases, the responsible parties, under either a “memorandum of agreement” (with the DEP) or a consent order, are carrying out the remediation at their own expense.

In an emergency, or when no responsible party can be identified, public funding is used; however if a responsible party is subsequently identified, the DEP and EPA may, by law, seek to recover up to three times the amount they spent in site cleanup.

The ISRA program – The Industrial Site Recovery Act requires the owner of any industrial facility or contaminated property to clean up the property (or sign a remediation agreement assuring cleanup) before any sale, facility closure, or change in ownership may take place. The DEP’s Industrial Site Evaluation Element administers the ISRA program.

Publicly funded cleanup – The DEP’s Division of Publicly Funded Site Remediation administers the publicly funded cleanup program that is financed through a combination of Superfund and state funding. Cleanup at NPL sites is financed jointly by federal (90 percent) and state (10 percent) funding. Investigation and design phases of projects are 100 percent federally funded.

At non-NPL sites, where the companies or individuals responsible for the contamination are unknown, unwilling or unable to pay for cleanup, the state pays the bill, with authority to sue for three times the cost of the cleanup. State funding sources include the New Jersey Spill Fund, direct appropriations from the Corporate Business Tax, and a total of \$320 million from Hazardous Discharge Bond funds.

For Further Information

Contacts:

DEP Bureau of Community Relations, Site Information Program, 609-984-3081

DEP Division of Responsible Party Site Remediation, 609-633-1408

DEP Division of Publicly Funded Site Remediation, 609-984-2902

DEP Industrial Site Evaluation Element (ISRA), 609-984-1351

EPA Region II Community Relations for Superfund, 212-637-3678

EPA Region II Community Relations for RCRA, 212-637-4145

Website:

DEP Site Remediation Program,
<http://www.state.nj.us/dep/srp>

The law and regulations:

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) 42 U.S.C. 9601 to 9675.

Industrial Site Recovery Act (ISRA), N.J.S.A. 13:1K-6 *et seq.*

Technical Regulations for Site Remediation, N.J.A.C. 7:26E

Technical Regulations for Oversight, N.J.A.C. 7:26C

POLLUTION PREVENTION

New Jersey’s Pollution Prevention Program is designed to stop pollution before it is created and to reduce the volume of hazardous waste produced in the state by encouraging the reduction of hazardous/polluting materials in the production process. The idea is simple: before industry spends money on sophisticated pollution control systems and hazardous waste disposal, it should investigate ways to reduce the ingredients of pollution through such strategies as:

- substitution of less-polluting/less hazardous ingredients;
- reductions in the quantities of harmful ingredients used;
- changes in handling and transport techniques to reduce spills and waste; and
- the re-use of formerly discarded or emitted chemicals.

The Pollution Prevention Act (PPA) of 1991 created the Office of Pollution Prevention (OPP) within the DEP, as well as an independent, 15-member Pollution Prevention Advisory Board. The Act requires every facility in the state producing large amounts of hazardous waste to prepare a five-year pollution prevention plan. Each facility plan must contain a detailed inventory of hazardous chemicals used, produced and discarded/emitted, and five-year numeric goals for reducing those substances. Regular progress reports must be submitted to the DEP, and pollution prevention plans must be revised on a five-year basis. However, the Act contains provisions for numerous exemptions including R&D facilities, pilot facilities and hazardous substances that are unfeasible or impossible to reduce in a production process. Cost considerations also are taken into account. Approximately 700 New Jersey industrial facilities covered by the Worker and Community Right to Know Act are required to prepare and implement pollution prevention plans.

The PPA also required the DEP to establish a system for the granting of facility-wide permits. Under such a system, a facility would operate under one comprehensive permit encompassing air, water, hazardous waste and all other environment-related discharges and procedures. The comprehensive (“multi-media”) nature of the permit would, hopefully, facilitate a “big picture” approach to pollution for each facility, improving regulatory efficiency and preventing pollution from being transferred between environmental media. The first of these facility-wide permits was issued on a pilot basis in December 1994.

The N.J. Technical Assistance Program (TAP) complements the pollution prevention program. Administered as a collaborative effort between New Jersey Institute of Technology and the DEP, the TAP offers several cost free and confidential services including:

- literature and research information to help develop cost-cutting strategies and transfer of proven waste reduction technologies;
- referrals to qualified professionals accomplished in process design, modernization, economics and engineering;
- industry-specific case study workshops and presentations to trade associations on waste reduction opportunities;
- development of pollution prevention demonstration projects with trade associations and utility authorities.

For Further Information

Contacts:

DEP Office of Pollution Prevention, 609-777-0518
N.J. Technical Assistance Program, 201-596-5864
EPA Pollution Prevention Clearinghouse 202-260-1023

Website:

EPA Pollution Prevention Clearinghouse,
<http://www.epa.gov/opptintr/library/libppic.htm>

The law:

New Jersey Pollution Prevention Act, *N.J.S.A. 13:1D* – 35 through 50

HISTORIC RESOURCES

THE HISTORIC PRESERVATION OFFICE

The N.J. Historic Preservation Office (HPO), a subdivision of DEP's Division of Parks and Forestry, administers the state and federal historic preservation program in New Jersey. The HPO identifies, evaluates and protects historic resources by:

- nominating properties to the New Jersey and the National Registers of Historic Places;
- awarding and administering survey-and-planning grants and rehabilitation grants;
- reviewing public projects under state and federal preservation laws;
- certifying historic properties and rehabilitation projects eligible for federal tax incentives;
- developing and implementing programs in state-owned historic sites; and
- encouraging historic preservation throughout the state through educational programs and technical assistance.

THE NATIONAL REGISTER

The National Register of Historic Places is the official list of the nation's cultural resources that are considered worthy of preservation. It includes districts, sites, structures, buildings and objects of state and local importance. The

governor of each state designates a State Historic Preservation Officer (SHPO) to work with the U.S. Department of the Interior's National Register Office. New Jersey's SHPO is the commissioner of the DEP.

The National Historic Preservation Act authorizes the Secretary of the Interior, through the National Park Service, to grant funds to states to prepare comprehensive statewide cultural resource surveys and preservation plans. These surveys identify districts, buildings, sites and structures in the state that are significant in American history. They also identify architecture, archeological sites, engineering and cultural features that are significant at the national, state and local levels, and create programs designed to protect these resources.

NEW JERSEY'S REGISTER

The New Jersey Register of Historic Places is the official list of the state's cultural resources. Closely modeled after the National Register, it has the same criteria for eligibility, nomination and review. Almost every municipality has properties eligible for the state or national register because of their architectural, historic, archeological, engineering or cultural significance.

Getting on the Register

In New Jersey, private individuals or organizations of any kind (including government agencies) may nominate prop-

erties for inclusion on the New Jersey or National Historic Registers. Nominations are submitted to the HPO.

The N.J. State Review Board for Historic Sites, a panel of professionals in the fields of architecture, history, architectural history and archeology, reviews all New Jersey Register nominations. After a public hearing, with proper notice given to local officials and all owners of the property, the Board advises the SHPO whether to add the resource to the register. If the recommendation is positive and the SHPO agrees, the property is listed on the New Jersey Register of Historic Places and the nomination is forwarded to the National Register office for consideration.

Nomination Criteria

Nominated districts, sites, buildings, structures and objects should possess integrity of location, design, setting, materials, workmanship, feeling and association, and should:

- be associated with events that have made a significant contribution to the broad patterns of our history;
- be associated with the lives of persons significant in our past;
- embody the distinctive characteristics of a type, period or method of construction; represent the work of a master; or possess high artistic values;
- represent a significant and distinguishable entity whose components may lack individual distinction; or
- have yielded or be likely to yield information important in prehistory or history.

If a Property Owner Objects

If a private property owner, or a majority of private property owners in a historic district, notifies the SHPO by notarized letter of objections to National Register listing for a nominated property, the nomination is sent to the National Register Office for a determination of eligibility, but the property is not listed on the National Register. A determination of eligibility ensures review of any federally sponsored project that would encroach on the property. However, the property is ineligible for tax benefits unless it is actually listed on the National Register.

Benefits of Being on the Register

The New Jersey and National Registers provide a degree of protection for listed sites. Any federally licensed, financed or assisted project will be reviewed to ensure that it does not adversely affect a property listed, or eligible to be listed, on the National Register. At the state level, any state, county or municipal undertaking will be reviewed to ensure that it does not adversely affect properties on the New Jersey Register.

National Register listing makes a property eligible for federal tax benefits. Since 1976 the Internal Revenue Code has contained incentives to stimulate investment in income-producing historic buildings and to revitalize historic communities. The most recent of these, the Tax Reform Act of 1986, allows a 20 percent tax credit for the substantial rehabilitation of historic buildings used as commercial, industrial or residential properties. Owners of historic properties may also apply for restoration matching grants, when money is available.

Both publicly and privately owned sites may be listed on the registers. A register listing does not mean that the property is open to the public. Listing on the New Jersey and National Registers does not restrict private property rights. Within the limits of municipal zoning laws, owners are free to use, renovate, alter, sell or demolish their properties.

LOCAL HISTORIC PRESERVATION

The Municipal Land Use Law (MLUL) was amended in 1986 to provide for historic preservation in New Jersey. The MLUL enables municipalities to establish Historic Preservation Commissions (also called Landmark Commissions) to advise the planning board or to act independently on historic preservation. The MLUL also allows a municipal zoning ordinance to designate and regulate historic sites or districts, and to establish design criteria and guidelines for such districts.

Communities that have adopted local preservation ordinances and created historic preservation commissions can apply to the HPO for Certified Local Government (CLG) status. As a CLG, a municipality is eligible for special Historic Preservation Fund grants and can receive technical assistance and training, participate in

nominating properties to the National Register and develop local historic preservation expertise, recognized by state and federal agencies.

The Survey and Planning Program

The Survey and Planning Program is designed to assist New Jersey municipalities in historic preservation activities. Federal grants, to be matched by local contribution, are available for historic resource surveys and historic preservation planning projects such as municipal and neighborhood preservation plans, preservation education, preservation planning staff, historic architecture design guidelines and National Register nominations.

Pre-development matching grants are available for New Jersey properties on the National Register to aid in preparing historic structures reports, plans, specifications, construction documents and archeological resource protection or stabilization.

The Grants Program

The general goals of historic preservation survey and planning projects are:

- to identify all buildings, sites, structures and districts that are significant in American history, architecture, archeology or engineering, and that meet the criteria for inclusion in the National Register of Historic Places;
- to design and implement planning tools for the protection of these resources.

Notices of the availability of matching grants through the Historic Preservation Fund are distributed annually. Eligible applicants include state, county and municipal agencies; academic institutions; and private profit- and not-for-profit organizations.

Application Evaluation

The HPO uses a competitive selection process and awards grants to projects that best meet the criteria described in the application packet. Grant awards are contingent upon the availability of federal funds. All grant funds must be administered in accord with federal and state requirements.

For Further Information

Contacts:

Historic Preservation Office, 609-292-2023

Preservation New Jersey, 732-442-1100

The laws and regulations:

Municipal Land Use Law, *N.J.S.A. 40:55D-65.1 and 107 et seq.*

N.J. Historic Trust, *N.J.S.A. 13:1B-15.111*

New Jersey Register of Historic Places, *N.J.S.A. 13:1B-15.128 et seq.*

The National Historic Preservation Act, *16 U.S.C. 461 et seq.*

LAND AND WILDLIFE

New Jersey has many programs that protect important natural lands. These lands include farms and wildlife habitats, whose importance is widely recognized, but also contain many ordinary natural features whose functions might not be so well understood. In every municipality wetlands, floodplains, stream corridors, woods and fields work at no charge to protect our land, water and wildlife, as well as the beauty of our communities. This natural engineering is cost-free, and frequently works better than the expensive, man-made solutions that are needed once the natural features are damaged.

