



NASSAU COUNTY DEPARTMENT OF HEALTH

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OBJECTIVES FOR 1980 - ENVIRONMENTAL HEALTH PROGRAMS

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Introduction

Program plans for 1980 in Environmental Health Services are described herein in the form of specific objectives organized by program area. This timely statement of annual objectives should serve as a useful management tool in several respects, notably to coordinate program plans with supervisory State agencies, provide information to the Board of Health and to the Commissioner, provide a basis to evaluate and report progress toward performance goals, and as a plan of action for program directors.

The objectives were developed by program managers as an outgrowth of a Manpower Analysis Report prepared in October, 1979 which detailed the personnel effort required for specific program elements. The selection of objectives is predicated on current staff resources and presumes both the continued availability of assigned staff and the absence of unforeseen environmental episodes and other developments which would require a labor-intensive response or otherwise diminish the labor pool. Personnel summary is attached.

Each objective is presented in the form of a concise statement which includes a general identification followed by greater detail and quantification. Personnel effort is also shown for each. Overall program management and routine administration are not reflected in the personnel requirements.

PUBLIC WATER SUPPLY

✓ 1. Water Quality Improvement

Investigation and correction of drinking water quality problems will be continued. Corrective action will be motivated in 50 anticipated incidents of chemical or microbiological contamination at wells and distribution systems. Includes evaluation of sampling data, consultation with water agency consultants, officials and superintendents, field inspections and enforcement action, correspondence, and reports. Effort required will be 0.60 person-years.

✓ 2. Engineering Plan Review

Engineering review of plans for new and modified facilities will be continued. Plans for 60 new or modified water supply facilities will be processed including consultation with water supply engineers and officials, preparation of correspondence, field evaluations, followup or construction inspections, and meetings as necessary. Personnel effort required will be 0.60 person-years.

Thirty plans will be processed for bathing facilities including consultation with engineers and owners, preparation of correspondence, site inspections, piping observations, followup construction visits and permit inspections. This activity will require 0.70 person-years of effort.

3. Regulation of Water Plant Operation

Surveillance and control of water supply operations will be continued. Annual waivers from disinfection requirements will be processed for 30 community systems. Twenty non-community water systems will be evaluated to determine need for routine disinfection treatment. Detailed water system evaluations will be conducted of 9 community systems to comply with State requirements (quadriennial frequency). Personnel effort required will be 0.9 person-years.

✓ 4. Special Studies of Water Quality

A special detailed evaluation will be conducted of prevailing groundwater quality, partially funded by a \$54,252 State grant extending to April, 1981. Thirty public and monitoring wells will be sampled for a broad spectrum of organic chemicals including 100 USEPA priority pollutants. Three hundred wells will also be sampled for about 15 toxic organic chemicals not previously assessed, for benzene, toluene, and xylene, for 12 pesticides and herbicides, and for 10 volatile halogenated organic chemicals previously monitored. Effort required will be 0.50 person-years.

✓ 5. Study of Contaminated Aquifer Segment

A special study, partially funded by a \$68,000 State grant, will be made of an aquifer segment contaminated with synthetic organic chemicals to determine mechanics of chemical movement, geophysical parameters, as well as spatial and qualitative dimensions of pollution as a basis for evaluating watershed management alternatives. Existing wells in the Roosevelt Field Water District will be sampled and tested for organic chemicals. Up to 30 test wells will be installed by contractor and tested for chemical and geophysical parameters. Consultant hydrogeologist will be retained to guide the work and prepare the study report. Department effort required will be 0.75 person-years.

6. Routine Surveillance of Distribution System Water Quality

Routine microbiological surveillance of public water supply quality in distribution systems will be continued at about 10 percent of testing

protocol of public water purveyors. Samples will be collected at a rate of 240 per month from 70 public systems for analysis. In addition, 50 resampling surveys will be conducted to investigate unsatisfactory water quality. Personnel effort will be 0.75 person-years.

✓ 7. Surveillance of Organic Chemical Water Quality

Surveillance of water sources will be continued for presence and levels of synthetic organic chemical contamination. Samples will be collected for analysis of an array of volatile halogenated organic chemicals from 250 public wells as well as 100 monitoring and 30 private wells, the latter to provide more comprehensive data. Effort needed will be 0.80 person-years.

