Chapter 4
Wastewater Management Facility Planning

This chapter updates wastewater management facility planning areas for the Northeast Ohio 208 Plan study area. It reaffirms local jurisdictions that are designated as management agencies under the Water Quality Management Plan for wastewater management planning. It also identifies wastewater management options within each facility planning area that were developed with the advice of affected local jurisdictions. These options represent current judgments about where sewers will be extended and where areas will remain unsewered over the course of the next twenty years.

Once this update to the Water Quality Management Plan (WQMP) is adopted, certified and approved, these designated management agencies, their facility planning area boundaries, and the identified wastewater management options become part of the region's WQMP. Ohio EPA's decisions concerning certain NPDES permits, permits to install (PTIs) and State Revolving Fund loans for wastewater treatment must be consistent with the WQMP.

This chapter sets forth policies governing areawide coordination of local wastewater management planning. These policies address:

(1) Designated Management Agencies (DMAs) and their Facility Planning Area (FPA) boundaries for wastewater management planning;
(2) Modifications to FPA Boundaries;
(3) Development of Local Wastewater Management options;
(4) Ohio EPA and USEPA 208 Plan Consistency Actions;
(5) Utilization of Areawide Population Projections;
(6) Modifications to DMAs;
(7) Nomination of New DMAs.

The chapter also includes recommendations for (a) conforming the land use plans of local jurisdictions to the WQMP, and (b) encouraging the use of Joint Economic Development District (JEDD) procedures to address potential conflicts among local jurisdictions over the extension of wastewater services to currently unsewered areas.

I. Introduction

Water quality planning requirements are specified in Sections 205(j), 208 and 303 of the Clean Water Act. Municipal waste treatment is among the nine elements to be included or referenced as part of the WQMP plan elements.[1] It is among the six elements in which areawide planning agencies are actively involved in Ohio. One of the objectives of Section 208 of the Clean Water Act was to establish integrated and coordinated facility planning for wastewater management. In order to

1 40CFR130.6(c)(3).

accomplish this objective in urban areas where competition for service areas was expected to be a concern, the Clean Water Act called for the designation of areawide planning agencies to assist in the resolution of such conflicts as they might arise. Ohio EPA serves in this role in the undesignated areas of Ohio.

NOACA is designated under Section 208 as the planning agency for Cuyahoga, Geauga, Lake, Lorain, and Medina Counties. NEFCO is designated as the planning agency for Portage, Stark, Summit and Wayne Counties. NOACA and NEFCO consult on planning matters in the watersheds that are shared by parts of both planning areas. The two major Lake Erie watersheds in this category are the Cuyahoga River and the Chagrin River.

In response to a court challenge, Ohio EPA has established a standard process for the review of NPDES permits and Permit to Install (PTI) applications statewide. This process requires that Water Quality Management Plans be up to date. The Ohio EPA addresses the full scope of Ohio's Water Quality Management planning in its Continuing Planning Process document.[2]

DESIGNATED MANAGEMENT AGENCIES UNDER THE ORIGINAL 208 PLANS

The 1979 NOACA 208 Water Quality Management Plan for this region established the basis for evaluating all sewering plans that have been proposed over the twenty years since the 208 Plan was adopted. For each area where sewers were being planned, a single local management agency was designated for all facility planning. This agency became a Designated Management Agency (DMA) for wastewater management planning under this element. DMAs include municipalities, counties, and sanitary sewer districts authorized under Ohio law to perform these functions. As part of the DMA designation process, the owners/operators of Publicly Owned Wastewater Treatment Works (POTWs) were designated by the 208 Plan to have the authority for sewer-related planning in clearly demarcated boundaries. These boundaries were commonly referred to as 201 boundaries (after Section 201 of the Clean Water Act) and are now known as Facility Planning Areas (FPAs). For each FPA delineated, the local wastewater management agency became the primary designee (the DMA) for sewer planning in the established FPA into the future. The 1979 WQMP also recognized Geauga, Lake, Lorain, and Medina Counties as DMAs for wastewater planning in the FPA created for the unincorporated portions of their respective counties that lie outside of any other established FPA. A DMA of either type was recognized as the lead agency within its FPA by the 208 Plan and was charged with the responsibility of identifying plans to solve existing wastewater related problems and to accommodate projected growth over a twenty year time frame.

The DMA mechanism prevented two separate treatment facilities from being planned for the same area. This was important because cost/benefit and feasibility analyses hinge on the projected service demand. The sizing of sewer lines and wastewater treatment plants must reflect existing and

2 Ohio EPA, "Continuing Planning Process." Draft,1998.

projected populations. If two POTWs were to compete for the same customers, the duplication of service would be cost prohibitive, could result in plant operation problems, or both. All FPA boundaries that were certified in the 1979 Plan specify clearly the entity that is the DMA in every area where sanitary sewers were in place or were being considered.

Many facility planning areas encompass land areas that lie outside of the political jurisdiction boundaries of the DMA responsible for wastewater planning. The WQMP recognizes all service agreements that exist among a POTW owner/operator and the jurisdictions serviced by that POTW. Those agreements can specify which wastewater planning functions are to be assumed by the satellite jurisdictions. Each satellite jurisdiction named in such an agreement is recognized as a DMA for wastewater management planning in accordance with the service agreement with the POTW owner/operator.

FACILITY PLANNING AREA STATUS UNDER THE ORIGINAL 208 PLAN

At the time that the original FPA boundaries were established, communities considered several factors. Some communities limited their planning area to the extent of their existing jurisdictional authority. Others extended their boundaries outside of their jurisdictional boundaries based on the sewershed concept (areas that drain by gravity to a treatment works or could be handled efficiently with the limited use of pump stations). In some areas, the County Sanitary Engineer assumed the facilities planning role for all or much of a county. Others, such as the Northeast Ohio Regional Sewer District, took a regional approach to providing sewer service far out into the future.

During the time that the 208 Plan was developed, there was little conflict in the establishment of FPA boundaries. Conflicts that did arise were resolved to the satisfaction of all parties and incorporated into the Plan. Before Ohio EPA accepted any FPA boundary definition, affected municipalities and counties had to agree on the boundary. As a result of this, facility planning proceeded in a timely manner at most of the region's POTWs.

Subsequent to the adoption of the 1979 208 Plan, disputes between POTWs started to arise. As time passed and plans began to be implemented, numerous small coordination issues arose. A major one involved the extension of interceptor lines proposed by the Northeast Ohio Regional Sewer District into areas which were currently being served by municipally owned POTWs. A conflict resolution process established under the auspices of the region's 208 Plans resolved each of these conflicts. This process helped to provide for the orderly implementation of facility planning and sanitary sewer infrastructure construction under the 208 Plan.

Most existing FPAs were recognized as part of the Construction Grants Program established under the Clean Water Act to help fund sewage treatment improvements. A facility planning area was typically subdivided into three general categories. These include (a) areas that were already served with sanitary sewers, (b) areas that would most likely be sewered during the next 20 years, and (c) areas where sewers were not likely to be extended for at least 20 years. The decision as to the classification of any given area was made by the DMA in accordance with planning guidelines established by USEPA. The charge to each DMA was to develop a plan to provide for adequate wastewater treatment over the 20-year time frame. They had to allocate projected growth within their planning area and identify options for handling such distributions.

For all of the facility planning actions that were taken in the past, there had to be a rationale for each decision made by DMAs. Ohio EPA had to concur with each of these decisions, at least as to the effects that they would have on receiving streams. DMAs had to develop and implement plans that would satisfactorily solve any pollution problems associated with their system. Expansion of a service area beyond that identified in the facility plan was allowed as long as they met all applicable water quality standards and had received the consent of affected jurisdictions.

Planning for future wastewater treatment needs is an inexact science. Assumptions are made relative to the size and extent of population growth. During the engineering phase of some projects, obstacles sometimes arise so as to render previously preferred alternatives impractical. With time, local conditions can change resulting in modifications to previously preferred alternatives. New treatment works continue to be proposed to meet growth demands. Planning changes that resulted from these factors were accommodated in the Plan by the development of a consistency review procedure.

CONSISTENCY REVIEWS UNDER THE ORIGINAL 208 PLAN

Under the 208 Plan, a Consistency Review was required whenever an application was made by a DMA for federal grants or loans under the Clean Water Act. This application could be to increase an existing discharge amount, to extend new sewer lines into a previously unsewered area, or to install an entirely new discharge. As the Areawide Planning Agency, NOACA was responsible for evaluating consistency in its respective area. The following procedures were followed in determining consistency within the 208 Plan.

Under the 208 Plan, any action proposed by a DMA was deemed consistent with the plan as long as it a) met Ohio EPA's technical requirements; b) consisted solely of actions that were within the existing FPA boundary; and c) conformed to regional population projections. If a DMA planned to extend service outside of its established FPA boundary, consistency was not attained until all affected parties agreed to the need for the change. This meant that Ohio EPA had to agree that the proposal represented a viable alternative for providing adequate waste treatment in an efficient manner. If a proposal infringed into the FPA of an adjacent DMA, the applicant had to secure the permission of the neighboring DMA. Some applicants proposed to extend service into areas where no facility planning had yet taken place. Such a proposal was deemed consistent with the 208 Plan as long as the local jurisdictions affected by the extension agreed to it and the Ohio EPA approved it.

All proposed projects that were seeking funding assistance were reviewed for consistency with regional population projections. This was done for two reasons. The Clean Water Act provides financial assistance only to those projects which serve existing and projected populations. The Act does not support the building of excess capacity as a means to attract development that would have occurred elsewhere. Such a move could undermine the efficiency or cost effectiveness of other treatment works. The regional review of population figures used to size the proposed facility also identified optimistically high projections that could lead to the inability of a community to financially support its POTW if its projections are not realized.

As time passed, the population projections contained in the original Plan became dated. A plan update was accomplished in 1984 to update the population projections that were recalculated following the release of the 1980 census. NOACA currently utilizes population projections based on the 1990 census for consistency review purposes. After the Year 2000 census is completed, new population projections will be developed for this purpose.

NOACA reviewed an applicant's population projections for consistency with areawide projections. If they were not consistent, the applicant was notified of the discrepancy and Ohio EPA was notified of the differences. Ohio EPA then worked with the community in question to examine the potential consequences if a community's projections are not realized. Ohio EPA ultimately determined whether the project should proceed as designed.

While most of these projections and allocations incorporated into the original 208 Plan proved to be accurate, some areas did develop faster or slower than expected. During the time that has elapsed since the original facility plans were prepared, some elements were implemented as designed. Other elements were implemented with changes. A few elements were not implemented at all. In some circumstances, plans were made and implemented that were not considered in the original effort. This WQMP update makes FPA boundaries current and provides an orderly process for future revisions.

II. Updating the Designation of Management Agencies, Facility Planning Areas, and Consistency Review Policies

For this plan update, NOACA undertook a comprehensive review of DMAs and FPAs in the original 208 Plan, and worked with the responsible management agencies to update FPAs to current conditions. This was done by circulating for review and comment maps of FPAs on file from the original 208 Plan with a request that the lead agency in each case consult with affected jurisdictions to update maps as appropriate. Treatment plants constructed after the original planning period were also identified and their lead agencies were also contacted. Lead agencies were asked to identify for their respective areas the following:

(1) Areas currently served with sanitary sewers;
(2) Areas expected to be served with sanitary sewers connected to an existing POTW during the next twenty years;
(3) Areas expected to be served with sanitary sewers connected to a new POTW in the next twenty years;
(4) Areas expected to remain on individual on-lot systems or semi-public systems, and where local officials are oriented to maintaining an unsewered status for the foreseeable future;
(5) Areas currently unsewered where local officials are oriented to accepting sewers if feasible and if found to be consistent with the WQMP; and
(6) Areas for which no wastewater management options have been declared.

The results of this effort were then used to update county level facility planning maps that were circulated for review and comment by affected local and county jurisdictions. This process generated ongoing planning discussions in each of the counties involved with the plan update.

This update process also involved identifying which local or county jurisdictions currently have lead agency responsibilities for wastewater facility planning. These jurisdictions are identified in Table 4-1 as having management responsibilities for facility planning associated with wastewater treatment facilities that they own or operate. The local jurisdictions or agencies identified in Table 4-1 are reaffirmed as Designated Management Agencies for wastewater management planning for their Facility Planning Areas under the auspices of this plan once it has been certified and approved. The Lorain County Rural Wastewater District (LORCO) has been established under Ohio Revised Code 6119 to serve portions of Lorain County. LORCO is eligible to become a DMA for wastewater planning in those areas where agreements are reached with established DMAs. These include Lorain County and the municipalities that own or operate a POTW in Lorain County.