STREAM CORRIDORS

A stream corridor consists of a water body or watercourse and its adjacent land area. It often contains one or more sensitive features such as wetlands, floodplains, steep slopes, erodible soils, forests, or plant and wildlife habitats.

Proper stream corridor management helps to minimize water pollution and flooding by providing a buffer zone where stormwater can infiltrate the soil. This allows natural filtration and bacterial treatment of contaminants, promotes recharge of the water table and aquifers, and helps prevent excessive amounts of water from entering the stream at any one time, thus reducing the frequency and severity of flooding. Proper stream corridor management also preserves the biological and aesthetic character of the

watercourse, promoting a healthy ecology by protecting the diversity of vegetation and wildlife.

The DEP protects stream corridors through its wetlands and floodplain programs.

WETLANDS

There are two types of wetlands: coastal (tidal) and freshwater. Activities in and around wetlands in New Jersey are regulated under four state laws:

- The Wetlands Act of 1970
- The 1987 Freshwater Wetlands Protection Act
- The Hackensack Meadowlands Reclamation and Development Act (1969)
- The Pinelands Protection Act (1979)

Coastal wetlands are regulated under the Wetlands Act of 1970, and are discussed in Chapter 14.

FRESHWATER WETLANDS

Freshwater wetlands are unique hydrological and biological systems that perform several critical ecological functions, including:

- purification of surface and groundwaters;
- control of erosion and stream sedimentation;
- protection of surrounding and downstream areas from flooding and storm damage;

- maintenance of the baseflow of surface waters through gradual release of stored flood waters and groundwater;
- provision of habitat for a great variety of wildlife, including migratory birds, endangered plant and animal species, and commercially or recreationally important animals and fish.

The Freshwater Wetlands Protection Act

This 1987 legislation and its implementing regulations govern the delineation and classification of freshwater wetlands. They require state permits for a wide range of activities in or near wetlands; establish widths for wetlands transition areas; and provide guidelines for the issuance of waivers from these regulations.

Wetlands Delineation and Classification

To obtain permission to disturb a freshwater wetland, or to develop a parcel on which there are wetlands or on which there are transition zones for wetlands on adjoining properties, an applicant must map the wetlands area and supply information to help the DEP determine its “resource value.” (The DEP will do the work for homeowners on less than one acre.) The resource value—“exceptional,” “intermediate,” or “ordinary”—determines the required width of the buffer, or wetlands transition area, which, like the wetlands, must remain free of most disturbance.

The DEP reviews the mapping, assigns a classification and buffer, and then issues a Letter of Interpretation (LOI), on which it bases any permits for wetlands or buffer disturbances and on which the applicant then bases the proposed plan of activity. Typically, the DEP depends upon the information supplied by the applicant or the applicant’s consultant unless local officials, boards or citizens supply additional information. The applicant may ignore—or be truly ignorant of—local conditions that could elevate the wetland classification and thus limit the usable land or require mitigation for any disturbance. For this reason, it is important for the municipality to review and correct these applications. This is often the province of the environmental commission.

Various factors influence a wetland’s classification and the DEP’s ability to grant a transition area waiver. The type of activity proposed, the presence of threatened or endan-

gered species, and the wetland’s proximity to high-ranked surface waters are some of the factors that affect these decisions.

Delineating Wetlands – Wetlands are defined by the “three parameter approach,” based on hydrology, soils, and vegetation. This method is found in the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*. Soil surveys and various federal and state wetlands maps may be used for guidance, but an on-site evaluation using the three parameters is required to make an exact delineation.

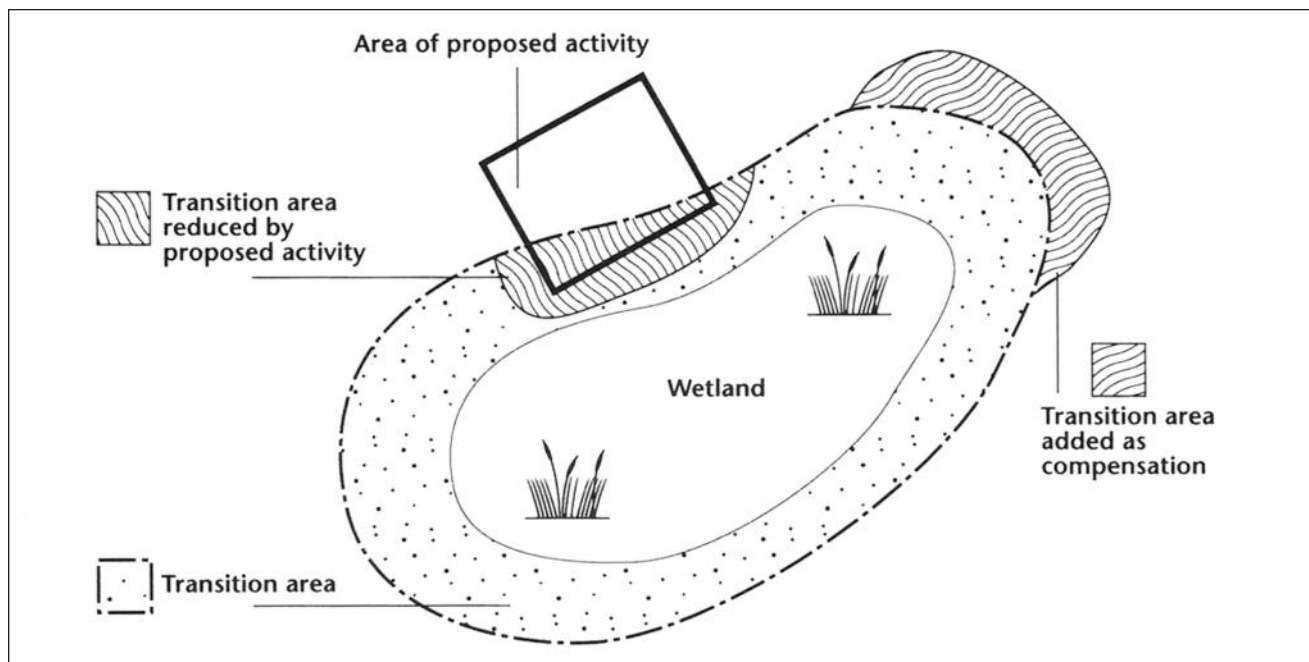
The three parameters center on hydric soils. These are soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions favoring the growth and regeneration of hydrophytic vegetation. In addition to Soil Surveys and the various state and federal wetlands maps, there is a *National List of Plant Species that Occur in Wetlands*, and the *New Jersey Official List of Hydric Soils*. However, certain other alluvial lands or soils with hydric characteristics may also be associated with wetlands.

Classification – Wetlands classifications are *exceptional*, *ordinary* and *intermediate*. The classifications are based on various factors, including size, association with certain highly classified surface waters, and function — especially their proven use as habitat for threatened or endangered species.

“Exceptional” wetlands are those that discharge into FW1 (freshwaters that originate in or are located within public lands) or FW2-TP (trout production waters) or that currently are or have been documented and remain suitable to be habitats for threatened or endangered species. Even if a wetland has documented habitats, an applicant can request a waiver of the “exceptional” classification by showing that there is already a long-term loss of one or more of the habitat requirements for the endangered or threatened species in question—for instance, a reduction in wetland size or water quality, or vegetation density or diversity.

“Ordinary” wetlands lack “exceptional” characteristics. They are either: 1) isolated wetlands (not connected to any surface water system by stream or drainage pipe) that have development on more than half the area within 50 feet of the wetland; or 2) drainage ditches, swales or detention facilities.

All other wetlands are considered of “intermediate” value.



Transition Area Averaging

For Further Information

Written references:

Federal Manual for Identifying and Delineating Jurisdictional Wetlands, EPA, Army Corps of Engineers, US Fish and Wildlife Service, and US Natural Resource (Soil) Conservation Service, available from the DEP Office of Maps and Publications, 609-777-1038

Priority Wetlands for the State of New Jersey, EPA, available from the DEP Office of Maps and Publications, 609-777-1038

New Jersey Official List of Hydric Soils, the U.S. Department of Agriculture's Soil Conservation Service and the U.S. Fish and Wildlife Service

National List of Plant Species that Occur in Wetlands: 1988—New Jersey (and amendments), compiled by the US Fish and Wildlife Service, the Army Corps of Engineers, the EPA, and the US Natural Resource Conservation Service

New Jersey Freshwater Wetlands Maps, DEP, available from the Office of Maps and Publications, 609-777-1038

National Wetlands Inventory, prepared by the U.S. Fish and Wildlife Service

Manual for Freshwater Wetlands Management Practices for Mosquito Control and Manual for Stream Encroachment, DEP

Freshwater Wetland Protection in New Jersey: A Manual for Local Officials, 1992, Association of New Jersey Environmental Commissions, 973-539-7547

Transition Areas

The lands surrounding a wetland are an integral part of the wetland ecosystem. State regulations define transition areas by their function. They serve as:

- an ecological transition zone that provides temporary refuge for animals during high water, habitat for birds and animals that depend on but do not live in the wetlands, travel corridors for wildlife, and space for slight variations in wetlands boundaries;
- a sediment and stormwater control zone to reduce the impact of development on the wetlands, wildlife and nearby waterways—these impacts include noise, traffic, light pollution, siltation, pollution and debris.

Regulations went into effect on July 1, 1989 mandating standard transition areas (or buffers) that are based on the resource value, or classification, of the wetland:

- *exceptional* wetlands require a 150-foot buffer;
- *intermediate* wetlands require a 50-foot buffer;
- *ordinary* wetlands require no buffer, nor do state open waters (waters that are not wetlands and

come under the state's jurisdiction, included here for regulation of dredge and fill or culverts and similar intrusions).

Specific activities are prohibited or permitted within buffer zones, although prohibited activities may be allowed under transition area waivers.

Permitted activities, which are allowed only if they are done in a way that minimizes any adverse effects on the transition area and the wetland, include:

- normal property maintenance, such as mowing, pruning and limited planting of native vegetation (this does not include creating lawns);
- continued cultivation of existing gardens or development of new gardens no larger than a quarter acre;
- minor and temporary disturbances connected with certain non-mechanical construction activities on lands next to transition areas, such as removal of man-made debris;
- erection of temporary structures (less than six months) covering 50 square feet or less, or maintenance of usable structures that existed lawfully before July 1, 1989; and
- placement of utility lines under or over existing, approved, paved roads.

Prohibited activities (listed in *N.J.A.C. 7:7A-6.2a*) in transition areas include:

- removal, excavation or disturbance of the soil (including grading);
- dumping or filling;
- erection of permanent structures or temporary structures of more than 50 square feet;
- paving or creation of impervious surfaces; and
- destruction or addition of plant life that would alter vegetation patterns.

Other activities within wetlands themselves (and thus within transition areas) that are exempt from permitting regulations are discussed in the next section.

Transition Area (Buffer) Waivers – The DEP may grant transition area waivers under several circumstances,

but a waiver may not be granted if it would prevent the buffer from functioning properly or cause a substantial impact on the wetland. Some conditions are automatically defined as causing substantial impact, for example, if the wetland is associated with certain special water or land features, or if the use includes certain industries or utilities (listed in *N.J.A.C. 7:7A-7.2*), septic systems or landfills.

The regulations allow the DEP to alter buffer requirements by reducing them (usually by no more than 50 percent) or by altering their shape, sometimes requiring compensation by increasing buffers in other areas, or by transition area averaging without reducing the total square footage. Limiting factors include slopes, habitats and the density of the proposed development. Neither septic systems (except for repairs of existing systems) nor untreated stormwater outfalls are allowed in the standard buffer area, even if waivers are granted.