✓ 8. Surveillance of Inorganic Chemical Water Quality

Surveillance of water and distribution system source quality will be continued for presence and concentrations of inorganic chemical contamination (full chem) as well as to assess overall groundwater quality. Samples will be collected for analysis of inorganic chemicals less heavy metal compounds from 450 public supply wells, 250 monitoring wells, 30 private wells and also from distribution systems (75 samples). Samples for heavy metal analysis will be collected from 150 public wells, 180 monitoring wells, and 30 private wells. Distribution system samples will also be taken for analysis of fluoride (180), iron (120), lead (200), and nitrates (24) to evaluate efficacy of water treatment. Some field activity will be concurrent with other sampling work. Effort required will be 0.5 person-years.

✓ 9. Investigation of Water Quality Problems

Investigation of consumer complaints of drinking water quality will be continued. Complaints (150) of substandard water quality will be investigated and chemical or microbiological water quality surveys will be made where water contamination is found or suspected. This activity will require 1.20 person-years of effort.

10. Annual Evaluation of Water Supply Facilities

Annual evaluation of public water facilities will be continued. State evaluation forms will be completed for 75 public water systems. Involves updating of operation records, supply statistics, and evaluation of compliance with major requirements of the State Sanitary Code. Includes conferences with water supply superintendents; review of purveyor operating reports, notification of deficiencies, and followup actions. Also includes comprehensive inspection at 200 of 437 well stations of the treatment facilities, safety controls, record keeping, auxiliary power and preparation of piping and treatment schematic. This activity will require 0.8 person-years of effort.

11. Certification of Plant Operators

Certification of water plant operators will continue to be made of 100 applications for Water Treatment Plant Operator Certification including field interviews, documentation, and processing for State approval. This activity will require 0.2 person-years of effort.

✓ 12. Assessment of Groundwater Quality

Assessment of groundwater quality will be continued. Evaluation of quality data will be performed on a continuous basis for overall evaluation of quality trends and effects of contaminant sources. Twenty-five assessments of localized problems will be performed. In addition, a comprehensive annual water quality assessment report will be prepared as well as a report on Glacial water quality in sewerred vs unsewerred areas. Involves extensive data review, tabulation, statistical analysis and data processing. This activity will require 1.50 person-years of effort.

✓ 13. Development of Automated Data Processing System

Under a \$50,000 State grant, a groundwater data management system (System 2000) will be acquired to enable storage retrieval and ultimately sophisticated analysis of the extensive organic chemical groundwater quality data. Inorganic chemical data already stored, using an out-dated Fortran data storage system, will also be transposed into the new management system to more readily enable retrieval and statistical analysis. This activity will require 0.65 person-years of effort.

14. Assessment of Drinking Water Quality

Evaluation of the water quality at consumers' taps will be continued. Evaluation will be made on a continuous basis of microbiological data from purveyors quality assurance program and departmental surveillance sampling. This activity will require 0.6 person-years of effort.

✓ 15. Assessment of Groundwater Quantity

Groundwater budget analyses will be made to evaluate trends in sufficiency of the groundwater supply. Reports will be prepared of static water levels and changes in the last decade. The Water Budget Analysis of 1974 will be updated. Effort required will be 0.25 person-years.

✓ 16. Statewide Groundwater Management Study

Participation will be continued in the design of the Long Island portion of the \$700,000 statewide groundwater management study to address water supply needs and groundwater management options. Effort needed will be 0.2 person-years.

✓ 17. State Water Policy Development

Contributions will be continued to develop State policies in water supply matters. Includes evaluation and reports on proposed water quality standards and water supply regulations. Also includes evaluation of DPW project studying renovation and recharge of wastewater. Total effort required will be 0.3 person-years.