Table 4-2 identifies satellite jurisdictions recognized as Designated Management Agencies for wastewater management planning in accordance with service agreements that they have with POTW owner/operators serving all or a portion of their jurisdiction.

The Clean Water 2000 plan reaffirms Geauga, Lake, Lorain, and Medina Counties as the designated wastewater management planning agency for a) the service areas of existing package plants that they own or operate and b) those portions of their respective counties that lie in unincorporated areas outside of another established Facility Planning Area. The geographical extent of the FPAs associated with the above listed DMAs and FPAs is shown in Figures 4-1 through 4-5 (attached in Appendix 4-1).

Figures 4-1 through 4-5 depict facility planning areas by county for each of the five counties in the 208 planning area. Figures 4-6 through 4-10 (attached in Appendix 4-2) depict wastewater planning options developed by each DMA with the advice of affected local jurisdictions within each Facility Planning Area in the NOACA area. The boundaries shown in these figures are generalized as discussed in Policy 4.1 below.

POLICIES FOR DETERMINING CONSISTENCY WITH THE WQMP

This section sets forth policies governing changes to Designated Management Agencies and Facility Planning Areas and procedures for determining wastewater management plans consistent with the WQMP. These policies address:

(1) Designating Management Agencies and their current Facility Planning Area boundaries for wastewater management planning;
(2) Future Modifications to FPA Boundaries;
(3) Development of Local Wastewater Management options;
(4) Ohio EPA and USEPA 208 Plan Consistency Actions;
(5) Utilization of Areawide Population Projections;
(6) Modifications to DMAs;
(7) Nomination of New DMAs.

Policy 4-1: Designated Management Agencies and Current Facility Planning Area (FPA) Boundaries

With the adoption of this Plan update, local jurisdictions or agencies identified in Table 4-1 are confirmed as Designated Management Agencies for wastewater management planning within the Facility Planning Areas set forth in Figures 4-1 through 4-5 of Appendix 4-1.

This WQMP update accepts FPA boundary decisions that were formally or informally approved by Ohio EPA in the past. Considerable confusion existed in some areas as to which of numerous sewer plans and planning boundary definitions that have been produced over the years should be recognized in this WQMP update. The lack of a formal procedure to clearly identify FPA boundaries and to track changes to these definitions over time is partially responsible for this confusion. The plan update process remedies this situation.

All owners or operators of POTWs were sent maps identifying FPA boundaries in the 1979 WQMP. During the update process, DMAs were given an opportunity to propose changes within existing FPA boundaries to accommodate changes that had been realized over the last twenty years. This process also allowed a DMA to propose the removal of subareas that it has no plans for sewering from its previously defined FPA. Expansion of Facility Planning Areas could also be proposed with the consent of affected jurisdictions.[3]

3 The boundaries that are recognized by this update replace all boundaries previously identified in the original 208 plan for the area. While there continues to be marked similarity between the boundaries established by the original 208 Planning process and the boundaries included in this update, there are notable differences. Boundary changes fall into two categories: those that reflect changes initiated by planning for active sewer extensions, and those that involve a strategic refocusing of planning objectives. Examples of the former category include the boundaries between the FPAs of (a) the Cities of Lorain and Elyria, (b) Medina County and the City of Akron, (c) the Greater Mentor WWTP and the City of Painesville, (d) Greater Mentor WWTP and Heatherstone WWTP. Each of these changes occurred as the former FPA boundary was moved to serve an area in a bordering FPA that could not be otherwise serviced in a timely or efficient manner. The DMAs of both FPAs agreed to the changes and Ohio EPA concurred. New FPAs were established for Amherst and Bedford Heights.

The second category of FPA boundary changes was based on facility planning that progressed after the initial 208 process. Several DMAs centralized their planning focus within their initial 201 FPA boundaries. These communities concluded that they had no intention of extending out to the furthest reaches of their planning area. They have established new boundaries to reflect this. Communities that fall into this group include the City of Oberlin, Newbury Township and Burton Village. The Cities of North Olmsted and Euclid, and Medina County (for its Hinckley WWTP) extended their planning areas to provide service to areas not originally included in a planning area. The Northeast Ohio Regional Sewer District renamed large tracts of their 201 FPA boundaries to "Sewer Planning Option Zones". Their intention is not to extend into any of these areas unless mutually agreed to by local officials and NEORSD.

Table 4.1: Designated Management Agencies/lead Agencies That Own or Operate a Public Wastewater Treatment Works

(Individual Wastewater Treatment Plants are identified only where necessary to avoid confusion.)

Cuyahoga County
Bedford
Bedford Heights
Chagrin Falls
Euclid
Lakewood
Northeast Ohio Regional
Sewer District (NEORSD)
Easterly WWTP
Southerly WWTP
Westerly WWTP
North Olmsted
North Royalton
North Royalton "A" WWTP
North Royalton "B" WWTP
Rocky River
Solon
Strongsville
Strongsville "B" WWTP
Strongsville "C" WWTP
Medina County
Hinckley WWTP

Geauga County
Auburn Corners
Burton
Chardon
Geauga County
McFarland Creek WWTP
Balance of Unincorporated County Area
Middlefield
NEORSD
Easterly WWTP

Lake County
Euclid
Lake County
Heatherstone WWTP
Greater Mentor WWTP
Madison WWTP
Balance of Unincorporated County Area
Madison Village
Painesville
Willoughby
Willoughby-Eastlake WWTP

Lorain County
Amherst
Avon Lake
Elyria
Grafton
LaGrange
Lorain City
Black River WWTP
P.Q.M. WWTP
Lorain County
Balance of Unincorporated County Area
Lorain Rural Wastewater District (pending)*
Portions of Unincorporated County Area
Oberlin
NEORSD
Southerly WWTP
North Ridgeville
French Creek WWTP
Vermilion
Wellington

Medina County
Lodi
Medina County
Chippewa-on-the-Lake
Hinckley WWTP
Liverpool WWTP
Balance of Unincorporated County Area
Seville
Spencer
Wadsworth
Westfield Center

*The designation of the Lorain Rural Wastewater District (LORCO) for portions of Lorain County is pending subject to agreements with Lorain County and other jurisdictions currently designated as management agencies for those portions.

Table 4-2 Jurisdictions that serve as Designated Management Agencies for wastewater management planning (Satellite DMAs) for areas contained within the Facility Planning Area of another jurisdiction		
Satellite DMA Jurisdiction	**County**	**POTW Owner/Operator**
Bay Village	Cuyahoga	Rocky River
Beachwood		NEORSD
Bedford		NEORSD
Bedford Heights		NEORSD
Berea		NEORSD
Bratenahl		NEORSD
Brecksville		Medina County, NEORSD
Broadview Heights		Medina County, NEORSD
Brook Park		NEORSD
Brooklyn		NEORSD
Brooklyn Heights		NEORSD
Cleveland		NEORSD
Cuyahoga County		NEORSD, North Olmsted
Cleveland Heights		NEORSD
Cuyahoga Heights		NEORSD
East Cleveland		NEORSD
Fairview Park		North Olmsted
Garfield Heights		NEORSD
Gates Mills		NEORSD
Glenwillow		Bedford Heights
Highland Heights		NEORSD
Highland Hills		NEORSD
Independence		NEORSD
Lakewood		NEORSD
Linndale		NEORSD
Lyndhurst		NEORSD
Maple Heights		NEORSD
Mayfield		NEORSD
Mayfield Heights		NEORSD
Middleburg Heights		NEORSD
Newburgh Heights		NEORSD
North Randall		NEORSD
North Royalton		Medina County, NEORSD
Oakwood Village		NEORSD, Bedford Heights
Olmsted Falls		NEORSD
Olmsted Township		NEORSD
Orange Village		NEORSD
Parma		NEORSD
Parma Heights		NEORSD
Pepper Pike		NEORSD
Richmond Heights		NEORSD, Euclid
Seven Hills		NEORSD

Table 4-2
Jurisdictions that serve as Designated Management Agencies for wastewater management planning (Satellite DMAs) for areas contained within the Facility Planning Area of another jurisdiction

Satellite DMA Jurisdiction	County	POTW Owner/Operator
Shaker Heights		NEORSD
Solon		NEORSD
South Euclid		NEORSD, Euclid
Strongsville		Medina County, NEORSD
University Heights		NEORSD
Valley View		NEORSD
Walton Hills		NEORSD
Warrensville Heights		NEORSD
Westlake		Rocky River
Geauga County	Geauga	Middlefield
South Russell		Geauga County
Eastlake	Lake	Willoughby
Fairport Harbor		Lake County
Grand River		Lake County
Kirtland Hills		Lake County
Lake County		Madison, Painesville
Lakeline		Willoughby
Mentor		Lake County
Mentor-on-the-Lake		Lake County
Painesville		Lake County
Timberlake		Willoughby
Waite Hill		Willoughby
Wickliffe		Euclid
Willoughby Hills		Euclid, Willoughby
Willowick		Euclid
Avon	Lorain	Avon Lake, North Ridgeville
Lorain County		Elyria, Grafton, Lorain, Oberlin, Vermilion,
LORCO (pending)		To be determined
Sheffield		North Ridgeville
Sheffield Lake		Lorain
South Amherst		Lorain
Brunswick	Medina	Medina County
Medina		Medina County
Medina County		Lodi, Rittman, Seville, Wadsworth

NOACA maintains detailed mapping files as part of its Geographic Information System (GIS). With the adoption of this update by the NOACA Board, the files maintained in this format are the definitive statement of all FPA boundaries unless a more detailed definition has been created by a DMA as part of its wastewater planning process. If a DMA has a more detailed map of boundaries in a report that has been submitted to and approved by Ohio EPA, NOACA can accept those boundaries with the consent of affected jurisdictions. In all cases, the NOACA GIS maps are the definitive source of FPA boundaries. Requests for changes to existing boundaries must be submitted by a DMA and will be recognized in the plan only after review and acceptance by NOACA. NOACA will provide electronic copies of all approved updates to the Northeast District Office of Ohio EPA (and plans to make them available to the public by posting updates on the Agency's website (www.noaca.org)).

Each DMA responsible for wastewater planning should develop plans covering a twenty-year time frame. The appropriate time for the development of these twenty-year plans is predicated by the life expectancy of each wastewater treatment plant. When the planning cycle of an existing facility looks to upgrade or expand that facility, a part of the planning that takes place should review wastewater treatment needs for all areas within the plant's FPA boundary over the twenty-year time frame. The results of this planning will be recognized by the WQMP when accepted by Ohio EPA.

Policy 4-2: Modifications to Facility Planning Area (FPA) Boundaries

The NOACA Board must approve all future changes to FPA boundary definitions. The Board must also approve all new FPAs. These changes are effective on Board approval and will be reflected in the next plan update submitted for certification.

The updated plan recognizes the FPA designations that are identified in Figures 4-1 through 4-5. For changes requested after the Board adopts the plan update, the DMA requesting a change must apply to NOACA for redefinition of its boundaries. This will require the DMA to solicit support from all affected jurisdictions including any other DMA that may be affected by the redefinition.

If a change is sought for a FPA that crosses the planning area boundary between NOACA and NEFCO, the approval of both agencies will be required.

Policy 4-3: Development of Local Wastewater Management Options

DMAs should develop wastewater management options within their facility planning areas in consultation with affected local jurisdictions. These options must comply with requirements of the Clean Water Act. To the extent that the option identified involves the enlargement of an existing POTW, the construction of a new POTW or the extension of sewers, that option must conform to consistency requirements of the WQMP (see Policy 4-4).

This update to the WQMP offers local communities an opportunity to have more formalized input into the definition of future waste handling plans in areas that are not yet sewered.

At present, DMAs develop sewering plans that are optimized from an engineering standpoint within their FPA. While coordination with local jurisdictions regularly occurs when a POTW serves more than a single community, there is no provision in the existing 208 plan that would encourage engineering plans to be amended based upon the desire of a local government to manage growth within its jurisdiction. This update to the 208 Plan provides such a mechanism. Local governments are being encouraged to identify where they want central sewers and where they do not. The DMA in each FPA must consult with affected jurisdictions and take account of their input in cases that do not raise engineering or efficiency limitations.