Buffers may be reduced in the following cases:

- to avoid extraordinary or substantial hardship to the applicant;
- for stormwater management facilities;
- for linear development, including roads, driveways, railroads, sewage or stormwater pipes, gas or water pipelines, and transmission lines, but not improvements *within* a development;
- for activities granted under Statewide General wetlands permits (see the next section);
- for redevelopment, although impervious coverage must have existed legally before July 1, 1989 and cannot be expanded.

Alternative locations for stormwater and linear development must be explored, even if the applicant would have to move or modify the systems, redesign or reduce the development, or obtain the sale or use of land owned by others.

Freshwater Wetlands Permits

Since July 1, 1988, permits have been required for most activities proposed within a wetland. These include any disturbance of soils, including

- dredging, excavation;
- removal, drainage or disturbance of water levels (including the water table);

- filling or discharge of any materials, pilings or obstructions; and
- destruction of plant life that would alter the character of the wetland (not including trees approved for harvesting under state regulations found in *N.J.A.C. 7:7A-2.7(b)*).

Important exemptions from both wetlands and transition area permitting include site plans approved before July 1988, and established farming, ranching or silviculture operations on properties that have, or are eligible for, farmland assessment. These exemptions are extensive and their definitions often depend upon the judgment of the applicant and of state and local officials.

Types of Permits – The DEP’s Land Use Regulation Element issues three types of freshwater wetlands permits — *Statewide General Permits*, *Individual Permits*, and *State Open Water Permits*. These are designed to control, not stop, development while also protecting the wetlands as much as possible. The permitting process allows several kinds of activities, even within exceptional wetlands. A general condition for all permits is that they not impact habitats for threatened or endangered species. Once an applicant has submitted the necessary information to the DEP, the Department has 30 days to inform the applicant, in writing, about what kind of permit is required.

Statewide General Permits (GP) – allow certain limited activities in either exceptional, intermediate or ordinary wetlands, under specific restrictions. Many of these include an automatic buffer waiver. All require that the hydrology or water flow within the wetlands must be maintained, a requirement that may be met by piping. For example, General Permits granted for exceptional wetlands would allow road crossings or stormwater outfalls (disturbance of up to a quarter acre), hazardous waste cleanups (up to one acre), or up to 750 square feet of fill within 100 feet of a residence, such as an addition to the structure. If threatened or endangered species are found on site, the DEP may restrict the activity to non-breeding times of the year or require that the species be removed during the work, or fenced off. Approved Statewide General Permits are published twice a month in the *DEP Bulletin*.

Individual Permits are required for all other activities that do not meet the requirements of any of the 25 General

Permits. An applicant must prove there are “no practicable alternatives” that could keep the project out of the wetlands or minimize its impact, that the activity fulfills a “compelling public need,” or that there is an “extraordinary hardship” based on the nature of the parcel. Among the factors that make an alternative “practicable” are cost, existing technology, logistics or whether the applicant would have to obtain the use of lands owned by others. Often if Individual Permits are denied, the applicant takes the DEP to court.

State Open Water Permits are required for the deposition of dredge spoils or fill in any of the state’s waters.

Applications for Individual Permits require detailed information, including:

- a site plan showing the wetlands boundary, the buffer, and the area and elevation of the proposed disturbance;
- a wetlands report, including site-specific information on soils, hydrology and vegetation;
- a survey of flora and fauna in the area of disturbance;
- best management practices that will be used to control adverse impacts;
- an analysis of practicable alternatives that might avoid the wetlands and transition areas;
- a plan to mitigate wetlands damage, which could include creation of wetlands elsewhere on the site or within the same watershed, conservation easements, and/or contributions of money or land to the state’s Mitigation Bank or to other conservation organizations;
- proof of notice, in the form of copies of the application, to the municipal clerk, environmental commission, planning board, county mosquito control agency, and landowners within 200 feet of the property (and anyone else requesting notification).

The DEP assigns a file number to a wetlands permit application, publishes a public notice in the semi-monthly *DEP Bulletin*, and has 30 days to seek additional information. The public has 20 days from the date of public notice to submit comments. This information—from county or

local officials or agencies, including environmental commissions, or from individuals—can be important, because otherwise the DEP typically depends upon the applicant's submissions, which may have overlooked pertinent local data. If there is substantial public comment, the DEP may schedule a public hearing in the county where the project is located. Notice is published in the *DEP Bulletin* and in a newspaper at least 30 days before the hearing. The DEP must make a decision within 180 days of receiving a complete application.

Permit Amendment or Cancellation – Either the DEP or the applicant can request that permit or waiver applications be withdrawn, amended or terminated. Under *N.J.A.C. 7:7A-7.10* and *7.13*, this can be done for cause at any time, including once the permits or waivers have been granted and at any time during the term of the permit/waiver. The applicant has the right to contest such an action by the DEP.

If a permittee becomes aware that he/she has failed to submit any relevant facts in a permit application, or has submitted incorrect information in a permit application or in any report to the DEP, that information must be submitted “promptly.” (Local citizens or boards, especially environmental commissions, can be an invaluable source of information that may have been overlooked in the application.)

If the applicant fails to disclose or misrepresents relevant information, or if the permit has “unanticipated negative environmental impacts,” the DEP can terminate the permit.

Enforcement

Violators of the Freshwater Wetlands Protection Act may be subject to administrative, civil or criminal penalties. The DEP may impose penalties of up to \$10,000 per day and restoration of damaged wetlands. A reporting error or omission is considered to be a violation if the applicant “knew or had reason to know that it submitted inaccurate or false information.” Fines can be based on the economic benefit the applicant has enjoyed by not complying or by delaying compliance.

For Further Information

Contacts:

DEP Land Use Regulation Program, Bureau of Inland Regulation, 609-633-6563

Application/Permit Support Section, 609-777-0456

Each county also has a specific contact number for permits, including wetlands permits:

Atlantic	609-984-0162
Bergen, Hudson, Passaic, Sussex,	609-984-1903
Burlington	609-984-0162
Camden, Cape May, Cumberland, Gloucester,	609-633-6755
Essex, Morris.	609-633-9277
Hunterdon, Mercer, Union, Warren	609-777-0454
Middlesex, Somerset	609-633-6754
Monmouth, Salem	609-984-0184
Ocean	609-292-8262

DEP Division of Fish, Game and Wildlife: Endangered and Non-Game Species Program, 609-292-9400

DEP Division of Parks and Forestry: Endangered Plant Species and Natural Areas Program, 609-984-1015

U.S. Fish and Wildlife Service, 609-646-9310

The laws and regulations:

Freshwater Wetlands Protection Act, *N.J.S.A. 13:9B*

Freshwater Wetlands Regulations, *N.J.A.C. 7:7A*

Federal Water Pollution Control Act (Clean Water Act), 33 U.S.C. 1251-1387 (Section 404, permits for dredged or fill material)

Written references:

DEP Bulletin, Documents Distribution Center, 609-777-4398

Wetlands Regulation in the Pinelands and Hackensack Meadowlands

Wetlands activities in these two special protection areas are not regulated by the Freshwater Wetlands Protection Act, but by the Pinelands Protection Act and the Hackensack Meadowlands Reclamation and Development Act.

Under those Acts, the Pinelands Commission and the Hackensack Meadowlands Development Commission (HMDC) regulate almost all forms of construction in their respective jurisdictions. In the Pinelands, the Commission has the power to set tougher wetlands standards than those in the Freshwater Wetlands Protection Act, but, in general, the regulations there are similar to statewide regulations.

Under Section 404 of the federal Clean Water Act, however, the discharge of dredged or fill material in the Pinelands does require a wetlands permit issued by the U.S. Army Corps of Engineers.

For more information on wetlands protection in these special areas, contact the DEP's Land Use Regulation Element, the Pinelands Commission, or the HMDC.

For Further Information

Contacts:

Pinelands Commission, P.O. Box 7, Springfield Road, New Lisbon, NJ 08064, 609-894-9344

Hackensack Meadowlands Development Commission, One DeKorte Park Plaza, Lyndhurst, N.J. 07071, 201-460-1700

DEP Land Use Regulation Element, 609-292-0060

The laws and regulations:

Pinelands Protection Act, N.J.S.A. 13:18A

Pinelands Comprehensive Management Plan, N.J.A.C. 7:50

Hackensack Meadowlands Reclamation and Development Act, N.J.S.A. 13:17

Hackensack Meadowlands Reclamation and Development Administrative Rules, N.J.A.C. 19:3

Federal Water Pollution Control Act (Clean Water Act), 33 U.S.C. 1251-1387, Section 404 (permits for discharge of dredged and fill materials)

FLOODPLAINS

Areas naturally subject to flooding are called floodplains, or flood hazard areas. These include the floodway, which is the channel and the floodplain subject to high velocities of moving water; and the flood fringe, which typically contains ponded or quieter floodwaters. DEP severely limits activities in the floodway because they stand in the way of the flood waters, are at risk for damage from flood-driven debris, and interfere with the ability of the floodway to accommodate floodwaters, thus causing worse flooding downstream. Activities in the flood fringe are less restricted, but are regulated so as not to diminish the flood-storage capacity of these areas.

Activities in the floodway and flood fringe are called "stream encroachments." Most require permits issued by the DEP's Land Use Regulation Element, both in delineated and non-delineated floodways. Municipalities may adopt stricter regulations.

Stream encroachment activities can:

- reduce the ability of the stream and floodplain to carry and store floodwaters, causing more frequent, higher, faster and faster-rising floods that extend to previously unflooded areas;
- bring more erosion, sedimentation and pollution to the stream and its floodplain,
- reduce water quality and damage habitats;
- introduce development to unsuitable areas, exposing people and property to harm and resulting in large public costs.

The Regulated Area

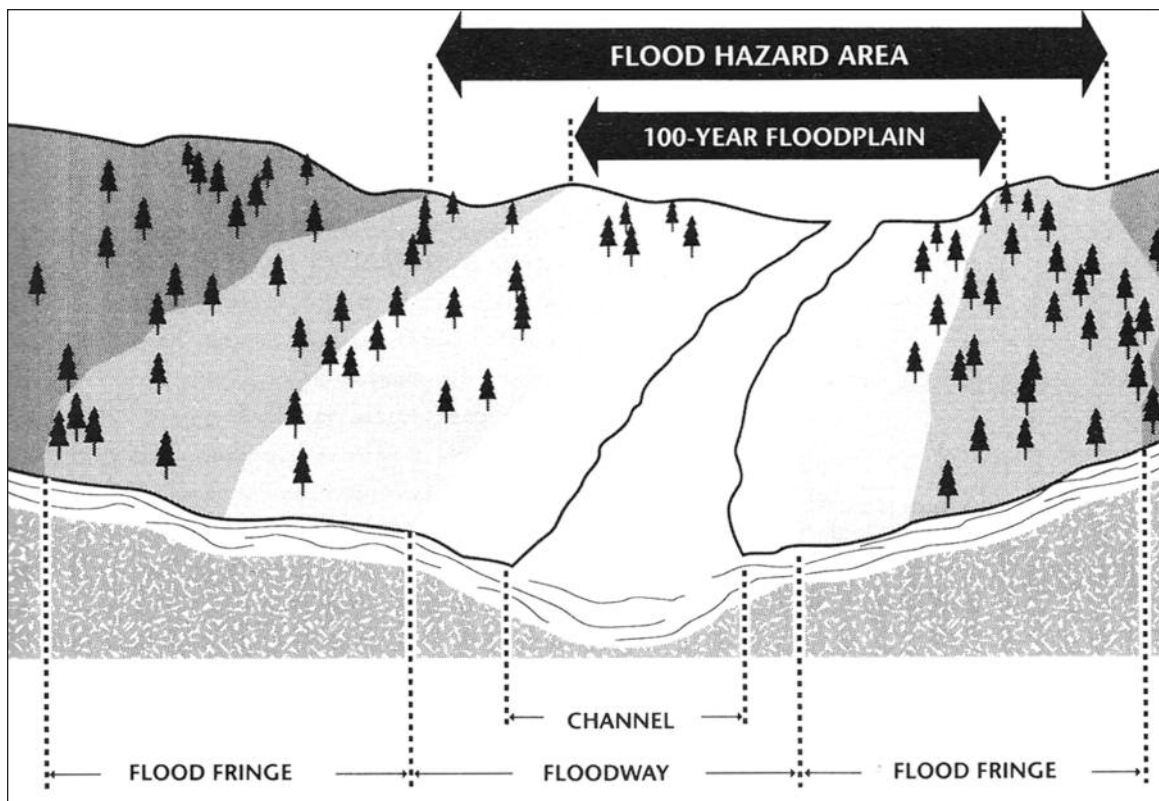
Under the state's regulations, most development or activity is regulated within the largest area defined by any of these parameters:

- the floodplain (for *undelineated* streams, the floodplain includes the watercourse and land inundated by the "regulatory flood," which is the worst flood typically occurring within 100 years; for *delineated* streams, it is the 100-year floodplain plus 25 percent);
- 25 feet back from the top of the channel bank;
- 50 feet back from the top of the channel bank if the waters contain acid-producing soils; are associated with trout waters classified as FW1 or FW2 (see Chapter 10); or are a critical part of a documented and still suitable habitat for threatened or endangered species.