WATER POLLUTION CONTROL

1. Regulate Sewage Treatment Plants

Control of operation and maintenance of 22 community and institutional sewage treatment plants will continue. Involves development of operating criteria, issuance of permits, and evaluation of compliance of each facility through plant inspections, review of reports, and evaluation of sampling data. Also includes review of 20 sets of engineering plans for new and modified facilities, review and processing of eligibility of 16 plans for O & M grants, and training and certification of 50 plant operators. Effort required will be 1.6 person-years.

✓ 2. Municipal Wastewater Facility Planning Studies

Provide public health engineering consultation on wastewater facility planning studies conducted by engineering consultants and administered by the County Department of Public Works under Section 201 of the Clean Water Act. Studies will be pursued of watersheds tributary to Manhasset Bay, Oyster Bay, and the Long Beach Barrier Island to address the need for sewerage, for new or expanded sewage treatment, including municipal sludge composting, and for location of outfalls to protect surface water quality. Continuing engineering and management consultation on 208 plan implementation will also be provided. Effort required will be 1.05 person-years.

✓ 3. Connection to Municipal Sewers

Program to motivate house connections to available sanitary sewerage systems will be continued. Involves the identification of unconnected premises, a series of form letters, and adjudication of special cases. Of 150,000 premises possibly requiring connection, approximately 15,000 will be processed during 1980. Effort required will be 2.1 person-years.

✓ 4. Investigation of Pollution Reports

Investigation and resolution of reports of pollution of surface waters will be continued. Reports of illegal discharges or other contravention of surface water quality will be investigated in 150 cases and abatement instituted where needed. An estimated 10 water quality accidents at sewage plants will also be investigated. Effort required will be 0.63 person-years.

✓ 5. Regulation of Scavenger Operations

Control of vehicles engaged in cesspool cleanout and related scavenger operations will continue. Seventy-seven vehicles of 55 operating companies will be inspected to ensure compliance with criteria and permits issued. Effort needed will be 0.15 person-years.

✓ 6. Investigation of Petroleum Spills

Control of petroleum spills to minimize environmental damage will be continued. In 90 petroleum spill episodes, an environmental assessment will be made and optimum cleanup strategy established. Improvement in the administration of the State Oil Spill Prevention and Compensation Fund will be motivated to establish specific standards for groundwater quality restoration, to provide compensation to local regulatory agencies for environmental assessment efforts, and to increase staff resources at DOT and DEC local offices to perform their functions effectively. Effort required will be 2.6 person-years.

✓ 7. Regulation of Petroleum Terminals

Controls to prevent water pollution from operation of petroleum terminals will be continued. Operations of 33 terminals already under permit will be monitored to ensure compliance by a field inspection of each and enforcement of the compliance schedule for each facility. An additional 36 terminals and depots will be regularized during the year by the development and issuance of operating permits replete with a compliance schedule. Effort required will be 1.1 person-years.

8. Control of Marina Sewage Pumpout Facilities

Regulation of the operation of 13 sewage pumpout facilities at boat marinas will be continued. Inspections will be made to insure proper connections to sewerage systems and operation in a manner to prevent pollution of surface waters. This work will require 0.02 person-years.

✓ 9. Regulation of Municipal Salt Storage Facilities

Survey and regulate 67 municipal road salt storage facilities for compliance and non-discharge of contaminated runoff to ground or surface waters. Effort required will be 0.34 person-years.

10. Bathing Water Monitoring

Routine monitoring of bacterial quality of bathing waters will be continued. ~~Approximately eight to ten samples per month will be collected~~ from April through September at 43 bathing beaches and 32 other monitoring locations. Where violations of State bathing water quality standards occur, investigations will be made and abatement actions initiated and bathing restricted when necessary. An annual summary and interpretation of results will also be prepared as part of the Annual Water Quality Assessment Report. Effort required will be 1.77 person-years, and 0.5 person-years for seasonal public health aides.

11. Marine Water Monitoring

Marine waters will be monitored routinely to determine conformance of the waters to State standards, determine trends in water quality, locate problem areas, and effect abatement. All bays, harbors, the ocean, and Long Island Sound will be sampled on a monthly basis, weather permitting, for chemical and bacteriological parameters. Over 1,200 samples will be collected on a monthly frequency and analyzed. When violations of State shellfishing or bathing water quality standards occur, investigation will be made and abatement actions initiated and shellfishing or bathing restricted when necessary. An annual summary of results and their interpretation will be prepared and included in the Annual Water Quality Assessment Report. Effort required will be 2.69 person-years.