In those areas where local officials want to restrict wastewater treatment to individual on-site systems, several conditions must be met. The county or municipal health departments responsible for managing on-site systems must authorize their use in the area under discussion. The provisions of ORC 6111 and OAC 3701-29-02 (L&M) that require connection to sanitary sewers when they become available must be complied with. The designation of an area as 'on-site systems only' applies as long as Ohio EPA does not mandate sewers under ORC 6117.34 if a water quality problem is demonstrated. The Clean Water 2000 Plan recommends a number of home sewage disposal management policies and practices for implementation by local health departments as a means of improving the performance of these systems and reduce their impact on water quality (see Chapter 5 below).

Figures 4-6 through 4-10 in Appendix 4-2 indicate in generalized terms the preferences of local officials regarding future sanitary sewer service areas.

As with FPA boundary maps, detailed boundary locations are registered in the GIS database maintained by NOACA. This database will be consulted when consistency reviews are made. Table 4-3 in Appendix 4-2 reflects the input from local elected officials who responded to a request from NOACA in the plan update process. Preferences expressed will be selected from the set of options described in Appendix 4-2

Some communities in the region are served by a neighboring community or regional system. The preferences expressed by these communities are subject to the acceptance of the DMA providing service. During a 208 plan consistency review, the DMA must demonstrate that consultation has occurred with communities in its facility planning area to ascertain community preferences for sanitary sewer service.

Policies of local health departments who have legal responsibility and authority to influence wastewater treatment continue to be recognized under this policy. This includes the policy on dry sewers issued by the Lorain County General Health District that provides for the installation of sanitary sewers in subdivisions that are likely to be reached by sanitary sewer extensions in the future while home sewage disposal systems are installed in the interim.

Ohio EPA and ODH are working in consultation with USEPA to develop a NDPES permitting policy that will apply to individual on-site wastewater treatment systems that have an off-lot discharge. This WQMP will incorporate the policy arrived at by this negotiation as soon as it is agreed to by Ohio EPA.

Local community plans remain flexible to the extent desired by the community. These plans serve to guide the wastewater management decisions of local landowners. It is recognized that all documented wastewater related water quality problems that exist now or that develop in the future, must be remediated in a timely manner by the best means available. Where wastewater related problems do not exist, local jurisdictions can decide if they prefer to protect water quality by utilizing individual on-site systems or centralized sanitary sewers. By identifying the areas that have no plans for sewer extensions in the next 20 years in this Plan, jurisdictions notify all landowners of the need for them to plan for the installation and maintenance of on-site systems. In areas where sanitary sewers are likely to be extended, repair and maintenance of problematic on-site systems may be warranted instead of total system replacement. In all cases, landowners are provided notice by this Plan to consult with local government officials before proceeding with their wastewater plans.

Policy 4-4: 208 Plan Consistency Actions by Ohio EPA and USEPA

Consistency with this Plan will be required whenever an application is made to the Ohio EPA for (a) a permit to discharge pollutants into the waters of the state (NPDES Permit) or (b) a Permit-to-Install. A consistency review will also be required of applicants for grants or loans under the Clean Water Act. Ohio EPA will not approve a permit to install or a Clean Water Act loan or grant until consistency with this Plan has been determined.

Under the WQMP update, a consistency review will be required whenever an application is made to the Ohio EPA for a permit to discharge pollutants into the waters of the state. This applies to applications to increase an existing discharge amount, to extend new sewer lines into a previously unsewered area, or to install an entirely new discharge. A consistency review will also be required of applicants for grants or loans under the Clean Water Act.

Ohio EPA will notify NOACA of all permit applications that apply to a Publicly Owned Treatment Works (POTW). NOACA must certify that proposed POTW actions are consistent with the current FPA boundary definitions, that they address the future sewering declarations made by the local officials in the affected area, and that they conform to population projections contained in the WQMP.

Ohio EPA may process all applications for PTIs that apply to treatment works servicing an individual lot that are in accordance with the declarations by jurisdictions contained in Appendix 4-2. Proposals that involve the installation or expansion of central sewers not connected to a POTW should be referred to the local jurisdiction for review prior to Ohio EPA consideration.

Policy 4-5: Utilization of Areawide Population Projections

All applications subject to Policies 4-3 and 4-4 must utilize population projections that are consistent with those provided in Appendix 4-3. NOACA will periodically update projections based upon new community level census data. Updated population projections will be incorporated into the plan by amendment.

The consistency review process includes the assessment of the most recent population projections generated by the areawide planning process utilized by NOACA.

The Ohio Department of Development prepares the official population projections for the State of Ohio. They allocate projections to the county level. NOACA is the lead agency for allocating the State's county level projections to minor civil divisions in its region. When the agency updates its projections, it will forward a copy to the Northeast District Office of Ohio EPA. The most recent minor civil division population projections produced by NOACA are the ones to be used for consistency reviews.

The minor civil division population projections serve as a starting point for the evaluation of population projections within facility planning areas. The facility planning process may disaggregate community projections to smaller areas. This may be accomplished based on an evaluation of available land for development combined with local zoning. Additional inputs can be used as appropriate. The final allocations will be deemed consistent with the plan if they agree with the plan's projections. Departure from plan projections must be accepted by NOACA before consistency is established.

Policy 4-6: Modifications to Facility Planning Areas of Designated Management Agencies

Designated Management Agencies that own or operate a Publicly Owned Treatment Works for wastewater have lead responsibility for sewer planning within their established Facility Planning Area subject only to appeal to the NOACA Board under Policies 4-6a and 4-6b below.

This policy addresses how lead responsibility for sewer planning is established and how it is to be changed when the need arises. It also gives affected jurisdictions guidance for challenging DMA decisions. It is important to note that Ohio EPA cannot issue a permit for any action that is not consistent with the 208 Plan. FPA boundary disputes must be resolved prior to the review for consistency of any project by the NOACA Board.

Policy 4-6a: Lead responsibility for sewer planning will be maintained by the Designated Management Agency in each established Facility Planning Area in all cases of challenge when they can demonstrate <u>any</u> of the following:

- **a. that the system affordability would be negatively impacted by the suggested change;**
- **b. that system efficiency, defined as the ability to meet its NPDES permit limitations, would be compromised by a suggested change; or**
- **c. the change would result in a violation of a condition of a Section 201 Facilities Construction Grant received through the USEPA or a provision of a State Revolving Fund Loan administered by the Ohio EPA.**

Conflicts stemming from problems related to officially recognized FPA boundaries are expected to occur from time to time. Furthermore, they may take on new dimensions that were not considered during the development of the original Plan. Some areas covered by an existing facility plan may

want sewers to be extended to them while the POTW owner either has no plans to extend service or has unacceptable conditions for service. An appeal process that could result in the redefinition of existing FPA boundaries is necessary.

Under this policy, the Designated Management Agency for an approved FPA will continue to have primacy for sewer planning but that primacy will no longer be as absolute as in the past. The request of any applicant to transfer a specified area out of a recognized FPA needs to be open to consideration. A process to deal with the evaluation of each application must follow established guidelines. For instance, the DMA will maintain the right to provide for sewering of the designated area if it can demonstrate that its treatment system will be harmed by a redesignation. If the DMA can show that it will suffer economic harm, or if it can demonstrate that system integrity would be compromised by the change, it must be given the opportunity to maintain primacy. Demonstrations of economic harm need to show that established federal guidelines for wastewater treatment affordability would not be met if the application for change were allowed to proceed. System efficiency and integrity concerns must be tied to reasonable expectations that a WWTP will be unable to maintain compliance with its discharge permit limits. USEPA or the Ohio EPA must certify those cases where 201 Facility Grant or State Revolving Fund Loan conditions preclude a requested change in FPA boundaries.

In cases where central sewers are needed to comply with an Ohio EPA order to resolve an existing water quality problem, the DMA's primacy standing would be dependent on its ability and willingness to proceed with the sewer extensions and capacity upgrades if necessary. If the DMA is not prepared or is not able to proceed in a timely manner, the applicant for change can request a redrawing of the FPA boundary.

Policy 4-6b: Lead planning responsibility for limited areas can be transferred from the Designated Management Agency in an established Facility Planning Area in cases of challenge when applicant for change can demonstrate <u>all</u> of the following:

a. that none of the conditions established by 4-6a apply;
b. that the existing DMA is unprepared or is unwilling to extend service to the challenged area, or that they have conditions that are unacceptable to the applicant community;
c. that an alternative sewering plan exists that protects the environment, and that the alternative plan is technically achievable, economically justifiable, and politically acceptable;
d. that the proposed DMA has legal authority to act.

Transfers must be approved by Ohio EPA and incorporated by amendment to the WQMP. A DMA's lead planning standing would be dependent on its ability and willingness to proceed with the sewer extensions (and capacity upgrades if necessary) to areas assigned to an established DMA that requests such extensions. If the DMA is not prepared or is not able to proceed in a timely manner, the applicant for change can request a redrawing of the FPA boundary. This request would be considered with the intention of identifying viable alternative wastewater alternatives. The applicant would be required to demonstrate that an alternative exists, that the alternative is technically

achievable, economically affordable and politically acceptable. If the proposed plan is consistent with all other aspects of the WQMP, it can result in a change being made to the existing FPA definition in favor of the applicant. The NOACA ongoing planning process will provide for a meeting with all affected parties in an attempt to effect a consensus agreement. When consensus cannot be reached, the NOACA Water Quality Subcommittee will hear all viewpoints, and render a recommendation for action to the Policy Board. The Board action on such requests would constitute an update to the Plan as far as future consistency reviews are concerned in the challenged area. (see **Policy 10-4).**

Where no other acceptable solution can be found, a community that is part of another community's FPA can request the right to develop plans to direct their wastewater to an alternative treatment works. This could be another existing POTW or an entirely new facility if one can be constructed. All applications for the redrawing of existing FPA boundaries must be accompanied by plans that demonstrate that an environmentally acceptable and affordable alternative exists. These plans must demonstrate that the reassignment of the area will not jeopardize the ability of the POTW currently slated to serve the disputed area to comply with its NPDES permit conditions. These plans must also estimate the impacts on existing rate structure of that POTW

Policy 4-7: Nomination of New Designated Management Agencies

New Designated Management Agencies can be established to provide sanitary sewer service in newly created Facility Planning Areas. Facility plans generated under this option must be approved by Ohio EPA, and incorporated by amendment to the WQMP.

All entities that are not designated as a DMA must apply for such status before their permit application can be processed. To become a DMA designee, the applicant must have adequate legal authority under Ohio law and clearly identify the geographical extent of its proposed facility planning area and sewer service area. It must also demonstrate that all affected local governments have been consulted in the development of the project. Support from all affected jurisdictions (municipalities in incorporated areas and county government in unincorporated areas) must be secured. Any FPA infringements must be resolved either with the approval of the infringed upon DMA or by appeal to the NOACA Board (**see Policies 4-6 and 10-4**).

The applicant may propose an area for designation as an FPA that is larger than the current or proposed project service area. This can be done where it makes sense for the purposes of future sewer planning. After the Ohio EPA reviews and approves the request for a FPA designation, the Board will act to adopt a resolution so stating.

RECOMMENDATIONS FOR SUPPORTING ACTIONS BY LOCAL JURISDICTIONS

This section presents recommendations concerning wastewater management planning that reflect the input and decisions of local governments and agencies.

Recommendation 4-1: Local jurisdictions are encouraged to conform local land use plans to the wastewater service options identified in Figures 4-6 through 4-10.

Ideally the planning choices reflected in wastewater management options presented in Figures 4-6 through 4-10 will be consistent with local land use plans. The effectiveness of the WQMP will be enhanced to the extent that it is consistent with these land use plans.

Recommendation 4-2: Local jurisdictions should consider the use of the Joint Economic Development District (JEDD) approach or the Community Economic Development Agreement (CEDA) approach to address conflicting interests in the process of wastewater treatment infrastructure.

Numerous cases exist in the region where a municipality owns and operates a POTW whose FPA includes portions of surrounding townships. Some of these communities have a policy of extending sewer service only to areas that are annexed into the community. This is required because the municipality has used their tax base to support the construction, operation, and maintenance of their sewer infrastructure and are attempting to insure all beneficiaries to pay a fair share of these costs. Annexation is the tool that they choose to use to accomplish this.

Annexation is usually contested in Northeast Ohio. Compulsory annexations in order to receive sanitary sewer service are often strongly contested. Use of substitute measures such as a JEDD[4] or a CEDA[5,] is encouraged to meet the needs of both the municipality in question and the neighboring township. A JEDD or CEDA can be established by neighboring communities and can allow an exchange of services and a sharing of tax revenues. In the scenario of a municipality attempting to recover capital costs, township residents in the area to be affected by the extension of sewer lines agree to be subject to an income tax rate that would provide the municipality with the funds that they seek before extending the sewer lines. Where loss of business base is an issue, additional tax sharing may have to be negotiated. While not a solution for every case, the JEDD approach is encouraged in the WQMP.