Certain floodplains are not regulated under this program. They include most tidal or tidally influenced floodways, wetlands regulated under the Wetlands Act of 1970, and lands regulated under the Waterfront and Harbor Facilities Act (N.J.S.A. 12:15) or the Coastal Areas Facilities Review Act (N.J.S.A. 13:19).

Unregulated Uses

In the floodway, unregulated uses are those that do not reduce or obstruct the channel or floodway, that do not affect water quality and that do not raise off-site flood elevations more than 2.4 inches. These typically include agriculture, aboveground utilities, and many recreational facilities.



Floodplains

In the flood fringe, unregulated uses are those that do not damage water quality or reduce flood storage, which may include shed-like buildings up to 100 square feet, home additions up to 300 square feet, or other buildings without permanent foundations.

Prohibited Uses

In general, the DEP is not to approve a permit if the activity or use is “likely to significantly or adversely affect the biota of the watercourse or its water quality.” In floodways, any fill or structure that raises the ground level or obstructs the flood flow is prohibited, as are the addition of solid or hazardous wastes or pollutants (although existing landfills may be allowed to expand vertically), pesticides for any purpose, septic systems, off-channel detention basins, or the storage of materials or equipment (unless existing before March 30, 1995).

In the flood fringe, the disposal or storage of hazardous materials or solid wastes are generally prohibited. Fill is permitted (under regulations detailed in *N.J.A.C. 7:13-13(e)*)

equaling up to 20 percent of the flood storage capacity of the filled portion of the property, although this limitation can be waived for public road projects. Septic systems are permitted within the fringe if they meet state codes (*N.J.A.C. 7:9A*).

Stream Encroachment Permits

For activities along, in or across the channel or floodplain of any stream, permits are required for construction, installation or alteration of any structure, for permanent fill, or for the alteration of the stream itself. Applicants must notify county and municipal officials and boards, abutting property owners, and municipalities across the stream and downstream within one mile. All applications must include detailed mitigation plans to minimize adverse environmental impacts, including restoration of vegetation, habitats and other features, and prevention of sedimentation and erosion as much as possible.

Restrictions on erosion and sediment, bottom or vegetation disturbance, changes in the channel or clearing of

natural obstacles, or anything that would increase turbidity are stricter for streams that have populations of trout, anadromous, or warmwater fish. Stream encroachment activity is prohibited or severely restricted during critical migrating or spawning periods (specified in *N.J.A.C. 7:13-3.5* and *3.6*). The DEP will not grant a permit for an activity or use that will adversely affect a threatened or endangered species.

Waivers

The DEP may grant stream encroachment waivers under the following conditions:

- if there is no “feasible and prudent alternative” and if the waiver is consistent with public health, safety and welfare;
- if the costs of strict compliance are “unreasonably high”;
- if the DEP and the applicant agree on alternative requirements;
- if the applicant can prove that a hardship exists and that the use will not cause significant flooding problems. In such cases, the DEP is to set special requirements for any work, to minimize its impact.

Permit Review and Enforcement

The DEP has 20 days to declare an application complete and 90 days to review the completed application, with a possible 30-day extension and optional public hearing. The DEP encourages local governments or interested individuals or groups to report stream encroachment violations.

For Further Information

Contacts:

DEP Land Use Regulation Program:
General, 609-292-0060
Application/Permit Support, 609-777-0456

Each county also has a regional DEP contact for stream encroachment permits:

Atlantic, Burlington, Camden, Cape May,
Cumberland, Gloucester, Monmouth,
Ocean, Salem609-984-0162

Bergen, Essex, Hudson, Mercer, Middlesex,
Morris, Passaic, Union609-984-0194

Hunterdon, Somerset, Sussex, Warren609-633-9277

The laws and regulations:

Flood Hazard Area Control Act, *N.J.S.A. 58:16A-50 et seq.*
Flood Hazard Area Regulations, *N.J.A.C. 7:13-1.1 et seq.*
Emergency Flood Control Bond Act, *P.L. 1978, c.78*
Flood Control Bond Grants, *N.J.A.C. 7:23-1.1 et seq.*

LAND AND HABITAT PRESERVATION

In addition to the regulatory programs that protect wetlands and floodplains, the state has many programs that support the preservation of open space through tax incentives, loans, grants, purchase of development rights and outright purchase or management. These programs protect environmentally sensitive areas and habitats, provide space for outdoor recreation, maintain farms and the farming industry, preserve local character, and save tax dollars by controlling development.

State-administered open space programs include: Farmland Preservation, Farmland Assessment, Green Acres, Green Acres Tax Exemption, and several land and wildlife conservation programs managed by the Division of Fish, Game and Wildlife, including Wildlife Management Areas and the Endangered and Nongame Species Program. The Division of Parks and Forestry’s Office of Natural Lands Management administers the Natural Heritage Program, Natural Areas Program, N.J. Natural Lands Trust, Trails Program, Wild and Scenic Rivers Program, and Endangered Plant Species Program.

The N.J. State Development and Redevelopment Plan (SDRP) provides a statewide plan for development that will, if implemented by state agencies and local land use officials, result in the preservation of open space in rural and environmentally-sensitive areas. The Plan calls for rural preservation, revitalization of urban areas, and focusing further development into areas with existing infrastructure.

Farmland Assessment

Under the state’s Farmland Assessment Act of 1964, parcels of five acres or more that are in active use for agriculture, horticulture, or silviculture may be tax-assessed on the land’s value *for those activities*, rather than on its development value. The Division of Taxation (within the state Treasury Department) administers this program, although

the Department of Agriculture also offers assistance and advice on the program.

In 1997, approximately 1.19 million acres, or 24.7 percent, of the land in New Jersey was farmland-assessed. The counties with the most farmland assessment were Salem (55.81 percent), Warren (50.98 percent) and Hunterdon (51.12 percent). Only Hudson County had none. Farmland assessments are far lower than regular assessments, ranging from a high of about \$900 per acre for the most productive farmland, to a low of about \$20 per acre for woodlands with poor soils.

To be eligible for farmland assessment, a land owner must apply to the local tax assessor by August 1st, and must have gross annual sales (including any soil conservation payments) of at least \$500 on the first five acres, and \$5 for each subsequent agricultural acre, or \$.50 for each silvicultural acre. This level of income must have existed for two years before the special assessment is sought, and must continue as long as the assessment continues.

Land used to harvest trees or forest products must be harvested and maintained according to a woodland management plan approved by the state. Wooded acres that are “supportive” of agricultural or horticultural uses or that have been historically part of a farm can also be included in a farmland assessment.

If farmland-assessed land is sold for development or any non-agricultural purpose, “rollback” taxes must be paid equal to full taxation for the year during which the change occurred plus the two preceding years. If the farmland assessment was no longer in place in the year of the change, but had been in place within the preceding two years, the rollback is based on whatever portion of those two years the special assessment was in place.

Farmland Preservation – This state Department of Agriculture program helps keep land in agricultural use by offering farmers grants for soil and water conservation and by offering to buy the “development rights” on farmland, leaving the farmer with the right to continue farming or to sell the land to another farmer.

Between 1981, when the initial \$50 million bond issue was approved to fund this program, and February 1998, more than \$198 million was spent to preserve 43,797 acres of farmland in 15 of the state’s 21 most rural counties, which contain 99 percent of New Jersey’s remaining farms.

The six counties not participating are Hudson, Essex, Bergen, Passaic, Union and Camden. The state’s share of the total cost was \$130 million, with the remainder coming mostly from counties and municipalities and occasionally from the landowner or from private groups. There is no mandated state share, which averages 63 percent.

To be eligible for the farmland preservation program, the farmer must join or be in an “Agricultural Development Area” (ADA), designated by the County Agricultural Development Board (CADB) and certified by the State Agricultural Development Board (SADB). Any non-agricultural development proposals must be reviewed for their impact under the ADA.

Once within an ADA, if the land is farmland assessed and meets other criteria established by the CADB, the landowner may also enter into an eight-year preservation program, promising to keep the land available for agriculture for at least eight years,

Certain benefits accrue to being within an eight-year preservation program. If the program is not municipally approved, the farmer is eligible for soil and water conservation funding to fund up to half the project cost and may use established farm building designs without getting the seal of an architect or engineer. Under municipally approved eight-year programs, farmers also enjoy much stronger protections against eminent domain and an “irrebuttable presumption” under the Right to Farm Act that protects farmers against nuisance complaints.

Joining an eight-year program is not a prerequisite to applying to sell development rights, although being within an ADA is. For the development rights easement purchase program, the county boards establish criteria, receive applications from farmers wishing to sell their rights, appraise and select the farms, and then send a list of up to seven candidates each year to the State Agricultural Development Commission (SADC), which decides which farms will be preserved.

In most cases, the county holds the development rights, although occasionally the SADC will buy a farm outright and then resell it minus development rights, which are then held by the state. The assumption is that the counties and state can never dispose of or sell back into private use the development rights, although this question has never been tested in court.

In general, county criteria for ADAs and sale of development rights are based upon:

- whether the farm's location is "reasonably free" of suburban and commercial development;
- the proximity of other farms;
- the size of the farm;
- the suitability of the soils;
- whether the property is farmland assessed;
- whether the property will be subject to development pressures as evidenced in local planning and zoning and the nearness of highways and water/sewer systems; and
- whether continued agricultural use is consistent with county or state master plans.

Because funding is limited, farmland preservation has become a competitive process; for every farm that is selected for preservation, nine don't make it. Once a year, usually in May, farmers may enter an open bid process in which they tell the SADC what price they are willing to take for their acreage, rather than having the county board set a true-market assessment. By so doing, these farmers may improve their ranking on the list of candidates, increasing the chance that their land will be selected for preservation.

For Further Information

Contacts:

State Treasury Department, Division of Taxation, 609-292-5185

State Department of Agriculture, 609-292-5511

State Agricultural Development Committee Farmland Preservation Program, 609-984-2504

Local tax assessors, for information about farmland assessment

The laws and regulations:

Farmland Assessment Act of 1964, *N.J.S.A.* 54:4-23

Farmland Assessment Regulations, *N.J.A.C.* 18:15

Agricultural Retention and Development Act of 1983, *N.J.S.A.* 4:1C-11

Agricultural Retention and Development Regulations, *N.J.A.C.* 2:76

Right to Farm Act of 1983, *N.J.S.A.* 4:1C-1

Green Acres

The Green Acres program was created in 1961 to increase and preserve open lands and recreational areas. Since its inception, the program has distributed \$1.4 billion from nine bond issues, resulting in the purchase of a total of about 391,000 acres. Of that, approximately 275,000 acres are state-owned lands, 81,000 acres are county or municipally owned lands, and 35,000 acres are lands purchased by non-profit groups. Even though New Jersey voters have consistently supported Green Acres by approving ten bond referenda, the demand for Green Acres funds has always been greater than the supply.