12. Ocean Outfall Study

Marine water quality will be evaluated within a two mile radius of the outfall diffuser of Cedar Creek Sewage Treatment Plant. Samples of the water column and bottom sediments will be collected for physical, bacteriological, chemical, and biological analysis. A report will be prepared summarizing the findings. Effort required will be 0.40 person-years.

13. Municipal Sewage Sludge Ocean Dump Monitoring

A single cruise will be conducted to monitor the impact of ocean dumping of municipal sewage sludge on the marine environment. Samples of the water column and bottom sediments will be collected within an area of 100 square miles south of the Long Beach barrier island. Samples will be collected for physical, chemical, bacteriological, and biological analyses. A report of the findings will be prepared. Effort required will be 0.59 person-years.

14. Sanitary Survey and Abatement

Extensive sanitary surveys will be conducted along selected waterways where preliminary sampling has indicated the presence of waste discharges. This will include dye testing of suspected sources, initiating abatement activities, and preparing legal documentation where necessary. Citizen referrals alleging discharge of sewage to surface waters will be investigated and abatement initiated where necessary. A total of 1.40 person-years will be required.

✓ 15. Study of Pollution by Stormwater

Participate in the initiating of a three year field study to evaluate ~~alternate schemes for abatement of water pollution caused by stormwater~~ recharge and runoff. Samples will be collected during 10 storm events at two Nassau surface water test sites for bacterial and chemical analyses. Evaluation of abatement alternatives in four Long Island groundwater test sites to be performed by the U.S.G.S. will be supervised through representation on Technical Advisory Committee (TAC) of the Long Island Regional Planning Board which will direct the project as part of the continuing Long Island wastewater management (208) study. Effort required will be 1.3 person-years.

✓ 4. Biological Hazardous Waste Survey

A survey of potential hazardous waste generating sites will be conducted. This includes 16 hospitals and 28 nursing homes. Other medical facilities will be surveyed to determine existence of hazardous wastes. Effort required will be 1.0 person-years.

✓ 5. Adoption of an Ordinance to Control Hazardous Substances

Potential sources of contamination of waters of the County will be controlled through the proposed adoption of a revision in the Nassau County Public Health Ordinance to regulate the storage, transportation, use, and disposal of hazardous substances. Proposed federal and state regulations of hazardous substances and other related environmental elements will be reviewed. Effort needed will be 0.83 person-years.

✓ 6. Regulation of On-Site Sewage Systems

Regulation of design and installation of on-site sewage systems will be continued. Needed field soil evaluations, plan review, and construction compliance inspections will be conducted for 20 realty subdivisions and 40 systems serving commercial properties, and 10 lateral sewer projects. Also includes permit issue and 60 permit renewals as well as 10 permits for existing systems. Effort needed will be 2.00 person-years.

✓ 7. Environmental Assessments

Assessment and coordination of proposed projects and actions to minimize adverse environmental impact will continue. A total of 50 projects will be reviewed under the State and local Environmental Quality Review Act. Effort required will be 0.76 person-years.

✓ 8. Regulation of Industrial Wastewater Discharges

Control of groundwater discharges of industrial wastewater will be continued. Forty-seven plants currently under permit will be inspected, sampled, and evaluated to insure compliance. An additional 15 plants identified in previous surveys will be investigated and regulated as appropriate. Effort required will be 2.00 person-years.

✓ 9. Hazardous and Industrial Waste Regulation

Proper control of hazardous and toxic industrial wastes will be continued. Organic and inorganic industrial sludges and residues at 174 plants already under "Store and Remove Permits" issued as wastewater discharge controls will be converted to solid waste permits. An additional 115 industries will be intensively surveyed and regulated as appropriate. In addition, 300 drycleaning plants will be surveyed with an anticipated 200 requiring permits. Surveys will also be made to identify illegal discharges at 40 autowrecking operations and 1,000 automobile service stations. Effort required will be 3.68 person-years.