4 Ohio Revised Code 715.70-.71
5 Ohio Revised Code 701.07

Appendix 4-1

COUNTY LEVEL MAPS OF FACILITY PLANNING AREAS

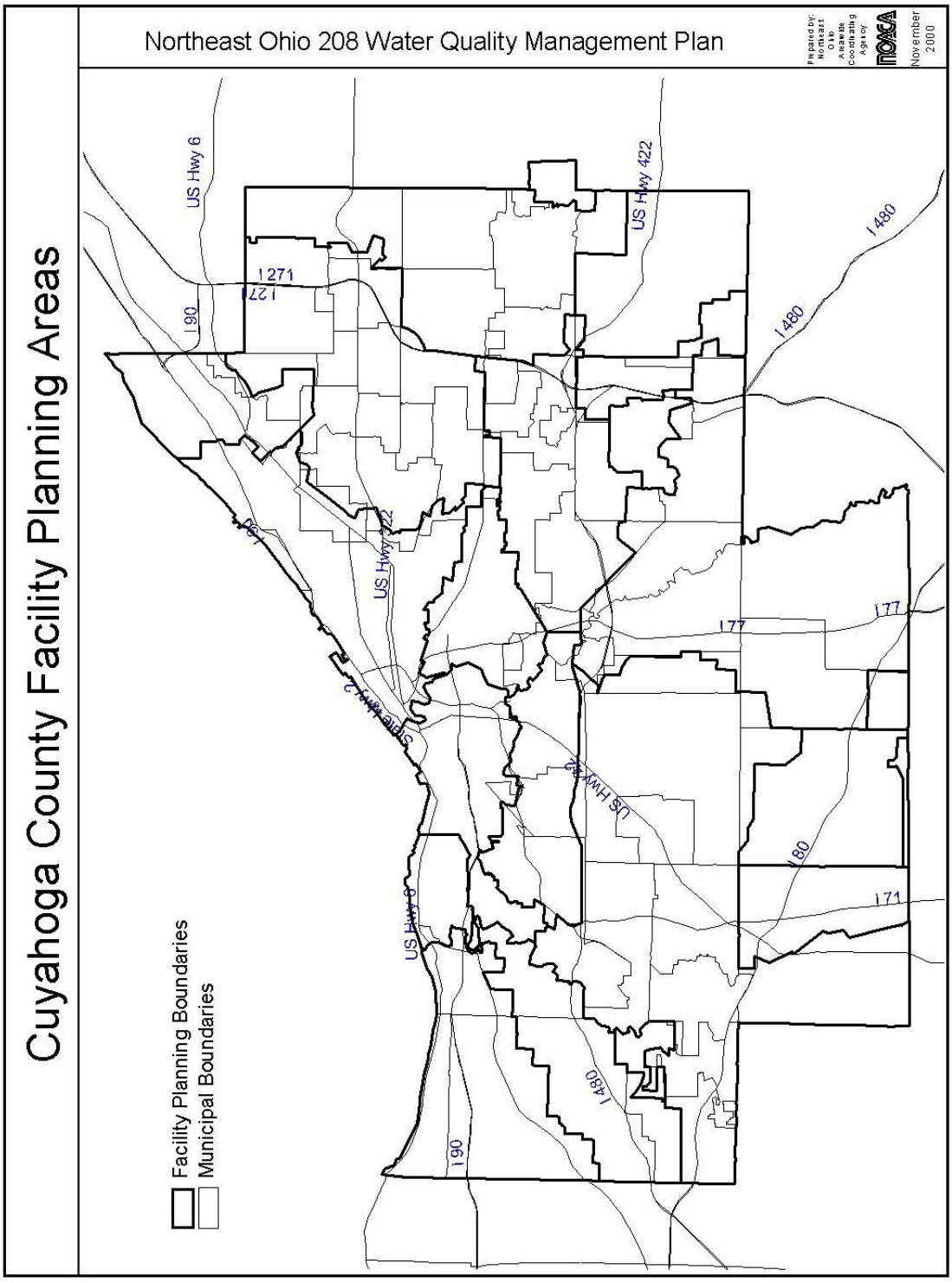
Cuyahoga County Facility Planning Areas
Northeast Ohio 208 Water Quality Management Plan
Prepared by: Northeast Ohio Areawide Coordinating Agency
NOACA
November 2000
US Hwy 6
US Hwy 422
I 271
I 90
I 480
I 77
State Hwy 2
US Hwy 42
I 80
I 71
I 490
Facility Planning Boundaries
Municipal Boundaries

Figure 4-1

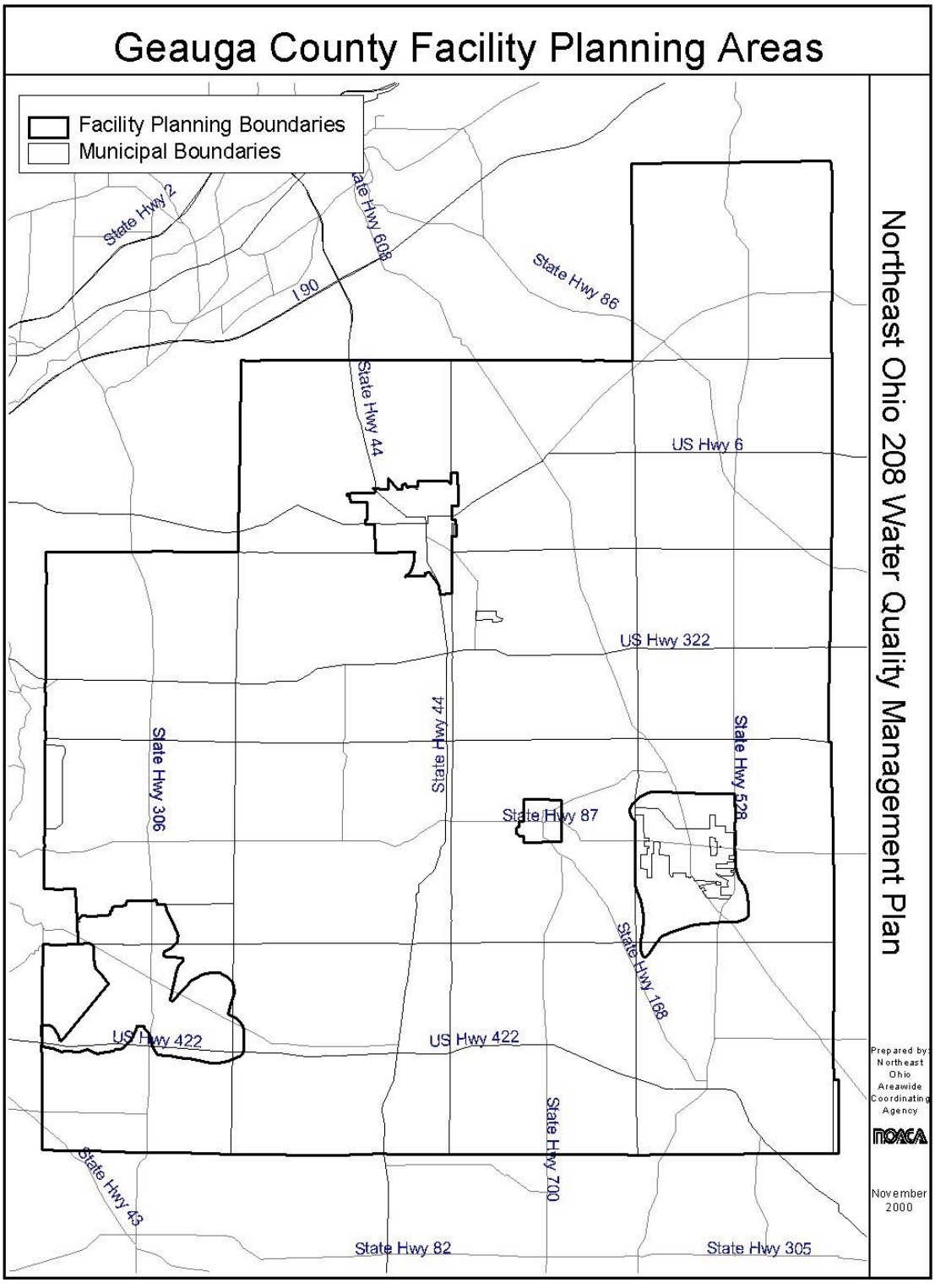
Geauga County Facility Planning Areas
Facility Planning Boundaries
Municipal Boundaries
State Hwy 2
I 90
State Hwy 608
State Hwy 86
State Hwy 44
US Hwy 6
US Hwy 322
State Hwy 306
State Hwy 44
State Hwy 528
State Hwy 87
State Hwy 168
US Hwy 422
US Hwy 422
State Hwy 700
State Hwy 43
State Hwy 82
State Hwy 305
Northeast Ohio 208 Water Quality Management Plan
Prepared by:
Northeast
Ohio
Areawide
Coordinating
Agency
NOACA
November
2000

Figure 4-2

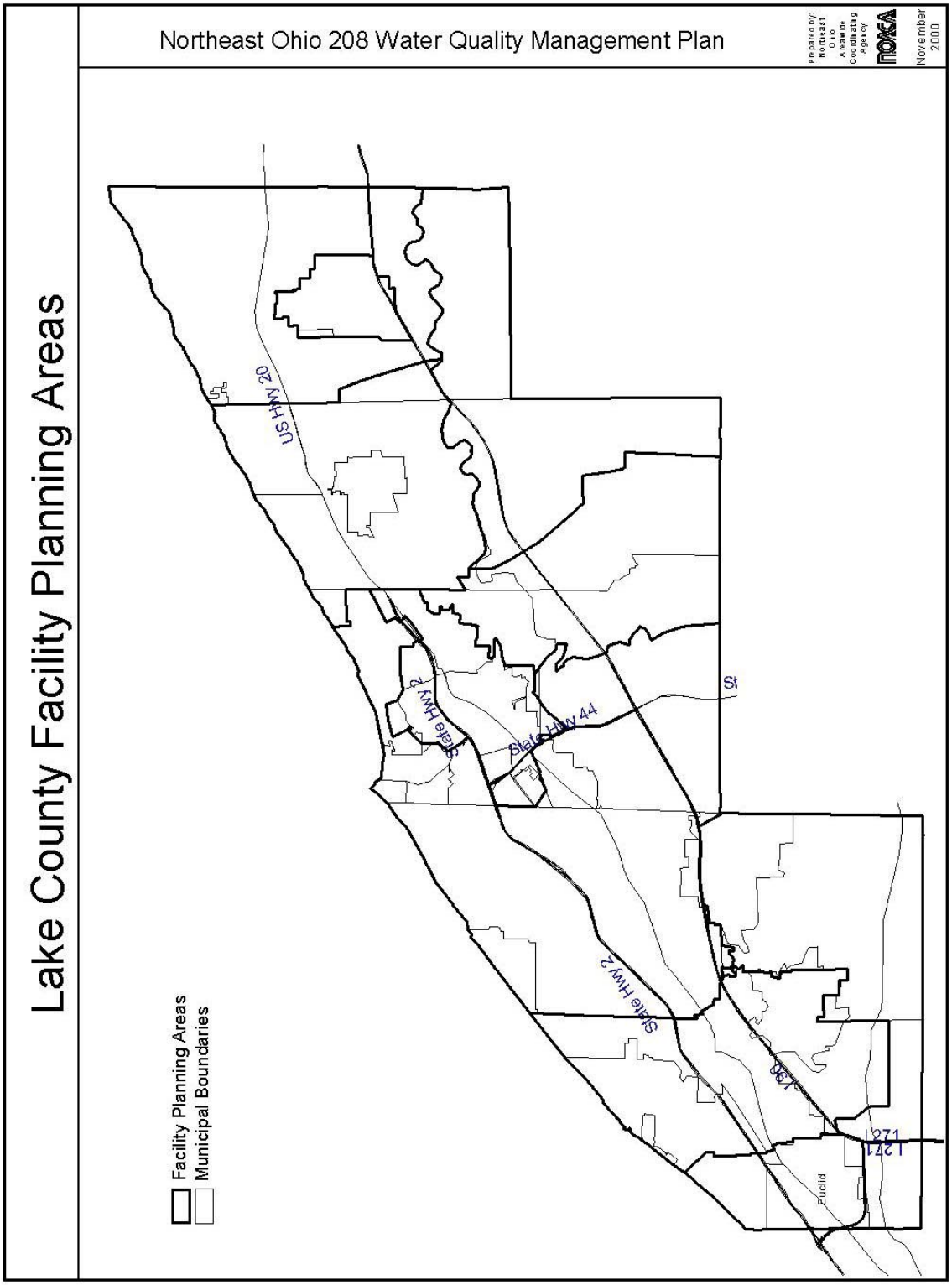
Lake County Facility Planning Areas
Northeast Ohio 208 Water Quality Management Plan
Prepared by: Northeast Ohio Areawide Coordinating Agency
NOACA
November 2000
US Hwy 20
State Hwy 2
State Hwy 44
State Hwy 2
I-90
I-271
Euclid
Facility Planning Areas
Municipal Boundaries