The local program: Since 1983, the Bureau of Green Trust Management within Green Acres has offered counties, municipalities and non-profit groups a combination of grants and low-interest, long-term loans (in a revolving loan fund) for open space and recreation projects. Any municipality, county or public agency authorized to acquire and maintain lands for recreation and conservation may apply for Green Acres funds, as may private, non-profit conservancies. Local entities can secure matching purchase funds from private groups, the federal government, or through local bonds or budgets.

Green Acres funds may be used for the purchase of conservation areas, open space for recreation (passive or active), natural areas, unique land types, historic sites or the development of outdoor recreation such as boating, swimming, fishing or playgrounds. Projects must meet the goals of the DEP's Statewide Comprehensive Outdoor Recreation Plan (SCORP). Other selection criteria include:

- availability of economical transportation to and within the project (such as public transit, bikes or walking);
- public participation in the planning;
- connections with other municipal, county or state public facilities; and
- acquisition of land through means other than full purchase (such as conservation easements or development rights).

Green Acres sites must be open to all New Jersey residents, although a small fee may be charged, with DEP approval (the money must be dedicated to recreation or

conservation). Green Acres parcels cannot be sold or diverted to a different use without the approval of the DEP commissioner and the State House Commission.

The municipal or county government must have a comprehensive park ordinance and a concise, mapped plan for protecting environmental features and open space, and must assume all liability for the Green Acres site. Also, permanent commercial billboards or advertising are prohibited.

Grant and loan applications are due by October 31st of each year. After reviewing the applications, the DEP publishes a priority list. There is no dollar limit for open space acquisition; however, two categories of recreational funding have limits of \$150,000 and \$500,000. For acquisition of land for parks and recreation, the state offers loans to cover up to 100 percent of the costs. For acquisition of environmentally sensitive land and for projects in urban areas, the state can offer 75 percent loans and 25 percent grants.

The state program: Through the Bureau of State Land Acquisition, Green Acres funds may be used to buy land or easements for parks, forests, natural areas or wildlife management areas. Although affected municipalities are usually consulted about purchases, and public hearings may be held, municipal approval is not required for this use of Green Acres funds. Green Acres parcels bought this way are under the control and management of either the N.J. State Parks System or the N.J. Division of Fish, Game and Wildlife, and must comply with the SCORP.

Because the municipality can no longer tax Green Acres land bought by the state, the state compensates by paying the host municipality declining amounts over a 13-year period.

Green Acres Tax Exemption Program – To satisfy the acute need in New Jersey for natural open space areas, the DEP may certify non-profit organizations for exemption from property taxes on land they agree to maintain for public recreation and conservation. The organization must assume all liability for the property, but with DEP approval may charge fees and restrict use of the property. As part of the application process, the municipal and county government must be notified of an application, and a public hearing must be held. The organization must re-apply for certification every two years. If it decides to sell or use the land for other purposes, it must repay the exempted taxes

for up to three preceding years. To date, this program has opened more than 35,000 acres for a wide variety of recreational and environmental uses.

Blue Acres

The Green Acres Bureau of Green Trust Management also administers the Blue Acres Program, established in 1995. Municipalities or counties may apply for 75 percent in grants and 25 percent in loans to purchase, for conservation or recreation, lands on the Atlantic coast, the Delaware Bay coast, and a 150-foot wide corridor along both sides of their tidal tributaries. These lands include those damaged, or prone to damage, by storms or storm-generated floods, and lands that need protection from storm damage. No structures or recreational facilities that would become storm hazards may be built on these lands.

Private Land Trusts

Non-profit, tax-exempt organizations play a significant role in preserving New Jersey's open space. Such private, independent groups can often act faster and more creatively than government agencies, helping landowners to put together a sale, easement or donation that makes the best use of charitable deductions and tax benefits. Private land trust organizations often enter into multi-party agreements with a landowner, the state, county or municipality, other trail or conservation groups, or developers in highly imaginative preservation agreements. They can be far more aggressive and flexible than government agencies in seeking open spaces for preservation and in closing the deal.

Most land trusts are directly involved in land transactions, and most hold and manage at least a portion of those lands. A land trust may be organized to protect a particular piece of property, or to affect land use patterns in an area such as a watershed or a particular geophysical province. Land trusts can apply for Green Acres funds for parcels that offer public access.

Greenways

The Green Acres program, county and municipal agencies, and private preservation groups increasingly favor preserving open spaces that are linked as greenways. Sometimes these are miles wide, sometimes as narrow as a footpath. They may be publicly or privately owned and protected by

easements or other restrictive covenants. Greenways are important:

- for conservation purposes, such as protecting sensitive features like steep slopes and forested areas, or for providing adequate habitat and corridors between habitats;
- to protect a vista or scenic corridor;
- to provide trails for recreational activities like biking, walking, cross-country skiing or horseback riding;
- to link existing parks, preserves or cultural and historic features; or
- for a combination of these purposes.

Greenways can be cost effective because they are often obtained by means other than the direct purchase of land. Typically, a municipality establishes a greenway through public and private financing paired with land use techniques. A municipality may seek easements or donations from developers, especially in clustered projects. To help link such easements, the municipality might approach other landowners for trail or conservation easements, or to suggest that they sell or donate a greenway through Green Acres or private land trusts.

For Further Information

Contacts:

DEP Green Acres and Blue Acres Programs, 609-984-0500
Association of New Jersey Environmental Commissions,
973-539-7547
N.J. Audubon Society, 908-204-8998
N.J. Conservation Foundation, 908-234-1225
The Nature Conservancy, 908-879-7262

The laws and regulations:

Green Acres Land Acquisition Act, N.J.S.A. 12:8A *et seq.*
Green Acres Regulations, N.J.A.C. 7:36 *et seq.*
Green Acres Tax Exemption Law, N.J.S.A. 54:4-3.63 *et seq.*
Tax Exemption Regulations, N.J.A.C. 7:35 *et seq.*
1995 Green Acres, Farmland, Historic Preservation, and Blue Acres Bond Act, P.L. 1995, c. 204

Written references:

Keeping Our Garden State Green, 1989, ANJEC,
973-539-7547

Programs within the Division of Fish, Game and Wildlife

Wildlife Management Areas: The Division of Fish, Game and Wildlife (DFG&W) oversees 107 Wildlife Management Areas in New Jersey, ranging in size from 1.5 to 24,000 acres, and totaling 245,400 acres. These areas preserve a diversity of wildlife habitats, from coastal marshes to mountain ridges, and are used for research, education and recreation. The Division maintains wildlife management areas to promote wildlife diversity, protect threatened and endangered species, increase the numbers of recreationally or economically important species, and promote wildlife and conservation-oriented recreation such as hunting, fishing, trapping and birding.

Most passive outdoor recreational activities are permitted in wildlife management areas, although DFG&W may limit or close areas to the public when necessary to protect habitats, wildlife or public safety. While camping and picnicking are prohibited, permits can be obtained for trail bikes, snowmobiles, dogsleds and even organized motorcycle events, depending on the applicant and the event.

Municipal police are empowered to assist the state's limited number of state conservation officers in enforcing Wildlife Management Area regulations. Citizens can report violations directly to DFG&W through the Operation Game Thief Hotline, or through local DFG&W offices (listed below).

Endangered and Non-Game Species Program: This program protects and manages more than 400 non-game species in New Jersey, 63 of them threatened or endangered. Since 1981, this program's research, management and educational activities have been funded solely by federal and private grants, a state income tax checkoff and proceeds from the sale of New Jersey's "Conserve Wildlife" license plates. Sightings of threatened or endangered species should be reported to DFG&W, which has standard reporting forms. It is against the law to threaten or harass these animals.

For Further Information

Contacts:

Division of Fish, Game and Wildlife, 609-292-2965
Bureau of Wildlife Management, 609-292-6685
Endangered and Non-Game Species Program,
609-292-9400

To report violations:
Operation Game Thief Hotline, 800-222-0456
Northern, 908-735-8240
Central, 609-259-2120
Southern, 609-629-0555

The laws and regulations:

Endangered and Nongame Species Act, *N.J.S.A. 23:2A et seq.*
Fish, Game, Wild Birds and Animals Statutes, *N.J.S.A. 23:1 et seq.*

Nongame and Exotic Wildlife Administrative Rules,
N.J.A.C. 7:25-4.1 et seq.

Division of Fish, Game and Wildlife Regulations, *N.J.A.C. 7:25-2 et seq.* (List of Wildlife Management Areas, 7:25-2.18)

Division of Parks and Forestry

The Division of Parks and Forestry administers state-owned holdings totaling almost 335,000 acres.

State Park Service: The Park Service manages all Parks and Forestry lands except for those managed by the New Jersey Natural Lands Trust. The Park Service is responsible for the management of 38 state parks comprising 78,560 acres, 11 state forests comprising 220,151 acres, lands in the Natural Areas System, recreation areas such as Round Valley and Spruce Run Reservoirs, state trails, historical sites, burial grounds, state marinas, reservoir sites and conservation easements. The Service also conducts programs on conservation, the environment, natural history and use of the park system.

N.J. Forest Service: About 42 percent of New Jersey's land (approximately 2,007,000 acres) has tree cover. Of this, well over half (about 1,860,000 acres, more than 80 percent privately-owned) is harvested for forest products. The Forest Service provides forestry information and assistance, including:

- data, updated every ten years, on New Jersey's forested acres, their uses and ownership;
- forestry expertise to the Pinelands Commission, and review and approval of Woodland Management (forest harvesting) Plans and Forest Stewardship Plans in the Pinelands region;
- review and approval of Woodland Management Plans, statewide, which are required of any landowner seeking farmland assessment for

silviculture, and monitoring of those plans to make sure wetlands are not adversely affected;

- technical assistance to local tax assessors for Farmland Assessment of silviculture acres.

The Forest Service also publishes the *New Jersey Forestry and Wetlands Best Management Practices Manual* (1995) and runs the Forest Resource Education Center and the State Nursery in Jackson Township, Ocean County (732-928-0029). It conducts the Forest Stewardship and Stewardship Incentive Programs, which offer financial aid and technical help to private landowners for woodland management activities such as reforestation, erosion control, trail layout, preparation of a Forest Stewardship Plan, installation of bird boxes or other wildlife protection measures.

The Forest Service has a Community Forestry Program that helps municipalities to inventory, plant and maintain trees on public lands, and to achieve Tree City USA status. The Community Forestry Program provides model municipal tree protection ordinances, and awards matching grants of up to \$4,000 for a variety of projects.

The Office of Natural Lands Management

The mission of the Office of Natural Lands Management (ONLM) is to protect natural resources through habitat management. Several programs operate in the ONLM to accomplish this mission.

New Jersey Natural Lands Trust: This is a corporate body, by law part of the Division of Parks and Forestry, but operating independently of DEP authority. The Trust is governed by a board of trustees, six from the private sector and five from state government. Its mission is to preserve land in its natural state for the protection of natural diversity. Currently, the Trust owns about 11,000 acres throughout the state, in parcels ranging from 20-by-100-foot lots to about 500 acres. Almost all (99 percent) of the Trust's holdings are charitable gifts, although the Trust may purchase land. Since its inception in 1968, the Trust has accepted between 12 and 32 gifts each year.

Public use is allowed on Trust lands, as long as it does not interfere with the mission of those lands. The Trust is permitted to dispose of land (typically to a contiguous state park or forest) or to sell it (for instance if a small parcel

becomes surrounded by development), but the board is reluctant to do so.

Because the Trust has a single field ecologist, it must rely heavily on stewardship from volunteers such as hunters and birders, Boy Scouts, environmental commissions, and trail groups. Land donors sometimes provide funds to help with management costs.