Figure 4-3

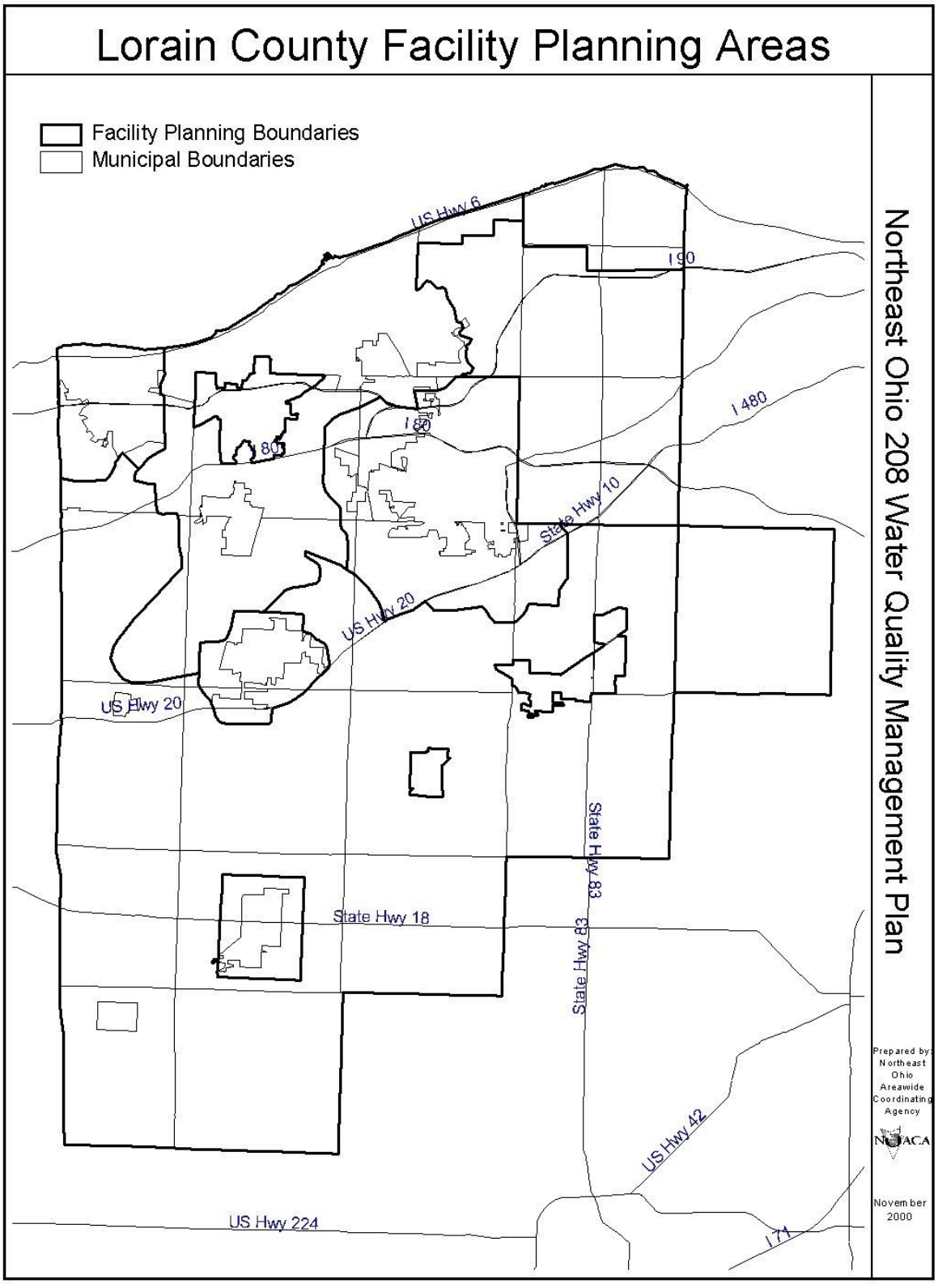
Lorain County Facility Planning Areas
Facility Planning Boundaries
Municipal Boundaries
US Hwy 6
I 90
I 480
I 80
State Hwy 10
US Hwy 20
US Hwy 20
State Hwy 83
State Hwy 18
State Hwy 83
US Hwy 42
US Hwy 224
I 71
Northeast Ohio 208 Water Quality Management Plan
Prepared by:
Northeast
Ohio
Areawide
Coordinating
Agency
NOACA
November
2000

Figure 4-4

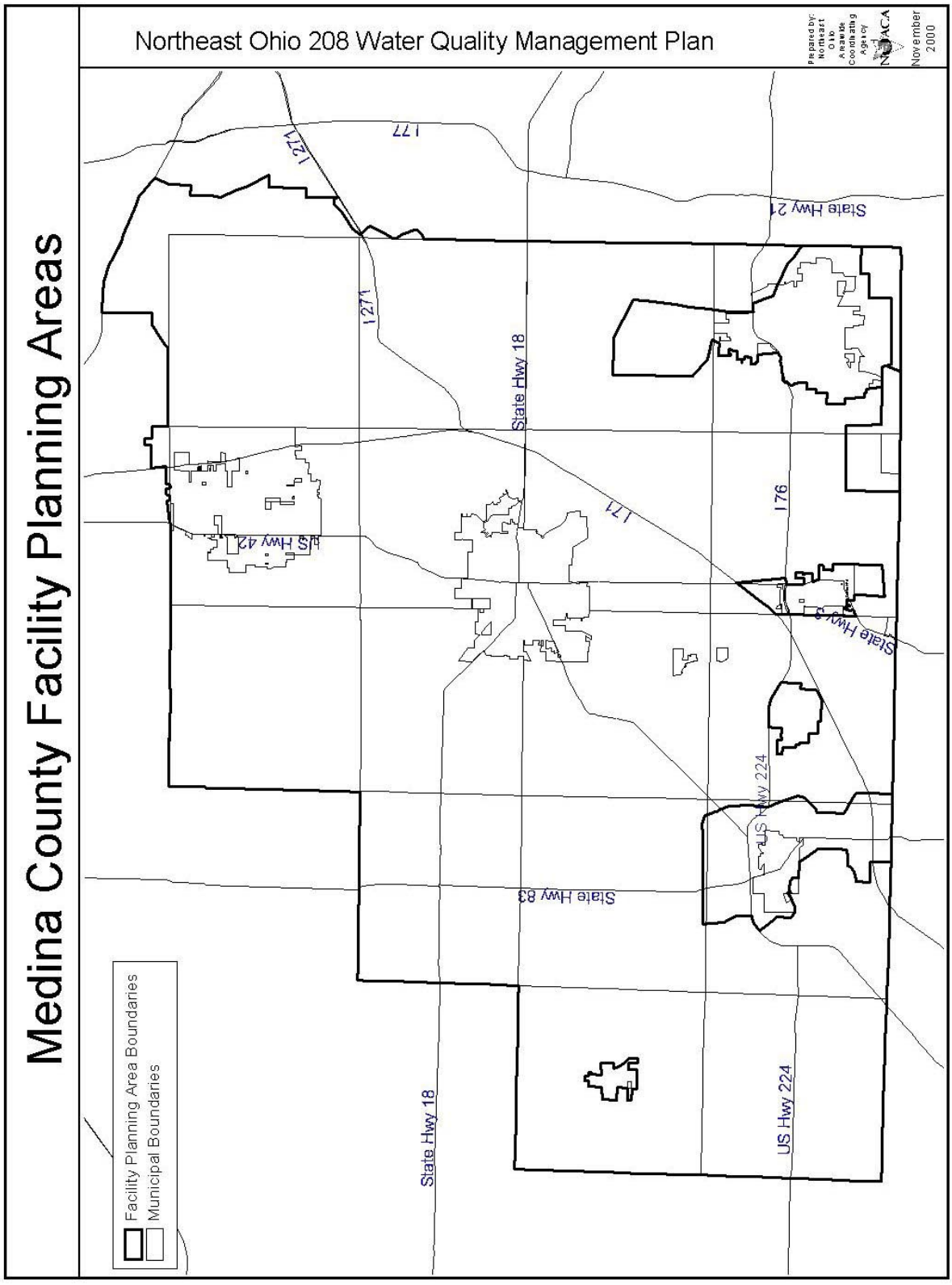
Medina County Facility Planning Areas
Northeast Ohio 208 Water Quality Management Plan
Prepared by: Northeast Ohio Areawide Coordinating Agency
NOACA
November 2000
Facility Planning Area Boundaries
Municipal Boundaries
I-77
I-271
State Hwy 21
State Hwy 18
I-71
I-76
US Hwy 42
State Hwy 3
US Hwy 224
State Hwy 83
State Hwy 18
US Hwy 224

Figure 4-5

Appendix 4-2
Criteria for Establishing Consistency for Community Plans for Wastewater Treatment

Criteria for Establishing Consistency for Community Plans for Wastewater Treatment

All communities in the NOACA WQMP area were surveyed by mail to provide information on how they want their community's wastewater to be treated out into the future. A series of options was presented to them from which they could select one or more for various portions of their community. The list of available options is contained in Table 4-3.

The following criteria have been established to guide the determination of consistency with the WQMP for any proposed wastewater treatment expansion. In a limited number of cases, communities have selected options which supplement the general statements made below. These community specific options are identified in Table 4-4. Community specific options modify or replace the general criteria as appropriate. The accompanying Figures 4-6 to 4-10 show the generalized options selected by local jurisdictions.

Criterion 1: **Central sewers that do not connect to the POTW that serves the Facility Planning Area in which a proposed project area lies are inconsistent with the WQMP without the expressed permission of the resident municipality in incorporated areas, and the County in unincorporated areas, and the Designated Management Agency that owns or operates the applicable POTW if different from the resident community. On-site wastewater system installations, repairs, or up-grades are consistent with the WQMP in areas where sewer plans exist to meet service needs until sanitary sewers are available**

Under the WQMP an area is considered to be "currently sewered" if adequate wastewater capacity exists at a POTW to treat the wastes generated in the area, and an adequate collection system is in place to transfer those wastes to the POTW. There may be pockets of unsewered properties within this classification. Often these properties, when developed, could easily be connected to the central system. This classification can also include unsewered pockets that cannot economically or physically be connected to the central system. These pockets could also include areas with an insufficient density of wastewater sources to warrant extension of collection lines at this time. For facility planning purposes, these pockets are included in the "sewered" definition if the intent is to connect them to the central system if that ever becomes feasible. On-site treatment management practices continue to be in force in the interim. Properties that cannot yet be connected to the central system are permitted to install on-site systems as needed unless an exception is identified in Table 4-3. All sewer extensions to serve these pockets will be considered consistent with the

WQMP as long as they do not require any expansion of the POTW that services them.

An area is classified as "expected to be sewered" if the local management agency perceives that sufficient capacity exists at a POTW, or can be added to it, to handle wastes generated in the area and that a demand exists to extend lines to the area in question. The demand could be the result of growth expectations or the need to address problems being caused by failing on-site treatment systems that exist in the area at the present time. Local officials depending on their estimate of when projects will actually move forward subdivide this category into 5, 10 and 20 year time frames. For purposes of plan consistency, the timing of all projects is at the discretion of local communities. Timing declarations are estimates only and are not binding in any way. Consistency reviews are not affected by departures from these schedules. All central sewering projects in these areas are subject to a consistency review. Individual properties in these areas can be serviced with on-site systems until sewers become available unless an exception is identified in Table 4-4.

Areas classified as "limited sewering likely within 20 years" differ from the above classification in the confidence associated with the expectation that a demand will develop in the next twenty years. To be placed in this category a DMA has determined that adequate treatment capacity exists at a POTW and that limited collection line extension is affordable. What is different is that there may be no demand to extend lines at this time either because development pressure is low or that individual on-site systems are performing well. From a sewer planning perspective, it is reasonable to expect that sanitary sewers will eventually be extended into at least a portion of areas in this classification, but that extension is not likely to occur or to be completed in the next twenty years. All central sewering projects in these areas are subject to a consistency review. Individual properties in these areas can be serviced with on-site systems until sewers become available unless an exception is identified in Table 4-4.

<u>Criterion 2</u>: Communal systems are inconsistent with the WQMP in areas identified as to remain served by on-site systems without the expressed permission of the resident municipality in incorporated areas, or the County in unincorporated areas, and must be consistent with local zoning and building requirements of the municipality or township in which they are to be located.

Those areas that are classified in the "areas to remain served by on-site systems" represent several cases. Most are areas that have little demand for growth and are likely to remain rural far into the future. Many represent areas where expected growth can be accommodated with the use of individual on-site systems given existing zoning and building requirements. A few are areas where local officials are actively seeking service with sanitary sewers but have yet to develop viable projects.

"Communal systems" are small systems that use central sewers to collect wastewater from a number of individual properties and to treat it at a central point generally using an alternative treatment technology. New system designs are continuously being researched and the use of communal systems is expected to grow in the future. These systems can allow the use of conservation developments in areas where the use of individual on-lot systems would not support the concentration of building units to preserve open spaces. The use of such systems is restricted to jurisdictions that allow their use. All proposals must conform to local zoning and building

regulations. Each request to use a communal system must be approved the local jurisdiction in which it is to be located.

Criterion 3: On-site waste treatment system designs are approvable consistent with the permitting authorities of local municipal and county health authorities or the Ohio EPA whichever has jurisdiction over the application in question.

Communities, acting in concert with local health authorities and the Ohio EPA, have the option of declaring the types of on-lot systems are to be used within their jurisdiction. There are two generic groups of systems that need to be considered: discharging and nondischarging systems. Nondischarging systems are on-site systems that have an on-lot discharge (e.g., a septic tank or mound type system). Discharging systems have off-lot discharges of wastewater. The most commonly used system of this type in the NOACA area is the aeration system. The primary difference between the two classes of systems is that discharging systems lead to immediate off-lot problems whenever the system is not operating as designed. For this reason, USEPA and Ohio EPA discourage their use. Communities can opt to require the use of nondischarging systems in all new construction so as to limit the impacts of malfunctioning systems on their residents. The continued use of discharging systems will be subject to permitting requirement of Ohio EPA acting in concert with USEPA.

Criterion 4: Installation or expansion of central sewers or treatment works are inconsistent with the WQMP in areas where sewer plans are undeclared; on-site treatment installations may proceed in such areas.

Areas that are classified as having "sewer plans undeclared" are areas where there is a mix of sanitary sewers and on-site systems and local officials have yet to identify their sewer plans, most usually because they are not yet complete. All land areas in this category need to develop their plans before any consistency action can be taken. The DMA(s) responsible for wastewater management planning in these areas must submit community sewer declarations for undeclared areas prior to the initiation of a consistency review by NOACA and Ohio EPA. The permitting and installation of on-site treatment systems in these areas may proceed pending completion of planning activities and the availability of central sewers.

Table 4-3
Wastewater Planning Options

The following list represents some of the categories that local officials can consider for use in recommending how they want their community's wastewater to be handled in the future. Different categories can be applied to portions of a community. General headings (e.g., area is expected to be sewered) or more detailed definitions (e.g., area is expected to be served with sanitary sewers connected to an existing treatment plant) can be used. **Bold face type indicates the default definition that applies to all communities unless indicated otherwise in Table 4.4.**

1. Area is currently served with sanitary sewers:

    A. Area is totally served with sanitary sewers connected to a specified, existing publicly owned treatment facility (POTW); all new construction will be connected to the central sewer system.

    B. **Area is currently served with sanitary sewers except for isolated pockets of on-site systems. On-site systems must be abandoned when collector sewers are available. New on-site systems may be used where collector sewers are unavailable.**

    C. Area is totally served with sanitary sewers connected to a specified, existing package plant.
        i. Package plant to be abandoned when POTW sanitary sewers become available.
        ii. Package plant to remain in operation if and when POTW sanitary lines become available.

2. Area is expected to be served with sanitary sewers within the next 20 years (Pick one from each category)

    A. Treatment options:
        i. **All future sewers will be connected to a specified existing, publicly owned treatment plant (POTW).**
        ii. Area is expected to be served with sanitary sewers connected to a new POTW.
        iii. Area is expected to be served with sanitary sewers connected to a new private treatment facility.

    B. New system options until sewers become available:
        i. **On-site systems may be used but must be abandoned when sewers are available.**
        ii. On-site systems may be used but dry sewers must be constructed.
        iii. On-site systems may not be used until sewers are constructed.

Table 4-3
Wastewater Planning Options
(continued)

3. Area where limited sewers can be extended in the next 20 years if a demand develops. (Pick one from each category.)

   A. Treatment options:
      i. **All future sewers will be connected to a specified existing, publicly owned treatment plant (POTW).**
      ii. Area is expected to be served with sanitary sewers connected to a new POTW.
      iv. Area is expected to be served with sanitary sewers connected to a new private treatment facility.

   B New system options until sewers become available:
      i. **On-site systems may be used but must be abandoned when sewers are available.**
      v. On-site systems may be used but dry sewers must be constructed.
      vi. On-site systems may not be used until sewers are constructed.

4. Area designated to remain on on-site systems for the foreseeable future.

   A. **Service to be provided only by on-site systems.**
   B. Area to be served by on-site systems except for communal systems used as part of an approved conservation development plan that results in no added units.

Table 4-4
Supplemental Wastewater Planning Declarations

Cuyahoga County
The City of North Royalton requires that future sewer extension costs be borne by the developer.

Geauga County
The portions of Geauga County within the planning jurisdiction of the Department of Water Resources has sanitary sewer service restricted to areas that a) have an existing contractual obligation for such service, b) have been previously assessed for such service, c) are part of an existing service area, or d) are determined by either the Ohio EPA or the Geauga Health District to be in violation of water pollution laws or regulations, and that all such violations could not be remedied, after exhausting all possible solutions, without the use of centralized water or sewer facilities.

The Village of Chardon will limit sewer extensions to areas that are within the Village limits.

Chardon Township requests that no sanitary sewer service be provided for any portion of the township not in the Wintergreen Subdivision as currently platted.

Lake County
The Village of Kirtland will allow the use of communal wastewater treatment systems when used as part of an approved conservation development plan in areas that are otherwise to be served by on-site systems.

Painesville Township requests that sanitary sewer service be provided to all portions of the township.

Lorain County
The Lorain County General Health District requires that all subdivisions located within 2,000 feet of an established Facility Planning Area that are to be serviced by on-site wastewater treatment systems will install a sanitary sewer collection system that can be activated when sanitary sewer connections become available.

Ohio EPA and the Lorain County General Health District should consult the City of North Ridgeville prior to the issuance of a permit to install an on-site system within the municipality.

Medina County
The Medina County Sanitary Engineer will extend sewers in identified areas only in consultation with affected townships, cities, and/or villages.

Sharon Township requests that no expansion of sanitary service be allowed within the township.

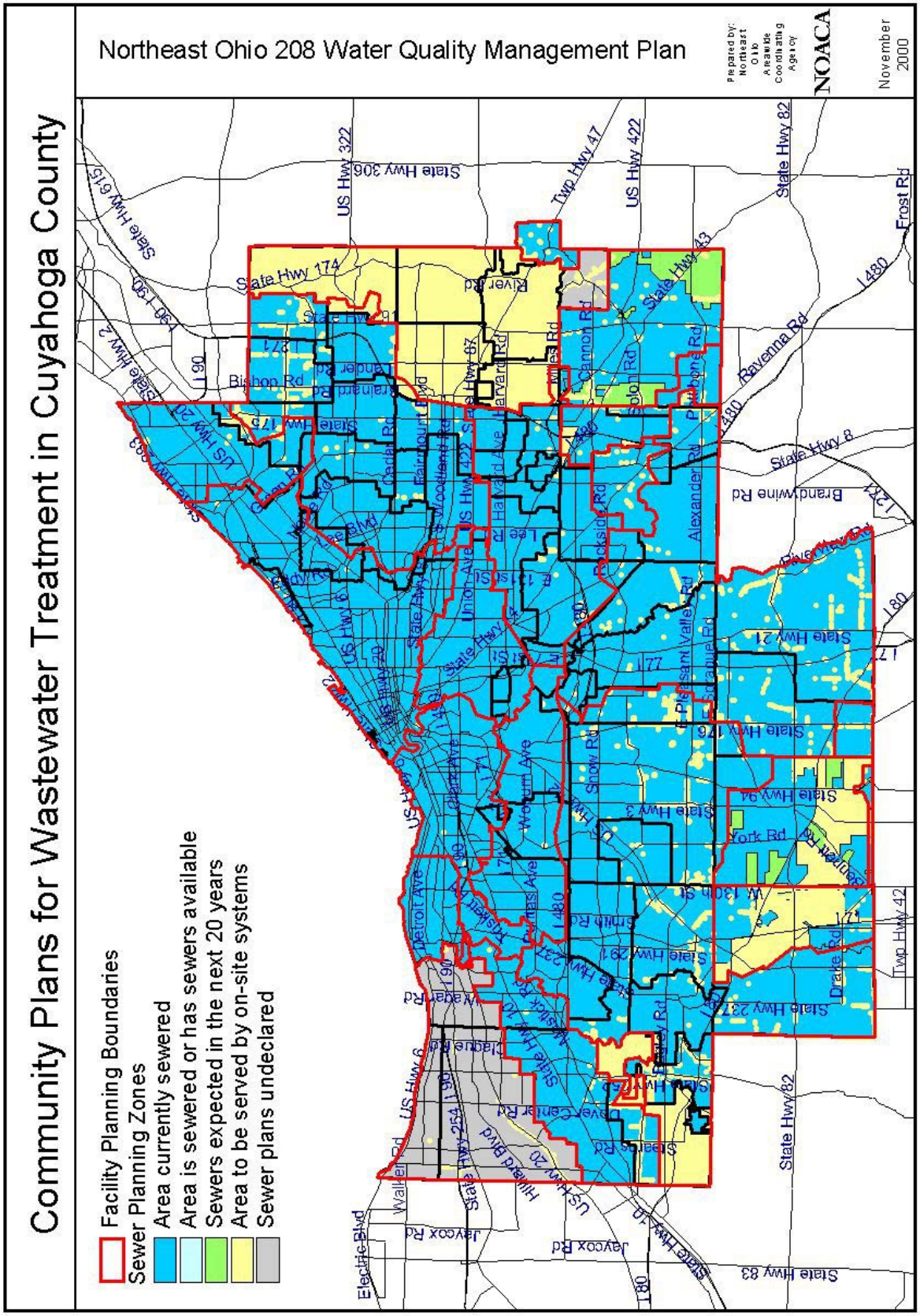
Community Plans for Wastewater Treatment in Cuyahoga County
Northeast Ohio 208 Water Quality Management Plan
Prepared by: Northeast Ohio Areawide Coordinating Agency
NOACA
November 2000
Facility Planning Boundaries
Sewer Planning Zones
Area currently sewered
Area is sewered or has sewers available
Sewers expected in the next 20 years
Area to be served by on-site systems
Sewer plans undeclared