Wild and Scenic Rivers Program: New Jersey's Wild and Scenic Rivers Program was established in 1977 to preserve and enhance rivers with outstanding scenic, recreational, natural or cultural qualities. The Program's regulations expired in 1995, and the program is now inactive due to a lack of funding. Only one river, the Lower Atsion of the Mullica River in Wharton State Forest (Burlington County), was designated through the state program.

However, the federal Wild and Scenic Rivers program is still operating in New Jersey. Three rivers have been designated: the Upper Delaware, the Great Egg Harbor, and the Maurice and its tributaries. Two others, the Middle Delaware and the Musconetcong, are under study for possible designation.

Rivers may be classified as wild, scenic, recreational or developed recreational. Land use and development is to be controlled under a River Management Plan approved by a river commission, which is either a local group or, if such a group cannot be established, the DEP or EPA. Development is prohibited if it will have an "adverse effect" on the values for which the river was included in the program. Public access and recreational use is encouraged, as long as it does not damage the special qualities of the river corridor.

Open Lands Management Program: The first program of its kind in the country, the Open Lands Management Act of 1984 provided financial aid to private property owners who allowed their land to be used for public recreation. Individuals, corporations and non-profit groups applied for grants of up to \$10,000 (no match required) for passive recreation projects such as trails, picnic sites, canoe access sites, small parking areas, fences or trash barrels. The agreements included access covenants and provisions for the state to inspect the sites at least once a year, and also allowed property owners to restrict use to certain days and

hours. Under this program, facilities were developed on more than 2,000 acres. However, this program has received no funding since 1994. A few existing access easements extend beyond 2000, but when they run out, the program will be discontinued.

State Trails Program: The 1982 New Jersey Trails Plan proposed a statewide system of trails linking public open and recreational lands. That plan was updated and augmented in 1996, and now includes 1,000 miles of public (federal, state or county) long distance land trails (four miles or more) and 500 miles of canoe or boat trails. On the advice of the State Trails Council, the Office of Natural Lands Management recommends sites for acquisition or trail development, including abandoned railroad beds, and negotiates with other agencies and groups to plan, construct and maintain the trail system. The Trails Program gives matching grants of up to \$10,000 to public agencies or non-profit groups through the National Recreational Trails Fund Act.

Natural Areas Program: This program's mission is to protect lands that have retained their natural characteristics, have rare or vanishing plants and animals, or are representative of natural communities or ecosystems. Forty-two natural areas, owned or held under conservation easement by the DEP and totaling more than 40,000 acres, form a living museum of New Jersey's natural diversity. Natural areas are found in every county except Essex, Union, Camden and Gloucester. Most are designated parts of state parks and forests, but the Division of Fish, Game and Wildlife manages five parcels (totaling 2,779 acres) and N.J. Natural Lands Trust manages one (36 acres).

Scientific study, interpretative programs and recreation are permitted in natural areas as long as these activities do no damage. Each area has a management plan that details whether it is an "ecological reserve" to be left largely untouched, or a "conservation reserve" where habitat manipulation may be needed. The plan must analyze the impact of public uses.

The Natural Areas Council publishes a *State Register of Natural Areas*, which lists sites that may be candidates for the Natural Areas System. Listing on the Register is a prerequisite for a site to become a natural area. Currently, the Register lists 10 sites totaling about 37,000 acres, including

substantial areas within Wharton State Forest and the entire Pine Barrens Plain. No new sites have been added to the Register in 10 years, in large part because there has been no public outcry to help preserve special areas. Any individual or organization may recommend a site.

A detailed list of the Natural Areas System is found at N.J.A.C. 7:5A-1.13. The Register of Natural Areas is found at N.J.A.C. 7:5A-1.4. Information and location maps are available at the Office of Natural Lands Management, 609-984-1339.

Natural Heritage Program: This program functions as a clearinghouse for information on the state's endangered species, siting locations, and areas of natural diversity. The Natural Heritage database is the master list on rare, threatened, and endangered species and communities, comprising information from other programs such as the Division of Fish, Game & Wildlife's Endangered and Nongame Species Program. This database is used by various agencies and private groups including the N.J. Natural Lands Trust and the Green Acres program to prioritize land acquisitions, and is also used as the basis for the State Register of Natural Areas. Municipalities and consultants use this data for land use planning and environmental review (for instance, in classifying wetlands).

Endangered Plant Species Program: The N.J. Endangered Plant Species List Act of 1989 mandated the creation of an official list of endangered plants (found at N.J.A.C. 7:5C-5.1). The first list, in June 1990, included 287 species. As of January 1995, there were 331. The DEP defines endangered plants by designation, or by being on, proposed for, or under review for the federal threatened or endangered plant list (which currently contains only five species found in New Jersey, with one more under consideration), by being known or believed to be rare worldwide, or by having five or fewer populations in New Jersey. The Natural Heritage database also keeps a list of "plants species of concern," which may move up to the endangered list. The list may be obtained from the Office of Natural Lands Management, PO Box 404, Trenton, N.J. 08625.

The Pinelands Management Plan contains an endangered list under Section 6-204. Both that list and the state list apply in the Pinelands.

For Further Information

Contacts:

N.J. Division of Parks and Forestry, 609-984-0370
State Park Service, 609-292-2772
Forest Service, 609-292-2531
Community Forestry Program, 609-292-2532
Forest Stewardship Program:
Northern Office (Franklin) 973-827-1325
Central Office (New Lisbon) 609-726-1548
Southern Office (Mays Landing) 609-625-1124
Office of Natural Lands Management, 609-984-1339
N.J. Natural Lands Trust, 609-984-1339
State Trails Program, 609-984-1173
Natural Areas Program, 609-984-1015
Natural Heritage Program, 609-984-0097
Endangered Plant Species Program, 609-984-1015

The laws and regulations:

Natural Areas System Act, N.J.S.A. 13:1B-15.4 *et seq.* and 15.12a *et seq.*
Natural Areas and the Natural Areas System Regulations, N.J.A.C. 7:5A
Open Lands Management Act, N.J.S.A. 13:1B-15.133 *et seq.*
Open Lands Management Regulations, N.J.A.C. 7:5B
Federal Wild and Scenic River Act, 16 U.S.C. 1271-1278.
N.J. Wild and Scenic Rivers Act, N.J.S.A. 13:8-45 *et seq.*
U.S. Endangered Plant Species Act, P.L. 93-205, 16 U.S.C. 1533.
New Jersey Endangered Plant Species List Act, N.J.S.A. 13:1B-15.151 *et seq.*
Endangered Species Regulations and Plant List, N.J.A.C. 7:5C.

Website:

Natural Heritage Program, <http://www.abi.org/nhp/us/nj>

SPECIAL PROTECTION AREAS

THE COASTAL AREA

New Jersey's coastal management program, administered by the DEP's Land Use Regulation Program, guides development along the state's 1,792 miles of tidal coastline, including 126 miles of oceanfront. This program regulates and manages land in 244 of the state's 566 municipalities and 17 of its 21 counties; 244,500 acres of tidal wetlands; 720 miles of navigation channels that need regular surveying and dredging; and 700 buoys and 2,200 navigational markers. The goal of the program is to meet the demand for additional residential, industrial and commercial facilities while preserving and protecting natural resources and sites with recreational potential.

Authority for the coastal management program comes from the following laws:

- Coastal Area Facility Review Act of 1973 (CAFRA), as amended through 1993;
- Wetlands Act of 1970;
- Waterfront Development Law of 1914;
- common law Public Trust Doctrine concerning riparian lands.

Most construction in the coastal zone requires a permit under one or more of the laws listed above.

Coastal Area Facility Review Act (CAFRA)

The Coastal Area Facility Review Act (CAFRA) was enacted in 1973 in response to rapid commercial development along New Jersey's shores. The Act was intended to steer shoreline development toward land uses that are compatible with the delicate coastal environment, and away from those with negative health and environmental impacts. It gave the DEP review power over the placement and construction of coastal area facilities including manufacturing plants, mills, power generating stations, landfills, airports, highways, large housing developments (over 24 units) and other large projects. The Legislature substantially amended CAFRA in 1993, and broadened its language and focus to deal with general coastal area development activity.

CAFRA delineates a shoreline zone that ranges in width from a few thousand feet to 24 miles and encompasses approximately 1,376 square miles of land. It extends from the Atlantic coast to the three-mile limit at sea and includes that portion of the state from the Raritan Bay in Middlesex County south along the Atlantic coast to the tip of Cape May, and north along the tidal portion of the Delaware River to the Delaware Memorial Bridge in Salem County. The areas encompassed by CAFRA represent roughly 18 percent of the state's land and 75 percent of its waters.

CAFRA permits are required for most construction activities within the CAFRA zone. The DEP's authority to review a development project is determined by the project's proximity to either the mean high water line, a beach or a dune; the nature of the proposed development; and the existence of structures between the development and the dune, beach or water. All development proposed on a beach or dune is subject to DEP review.

Coastal Wetlands

The Wetlands Act of 1970 regulates activities on coastal lands that are located *at or below high water*, as designated on tidal wetland maps promulgated by the DEP pursuant to the Wetlands Act. These wetlands are situated along the Raritan River from New Brunswick east to Sandy Hook, south to Cape May and north along the Delaware River to Trenton. Wetlands regulated under this statute are exempt from the Freshwater Wetlands Protection Act. Coastal wetlands exist both in and out of CAFRA boundaries and have been delineated by the state on maps and aerial photographs. Tidal wetlands include banks, marshes, swamps, salt meadows, and flat or other low land subject to tidal action.

The Wetlands Act authorizes the DEP to establish a permit system for the regulation of all activities in the coastal wetlands that would alter or pollute those areas. Consequently, a DEP Coastal Wetlands Permit is required for virtually any coastal wetlands project including all dredging, filling or excavation; maintenance or repair of bridges and roads; construction of catwalks, piers, landings, observation decks, sea walls or any other structure; cultivation and harvesting of naturally occurring agricultural or horticultural products; diversion or appropriative use of water; application of pesticides (except those applied to the skin or clothes); and any alteration of the marsh contour. (See also Chapter 13 for a discussion of Freshwater Wetlands.)

Waterfront Development

The Waterfront Development Law of 1914, in concert with the Wetlands Law of 1970, is administered to minimize deleterious effects of development at the water's edge. A Waterfront Development permit is needed for waterfront activities including the construction or alteration of docks,

wharves, piers, bulkheads, bridges, pipelines, cables or pilings, and the dredging or removing of sand or other materials from lands under all tidal waters. Outside the CAFRA area, the Waterfront Development Law applies to tidal waterways and the adjacent uplands. Within the CAFRA area, this law applies only in the tidal waterways; CAFRA regulations govern the adjacent uplands.

The Permit Application Process

Any person who proposes to construct a project that falls under the regulation of CAFRA, the Wetlands Act of 1970, or the Waterfront Development Law of 1914 must obtain a permit from the DEP.

Pre-application review conferences are highly recommended for complex projects. They provide guidance on the permitting process and on the standards contained in the regulations. A request for a pre-application review should be made in writing to the DEP's Land Use Regulation Program, and should include a conceptual proposal and maps showing the location of the site. A pre-application review does not imply any obligation to submit an application, nor does it constitute a DEP commitment to approve or deny an application.

An applicant for a coastal permit must provide a copy of the application to the county and municipal planning boards, municipal and county clerks, county and/or municipal environmental commission, and the U.S. Army Corps of Engineers.

Within 20 working days from the receipt of an application, the DEP will:

- accept the application for filing, assign an agency project number, and issue notification to the applicant that the application is complete either for public hearing or for a public comment period, one of which must be scheduled within 15 days; *or*
- assign an agency project number and accept the application for filing, but request in writing that the applicant submit additional information within a specific period of time. In such cases, the application will not be considered complete until all the additional information has been received and deemed acceptable for review; *or*



New Jersey Coastal Zone

- return the application without filing, explaining why it is unacceptable to review, and return the filing fee upon notification that the applicant does not intend to reapply.