Figure 4-6

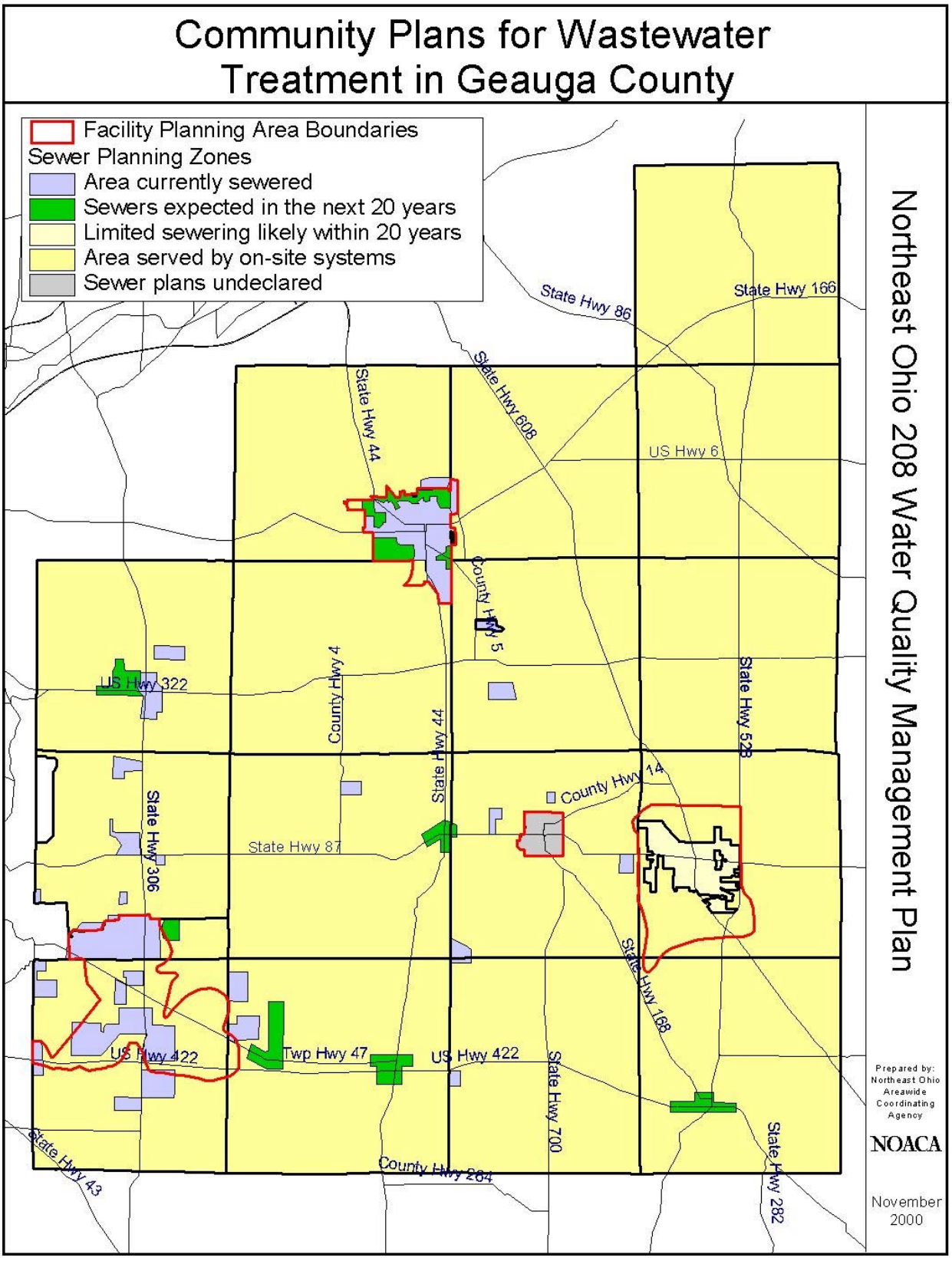
Community Plans for Wastewater Treatment in Geauga County
Facility Planning Area Boundaries
Sewer Planning Zones
Area currently sewered
Sewers expected in the next 20 years
Limited sewering likely within 20 years
Area served by on-site systems
Sewer plans undeclared
State Hwy 86
State Hwy 166
State Hwy 608
State Hwy 44
US Hwy 6
County Hwy 5
US Hwy 322
County Hwy 4
State Hwy 44
State Hwy 528
County Hwy 14
State Hwy 306
State Hwy 87
State Hwy 168
US Hwy 422
Twp Hwy 47
US Hwy 422
State Hwy 700
State Hwy 43
County Hwy 264
State Hwy 282
Northeast Ohio 208 Water Quality Management Plan
Prepared by: Northeast Ohio Areawide Coordinating Agency
NOACA
November 2000

Figure 4-7

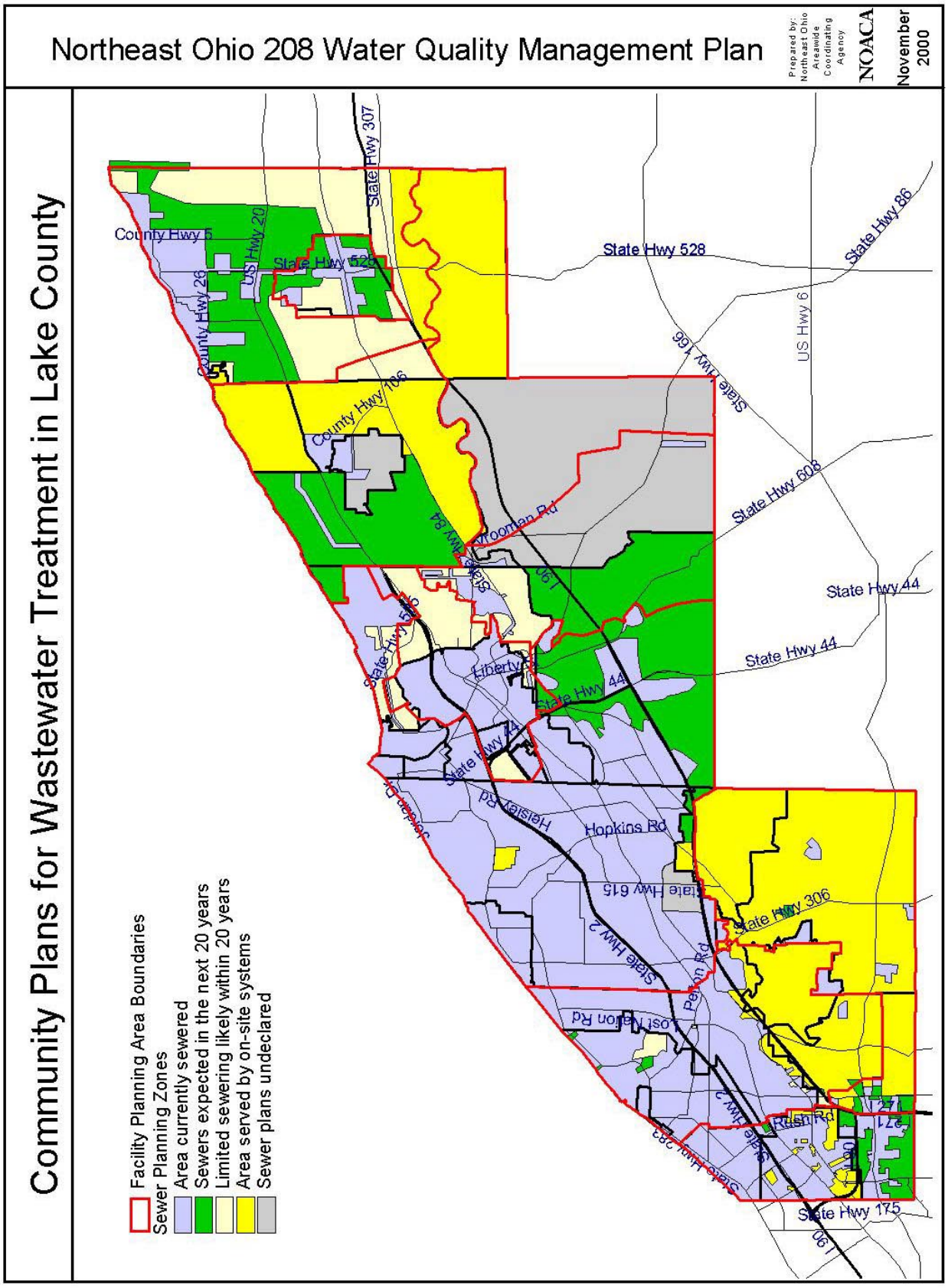
Northeast Ohio 208 Water Quality Management Plan
Prepared by: Northeast Ohio Areawide Coordinating Agency
NOACA
November 2000
Community Plans for Wastewater Treatment in Lake County
Facility Planning Area Boundaries
Sewer Planning Zones
Area currently sewered
Sewers expected in the next 20 years
Limited sewering likely within 20 years
Area served by on-site systems
Sewer plans undeclared
State Hwy 307
County Hwy 5
US Hwy 20
State Hwy 528
State Hwy 86
County Hwy 26
US Hwy 6
State Hwy 166
County Hwy 705
State Hwy 608
Broomlan Rd
State Hwy 84
State Hwy 44
Liberty Rd
Hopkins Rd
State Hwy 306
State Hwy 615
State Hwy 2
Lost Nation Rd
Perry Rd
Rush Rd
State Hwy 283
State Hwy 175
I-90

Figure 4-8

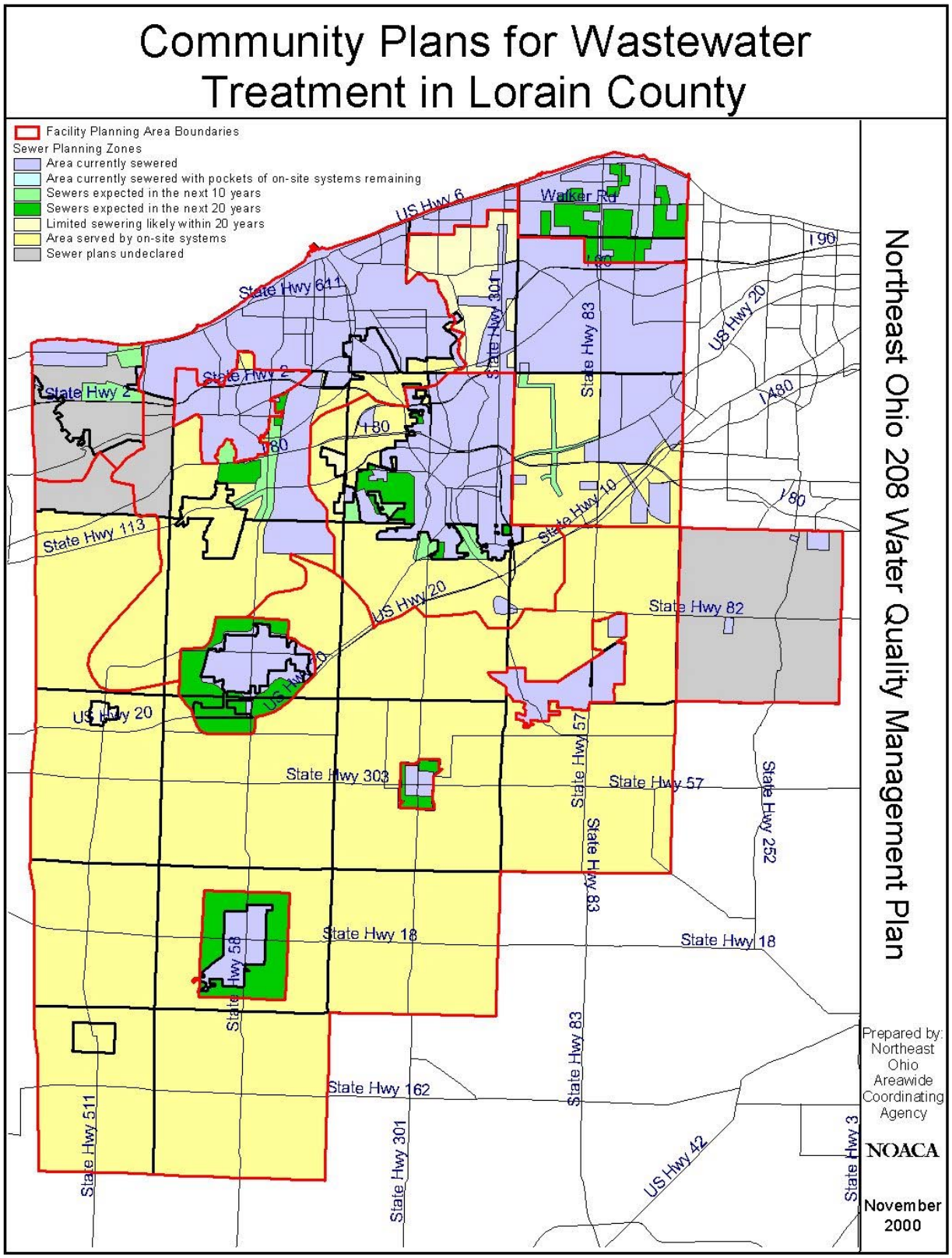
Community Plans for Wastewater Treatment in Lorain County
Facility Planning Area Boundaries
Sewer Planning Zones
Area currently sewered
Area currently sewered with pockets of on-site systems remaining
Sewers expected in the next 10 years
Sewers expected in the next 20 years
Limited sewering likely within 20 years
Area served by on-site systems
Sewer plans undeclared
US Hwy 6
Walker Rd
I 90
State Hwy 611
State Hwy 301
State Hwy 83
US Hwy 20
State Hwy 2
I 480
I 80
State Hwy 10
State Hwy 113
State Hwy 82
US Hwy 20
State Hwy 303
State Hwy 57
State Hwy 252
State Hwy 18
State Hwy 58
State Hwy 511
State Hwy 162
US Hwy 42
State Hwy 3
Northeast Ohio 208 Water Quality Management Plan
Prepared by:
Northeast Ohio Areawide Coordinating Agency
NOACA
November 2000