The initial application status report is published in the semi-monthly *DEP Bulletin*, which is distributed to all municipalities, counties and interested persons. The DEP considers written comments from public agencies and other interested persons that it receives prior to declaring the application complete for review. Often, comments received after this date are considered and made part of the record.

The DEP must hold a public hearing for major developments such as new roads, solid waste facilities, manufacturing or industrial processing facilities, and residential projects involving more than 150 dwelling units or 300 or more parking spaces (or equivalent paved areas). For smaller developments, the DEP may choose whether to hold a hearing or provide for a 30-day public comment period. The public hearing or the public comment period must be scheduled to commence no more than 60 days after the application has been declared complete.

An application for a Waterfront Development Permit is not complete for final review unless the applicant provides a legal document setting forth his or her right to use or occupy the riparian land, including but not limited to grants, leases or licenses. However, the DEP may, at its discretion, issue a permit decision prior to receipt of the conveyance, provided that the Bureau of Tidelands Management has received a complete application for the conveyance.

The DEP must approve, condition or disapprove an application for a construction permit, other than a CAFRA permit, within 90 days after it has accepted the application for filing, except when it has requested additional information. In that case, the DEP must make its decision within 90 days of the date that the application was declared complete for final review.

In the case of CAFRA permits, the DEP must act on an application within 60 days of the close of the public comment period or of the public hearing, unless additional information is requested at the hearing, in which case the DEP must act on the application within 90 days of the date it is declared complete for final review.

If the DEP fails to act (issue a decision) within the required period, an application will be deemed approved to the extent that it does not violate other statutes or regulations.

For Further Information

Contacts:

DEP Land Use Regulation Program, 609-292-1235 and 609-292-0060

American Littoral Society, 908-291-0055

Clean Ocean Action, 908-872-0111

The laws and regulations:

Coastal Area Facility Review Act, N.J.S.A. 13:19-1 *et seq.*

Wetlands Act of 1970, N.J.S.A. 13:9A-1 *et seq.*

Waterfront Development Law, N.J.S.A. 12:5-1 *et seq.*

Coastal Permit Program Regulations, N.J.A.C. 7:7-1.1 *et seq.*

Rules on Coastal Zone Management, N.J.A.C. 7:7E-1.1 *et seq.*

Tidelands (Riparian) Conveyances

Riparian law stems from common law and has evolved from the "Public Trust Doctrine." It states in general that tidal waters and the lands that are flowed by the tides are in public ownership and shall be preserved for the use of the public for navigation and fishing, including recreational uses such as bathing, swimming and surfing. Riparian lands, or tidelands, are lands now or formerly flowed by the mean high tide. They are found in bays, lagoons, rivers, wetlands and the ocean. Riparian lands are on the lower portion of the beach area where the tide flows. The portion of the beach above the mean high water line is not riparian land and may be public or private. Beaches are not always public land.

If a site proposed for development includes state-owned tidelands, the owner must apply to the Tidelands Resource Council for a grant, lease or license, as well as applying for the required coastal permit. If a property does not have clear title due to a state claim, a tidelands grant must be obtained to clear the title.

Municipal approval of a riparian grant, lease or license is not required. However, if any construction is involved, the plans must meet municipal requirements. Moneys from the sale or lease of state-owned tidelands are deposited into the Trust Fund for the Support of Public Schools.

For Further Information

Contact:

Bureau of Tidelands (DEP Land Use Regulation Program),
609-292-2573

The law and regulations:

Riparian Land Statutes, *N.J.S.A. 12:3-1 et seq.*

Waterfront Development Law, *N.J.S.A. 12:5-3 et seq.*, and
regulations *N.J.A.C. 7:7-1.1 et seq.*

TO REPORT A VIOLATION OF COASTAL DEVELOPMENT LAWS

Call the appropriate regional office of the Bureau
of Coastal and Land Use Compliance and
Enforcement

Northern New Jersey, 609-292-8203

Southern New Jersey, 732-255-0787

Enforcement – The staff of the DEP's Bureau of Coastal and Land Use Compliance and Enforcement inspect the coastal area for illegal development, enforce permit decisions and assist the general public.

HACKENSACK MEADOWLANDS

The 1969 Hackensack Meadowlands Reclamation and Development Act established a state agency responsible for the regional planning and permitting of development in the Meadowlands district. The act marked the first time that state government took an active role in control of land use. It instituted regional planning for 32 square miles of Meadowlands, which incorporated parts of 14 municipalities in Hudson and Bergen Counties.

At the time the legislation was passed, the Meadowlands district had become the repository for a third of New Jersey's solid waste, with landfills or proposed landfills on more than 2500 district acres, sewage treatment plants discharging into the Hackensack River, and power plants that were reducing dissolved oxygen levels in the river. This area had resisted development because of exposure to tidal waters, poor soil and distribution among many municipalities. However, the opportunity for development was there,

as the Meadowlands lay within a thriving metropolitan area and had the potential to generate new jobs, homes and recreation.

The law created the Hackensack Meadowlands Development Commission (HMDC) with independent administrative, financial and regulatory powers. The Commission is composed of seven members, including three each from Bergen and Hudson Counties, and the commissioner of the Department of Community Affairs, who serves as its chairman.

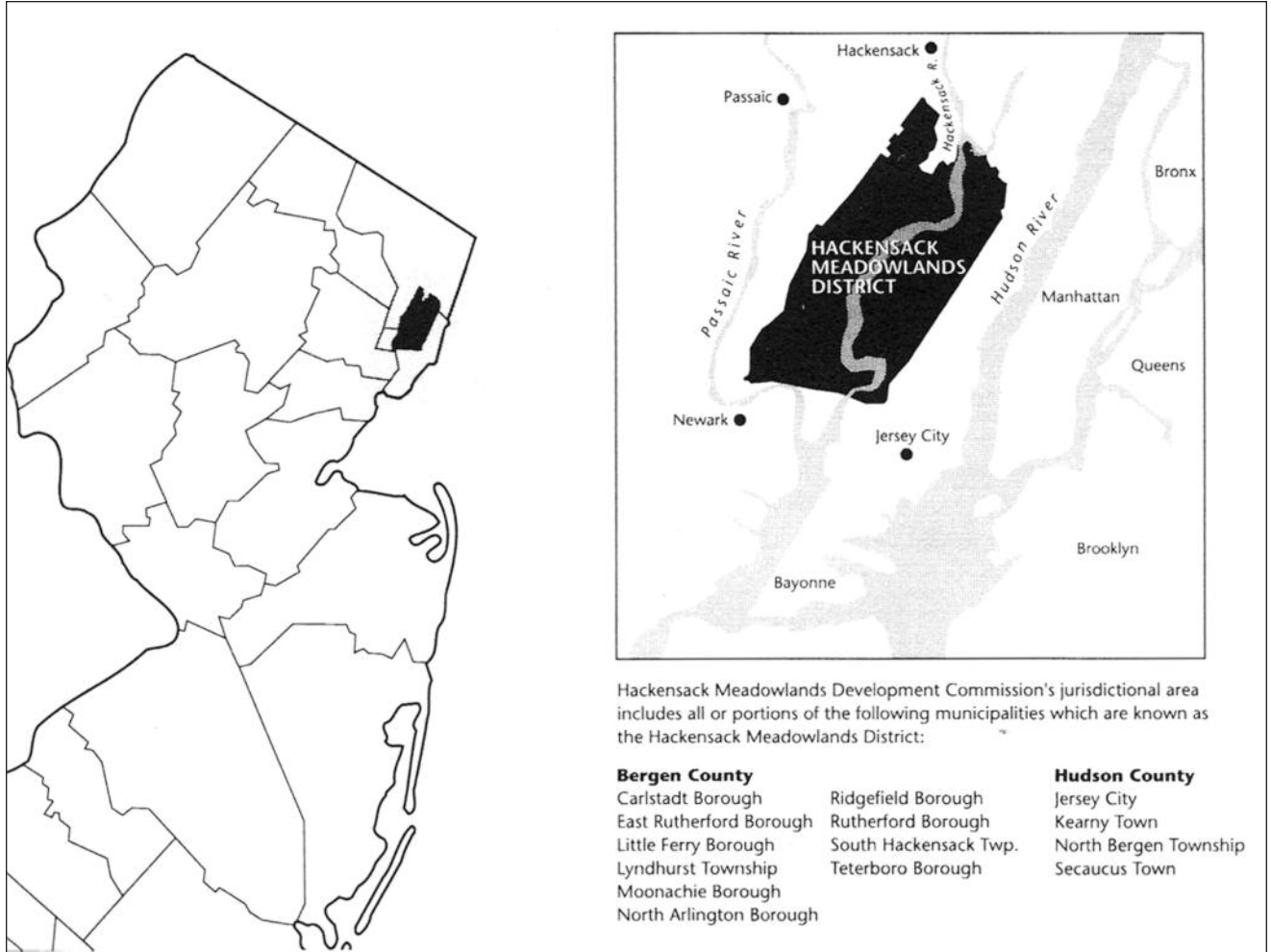
The law gave the HMDC the task of regulating land use through planning and control of development. Its charge was threefold:

- create a master plan for the region to provide for orderly development with a mix of commercial, industrial, residential, recreational and open space;
- develop programs to restore and protect the natural resources of the area;
- oversee solid waste management in the district (i.e., provide for the disposal of solid waste that was being treated and disposed of in the district).

The original HMDC master plan, completed in 1973, designated specific uses for land areas of the district, including six square miles devoted to open space. It posed new environmental controls to change the course of garbage dumping and environmental degradation in the region. It required uniform zoning, engineering, subdivision and building codes. It called for one developer or management group to do large-scale development in specially planned areas (as followed in the Harmon Meadows, Harmon Cove and Meadowlands Corporate Center) to guarantee unified development. The plan was designed to coordinate development objectives with large-scale wetlands preservation and restoration.

The HMDC developed zoning regulations to implement the land use plan. These regulations set forth requirements for residential, commercial, light industrial and recreation zones. They require natural buffers between development and waterways, and landscaped buffers between different land uses.

In addition to the Meadowlands Commission, the 1969 Act established a Meadowlands Municipal Com-



Hackensack Meadowlands District

mittee, composed of the mayors of all municipalities in the District. The Committee is an advisory body that reviews master plans, development plans and codes proposed by the Commission.

Five major divisions carry out the work of the HMDC: Land Use Management, Planning and Management, Solid Waste, Environment, and Administration.

Land Use Management

The HMDC issues over 250 building permits each year. This division acts as a planning board and a board of adjustment. Its engineers, planners and licensed plan reviewers assess all proposals within the district for compliance with the land use plan and regulations, evaluating each

proposal's impact on transportation, the environment and existing infrastructure. The division handles all sub-code plan reviews and building code inspections.

Planning and Management

This division works with developers, engineers and planners to protect air and water quality, wildlife, landscaping and open space. It assists in the design and implementation of proposed development, and manages wetlands through review of mitigation and enhancement plans. It coordinates the HMDC's long-range planning efforts regarding development, open space and transportation. Parks management is also in this division.

Environment

The HMDC opened an Environment Center in 1983 to enhance public understanding and appreciation of wetlands, estuaries and salt marsh environments. The center is supported in part by the N.J. Sports and Exposition Authority as mitigation for the wetlands that were filled or destroyed to build the Meadowlands Sports Complex. Over 10,000 students, teachers and others come to the Center each year.

Solid Waste

This division is responsible for overseeing solid waste facilities in the District. It supervises landfill operation, closure and methane gas collection systems. Until 1987, four counties dumped their waste in Meadowlands landfills. As the landfills reached capacity, Bergen, Essex and Passaic counties ceased dumping in the district. Municipal solid waste from Hudson County is still landfilled in a “balefill,” a mechanical baling facility that compresses the garbage into bales that are then landfilled.

Administration

This division supervises support functions for the other divisions, including personnel, financial and legal. It runs a tax-sharing program through which the communities of the HMDC district share property tax revenues from development, regardless of the municipality in which the development occurs.

Current Status of the Meadowlands Master Plan

The 1973 Meadowlands Master Plan predates much national and state environmental legislation. Some agencies, particularly the U.S. Environmental Protection Agency (EPA) and the U.S. Fish and Wildlife Service, have urged the HMDC to strengthen its wetlands protection requirements. The HMDC is currently updating its 1973 master plan. The Commission has been trying, since the early 1990s, to reach consensus with residents, environmentalists, local officials and other stakeholders to formulate a Special Area Management Plan for the region that identifies specific areas for development and preservation.

For Further Information

Contact:

Hackensack Meadowlands Development Commission,
201-460-1700

The law and regulations:

Hackensack Meadowlands Reclamation and Development
Act, N.J.S.A. 13:17-1 *et seq.*

Hackensack Meadowlands Development Commission
Administrative Regulations, N.J.A.C. 19:3-1.1 *et seq.*

PINELANDS PROTECTION AREA

The Pinelands National Reserve represents a unique approach to regional land management and natural resource preservation. In the 1970s, development pressures threatened the exceptional features of the region, which include extensive forests of pine, oak and cedar, abundant wetlands, and a 17-trillion-gallon aquifer containing some of the cleanest drinking water in the world.

Two laws — one federal and one state — were enacted to help preserve this area. In 1978 Congress established the Pinelands National Reserve, the first such designation. The reserve covers an area of 1.1 million acres, 23 percent of the state’s land area. The legislation required New Jersey to establish a local/state partnership to manage land use and to establish a regional planning commission to develop a plan to preserve and protect the area.

In 1979, New Jersey enacted the Pinelands Protection Act, which authorized a 15-member Commission to devise a Comprehensive Management Plan (CMP) for the region and to oversee its implementation.

The Act established the boundaries of the Preservation and Protection areas, different from the boundaries of the National Reserve. The 299,000-acre inner Preservation Area District is to remain largely in its natural state through strict regulation of development. Cranberry and blueberry farming, campgrounds and wildlife management are typical of the low-intensity land uses that are acceptable in this area. Only members of long-time Pinelands families who owned their land before the Act’s passage may build new homes in the Preservation Area District. Projected growth is directed to the remaining portion of the Pinelands, called the Protection Area.

Adopted in November 1980, the CMP divides the Protection Area into several land use management areas — forests, agricultural production, regional growth, rural development, Pinelands towns and villages, and military and federal institutions. Projections show the opportunity for approximately 200,000 residences to be built within the reserve, with over half in the regional growth areas. The CMP sets land use regulations to control the impact of growth on the area's environmental resources. The regulations address the following environmental features: wetlands, vegetation, fish and wildlife, water resources, air quality, scenic resources, wildfire management and historic resources. The CMP also sets standards for forestry, agriculture, resource extraction, waste management and recreation.

To retain their planning and zoning powers, the seven

counties and 52 municipalities whose lands fall within the state 937,000-acre Pinelands area must revise their master plans and zoning ordinances to conform to the CMP and agree to management area boundaries. The Pinelands Commission, which has direct control over development within the Pinelands area, rules on the conformance of these plans and ordinance revisions. If a municipality does not revise its plan and ordinances, the commission applies the CMP standards to any new development. Most Pinelands municipalities have brought their regulations into conformance with the CMP and regained the primary responsibility for approving or denying development applications.

The Pinelands Commission may review local approvals that raise substantial issues with respect to



Pinelands Area

resource protection standards of the CMP. State agencies must also act in accordance with the CMP.

One unique feature of the CMP is the Pinelands Development Credit program. This program allows the transfer of development credits from the Preservation Area District and agricultural production areas to regional growth areas. Developers can purchase the credits to increase allowable residential densities in the growth areas. The landowner who sells development credits retains title to the land and can continue to use it for certain non-residential uses. The land is deed-restricted to bind future owners.

The state created the Pinelands Development Credit Bank in 1985 to aid the sale and use of credits, to guarantee loans using credits as collateral, to buy credits in hardship cases and to track the ownership and use of credits.

While outright purchase of the entire Pinelands is not feasible, approximately 100,000 Pinelands acres have been permanently protected from development or placed in public ownership since 1979, when the Commission initiated its land acquisition program. Funding for land purchase has come mainly from federal (Section 502 of the National Parks & Recreation Act) and state (New Jersey Green Acres Program) sources. Counties and nonprofit organizations have also purchased lands. The Commission has set an additional 25,000-acre goal for land acquisition.

For Further Information

Contacts:

The Pinelands Commission, 609-894-9342

Pinelands Preservation Alliance, 609-894-8000

The laws and regulations:

National Parks and Recreation Act of 1978, 16 U.S.C. 471

Pinelands Protection Act, N.J.S.A. 13:18A-1 *et seq.*

Pinelands Comprehensive Management Plan, N.J.A.C. 7:50-1.1 *et seq.*

DELAWARE & RARITAN CANAL

The Delaware and Raritan Canal and its towpath run 60 miles in a “Y” shape from Bull’s Island (Delaware Township) to Lambertville, south to Trenton, and from there northeast to New Brunswick. It passes through 17 municipalities in four counties, with historic districts, natural and recreational areas and wildlife habitats.

History

After its completion in 1834, the D&R Canal served as a vital transportation corridor for almost 100 years. Abandoned as a commercial route in 1933, the canal became a water supply system administered by the state. The New Jersey Water Supply Authority is authorized to divert up to 100 million gallons each day from the Delaware River into the canal to supply water to over a million people in central New Jersey.

In 1974, the legislature made the canal a state park and established the nine-member Canal Commission to oversee and plan for an unbroken corridor for the waterway and towpath. To accomplish this, the commission formulated a master plan for the physical development of the canal in its various functions as:

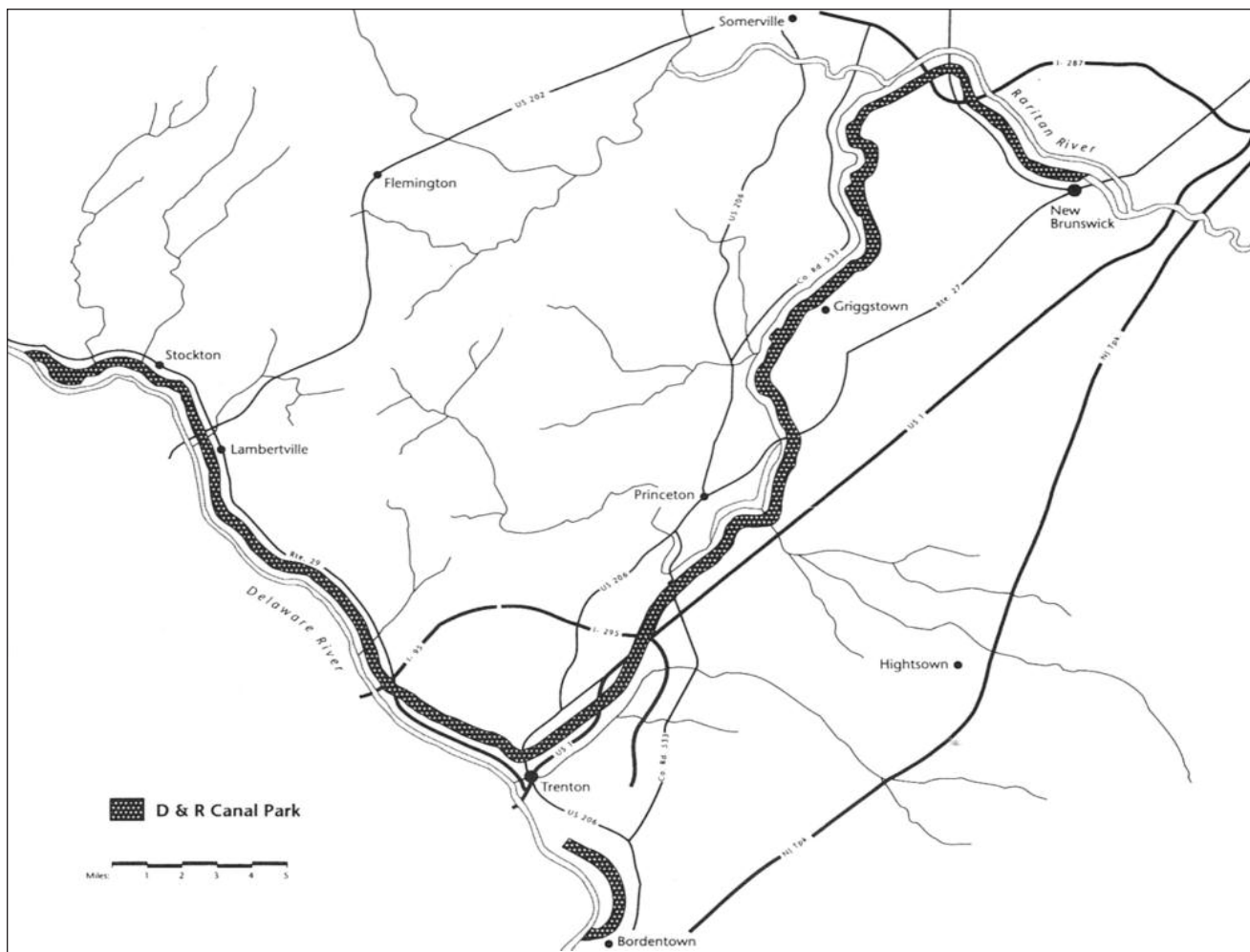
- a part of a water supply system;
- a recreation site;
- a historic resource;
- a natural area; and
- a means of enhancing urban areas.

The canal and its parklands now run through parts of 22 municipalities.

The Canal Commission

The Commission manages the development of the canal as a state park, supervising acquisition of new lands in order to widen the park, create access areas and protect stream corridors as tributaries of the canal. The Commission has proposed a \$12.8 million development plan for the D&R Canal State Park, which includes historic structure restoration, building new access areas, creating a trail system and establishing a canal boat ride. To date, the plan has been only partially funded.

The Commission developed land use regulations for projects in a “Review Zone” area, which encompasses parts of 34 municipalities whose runoff affects the canal and park. This regulatory program, in place since 1980, aims to protect the park from potentially harmful impacts of new development. It protects the canal as a water supply source by regulating the quantity and quality of runoff from all major projects within the park’s 400-square-mile drainage area. It protects the ecological, historic and aesthetic qual-



Delaware & Raritan Canal Park

ities of the park by regulating all development within 1,000 feet of the canal.

In 1989, the Commission adopted additional regulations to protect stream corridors of the 18 streams that enter the canal park. The corridors are defined as the stream and its tributaries, the 100-year floodplain and a 100-foot buffer on both sides of the floodplain. Construction of major projects is not permitted within the designated corridors.

The Commission reviews projects only for their potential impact on the park. It may approve, reject or modify proposed projects. The Commission often gives approval contingent on specific conditions, such as the dedication of a portion of the development to open space, tree planting, location of roads or preservation of historic structures.

The Commission also encourages and supports local suggestions that complement the park master plan, and lends its expertise to local planning bodies wishing to implement land use policies to enhance the park area.

For Further Information

Contacts:

Delaware & Raritan Canal State Park Office, 732-873-3050
 Delaware & Raritan Canal Commission, 609-397-2000
 Delaware & Raritan Greenway, Inc., 609-924-4646

The law and regulations:

Delaware and Raritan Canal State Park Law of 1974, N.J.S.A. 13:13 A-1 *et seq.* and Regulations, N.J.A.C. 7:45-1.1 *et seq.*

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