Figure 4-9

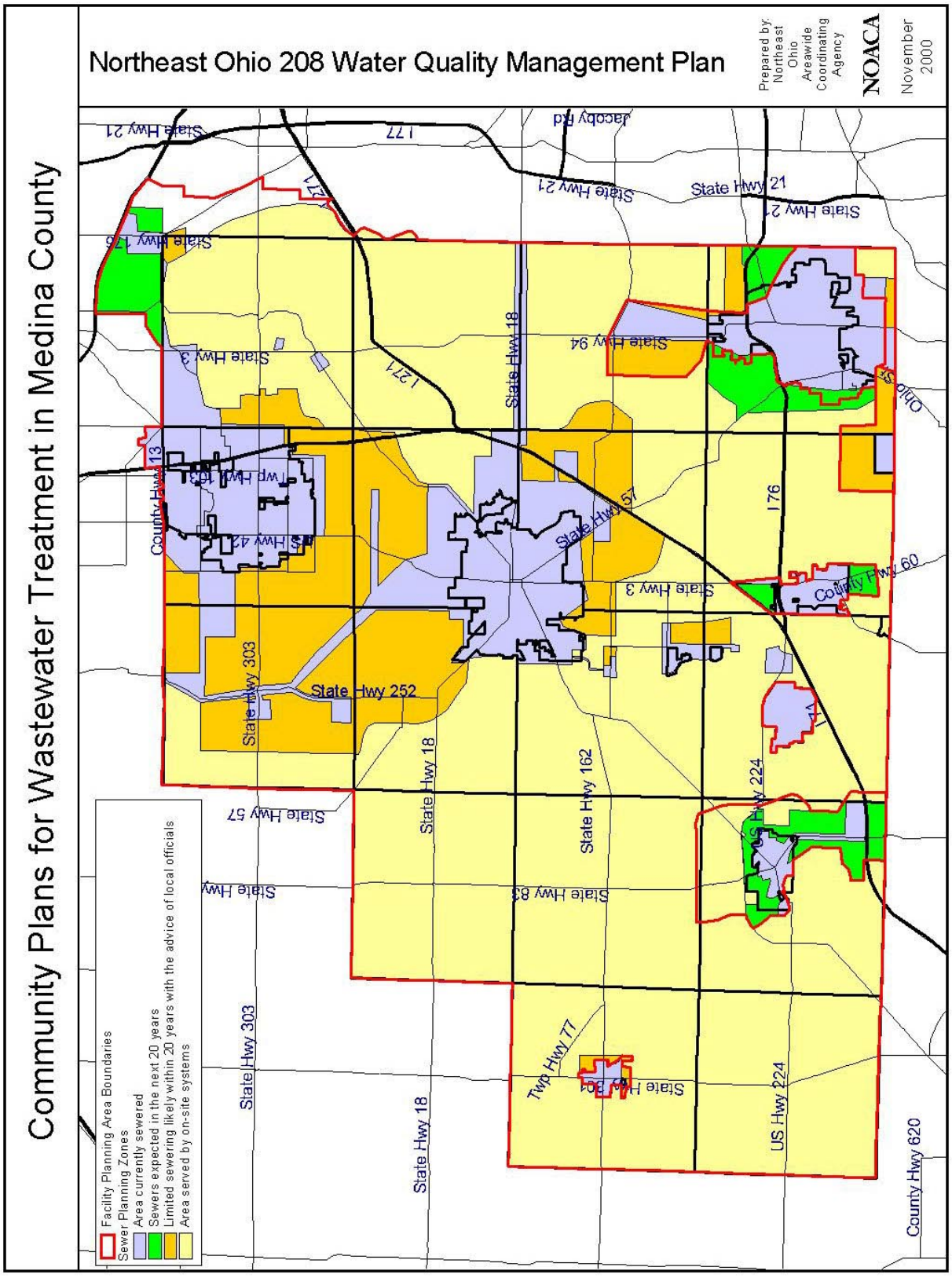
Northeast Ohio 208 Water Quality Management Plan
Prepared by Northeast Ohio Areawide Coordinating Agency
NOACA
November 2000
Community Plans for Wastewater Treatment in Medina County
Facility Planning Area Boundaries
Sewer Planning Zones
Area currently sewered
Sewers expected in the next 20 years
Limited sewering likely within 20 years with the advice of local officials
Area served by on-site systems
State Hwy 21
I 77
Jacoby Rd
State Hwy 18
State Hwy 94
I 271
Ohio St
County Hwy 13
Twp Hwy 103
State Hwy 42
State Hwy 57
I 76
State Hwy 3
County Hwy 60
State Hwy 303
State Hwy 252
State Hwy 162
US Hwy 224
State Hwy 83
Twp Hwy 77
State Hwy 301
County Hwy 620

Figure 4-10

Appendix 4-3

COMMUNITY LEVEL POPULATION PROJECTIONS

This appendix provides a discussion of the methodologies followed in producing the sub-county projections. As such, it reviews the role of the State Data Center and its county level projections as well as local planning commissions and their assistance in developing the final numbers.

Projection, Forecast, Allocation

Prior to a review of the methodology and techniques used in the projections, it is appropriate to discuss the meaning of projections, forecasts and allocations. Proper use of the numbers is in some degree dependent upon understanding their nature.[1]

The county level numbers in this appendix are projections developed by the Office of Strategic Research (OSR) located in the Ohio Department of Development. A projection is a statement that" "if X and Y happen, than Z will result." In making its projections, the OSR reviews past trends in county births, deaths and net migration and makes assumptions regarding how these variables will change in the future. If the OSR is correct in its assumptions, the projected population will occur.

In general terms, a forecast implies more certainty regarding the future number. To some extent a projection is more a mathematical exercise while a forecast suggests more expertise and considered judgement regarding the future.

Finally, it should be noted the allocation procedure also has an inherent basis toward continuation of past trends. For this reason the initial allocations were subjected to review by county level planning commissions. In several cases, the initial output was modified by these reviewers. Nevertheless, the allocations must be considered dependent, to some degree, on the county level projection.

County Level Population Projections

Among the many functions of the OSR, is the projection of population, by age and sex, for Ohio's counties. By virtue of a long standing Executive Order of past-Governor James Rhodes, governmental organizations receiving funding from the State must use the OSR population projections if their program requires projections.

The OSR's last projection of county level population was released in January 1993.[2] In developing these projections, the OSR met with local planning and other organizations to review preliminary projections and accept comments regarding the projections.

[1]See, for example: Dr. Demo, "What Is A Forecast?", American Demographics, December, 1995., pp. 8, 59.

[2]Ohio Data Users Center, "Population Projections. Ohio and Counties by Age and Sex: 1990 to 2015." January 1993.

The projections are the output of a cohort-component model. Such a model starts with a base population (in this case 1990), stratified by sex and 5-year age groups, and projects the components of change (i.e., births, deaths and net migration) for the next five years. These components are then added to the appropriate 1990 sex-age group to produce the 1995 projected population. The 1995 population then serves as the base for the next five year projection.

As shown in Table 4-5 the OSR projects regional population to first decline and then increase slightly over the 25-year projection horizon. The projection also shows a continued decentralization of regional population, although the projected rate of change is slower than in the past.

Table 4-5

State Data Center Projected County Population

	1990	2000	2015	Percent of Region in 2015
Cuyahoga	1,412,140	1,373,000	1,392,900	65
Geauga	81,129	87,900	100,000	5
Lake	215,499	220,300	224,700	10
Lorain	271,126	273,200	279,600	13
Medina	122,354	132,100	148,000	7
Region	2,102,248	2,086,500	2,145,200	

The pattern of regional change is controlled by the projected Cuyahoga County trend. The county " bottoms out" in the 2005-2010 period and is projected to grow two percent from 2010 to 2015. The OSR report offers no rationale for the reversal of what would be, by that time, a 40 year (1970-2010) trend of population decline.

As a point of general interest, the OSR projection shows the five-county NOACA region maintaining its proportion of the state's population. Between 1970 and 1990 the region's share of state population declined from 22 to 19 percent, but is projected to fall only one more point, to 18 percent, by 2015.

Although the projections of the OSR end with the year 2015, NOACA has programs (primarily the Long Range Transportation Plan Update) that require projections for the year 2025. In order to meet this requirement, the OSR projections were extrapolated to 2025 using the average annual rate of change over the 2010-2015 period.

Community Level (Sub-County) Population Allocations

As noted above, agencies such as NOACA are required to use the OSR county population projections for planning. Since sub-county (i.e., city, village and township) figures must, obviously, sum to the county total, they should correctly be regarded as allocations of projected county population.

Four separate techniques were used to allocate the county level population projections to sub-county (i.e., city, village, township) level.[3] These techniques included:

1. linear extrapolation which incorporates previous numerical change in community population;
2. exponential extrapolation which utilizes previous rate of change in community population;
3. a share technique which assumes a community's share of county population will hold; and,
4. a shift technique which combines elements of the linear and share techniques.

Each community's unadjusted model population allocation was determined by the average of the four techniques. The final modeling step was to adjust each community's population up or down by a common factor to ensure that the summation of community population equaled the county total projected by OSR.

At this point there is an element of "business as usual" implicit in the numbers. In the county level projections issued by the OSR, historic patterns of change influence projected future change. At the sub-county level the allocation of projected population relies upon past community and community/county trends and relationships. Thus the initial allocation is strongly influenced by historic trends.

Initial sub-county populaation allocations were then reviewed by NOACA staff and the respective county planning commission staffs. This step was essentially a "reality check" to ensure that, to the extent possible, the allocations were consistent with present trends and present thinking regarding future development patterns. Table 4-6 contains the sub-county population allocations.

[3]Sipe, Hopkins, McKay and Burrows. "Microcomputers and Economic Analysis: Spreadsheet Templates for Local Governments." University of Florida, Bureau of Economic and Business Research, 1987.

TABLE 4-6
POPULATION ALLOCATED TO COMMUNITIES IN
CUYAHOGA COUNTY

	1990	1995	2000	2005	2010	2015	2020	2025
CUYAHOGA COUNTY	1,412,140	1,395,900	1,373,000	1,364,500	1,365,900	1,392,900	1,332,400	1,321,800
CLEVELAND	505,616	503,000	473,200	457,600	444,500	439,400	417,100	415,200
WEST SHORE REGION	176,378	175,900	180,700	183,800	188,000	195,800	184,800	182,800
BAY VILLAGE	17,000	16,600	16,600	16,600	16,600	16,900	16,000	15,800
FAIRVIEW PARK	18,028	17,300	17,300	17,100	17,000	17,200	16,300	16,100
LAKEWOOD	59,718	59,300	58,900	59,000	59,400	60,900	57,500	57,000
NORTH OLMSTED	34,204	34,500	35,000	35,500	36,000	36,000	34,100	33,800
ROCKY RIVER	20,410	20,100	20,200	20,300	20,400	21,000	19,900	19,700
WESTLAKE	27,018	31,100	32,600	35,300	38,500	43,600	41,000	40,400
SOUTH WEST REGION	107,047	113,000	112,800	116,000	119,900	126,300	119,100	117,700
BEREA	19,051	18,700	19,000	19,100	19,300	19,800	18,700	18,500
BROOK PARK	22,865	21,700	20,600	19,800	19,200	18,800	17,900	17,800
MIDDLEBURGH HEIGHTS	14,702	14,400	13,700	13,400	13,200	13,200	12,500	12,400
OLMSTED FALLS	6,741	7,100	7,600	8,100	8,500	9,200	8,600	8,500
OLMSTED TWP	8,380	10,000	10,200	10,500	11,200	12,100	11,400	11,200
STRONGSVILLE	35,308	41,200	42,100	45,200	48,600	53,100	50,000	49,300
SOUTH CENTRAL REGION	144,386	145,000	146,400	148,300	151,100	156,700	148,100	146,700
BROOKLYN	11,706	10,900	11,400	11,300	11,300	11,600	11,000	10,900
LINNDALE	159	200	200	200	200	200	200	200
NORTH ROYALTON	23,197	28,000	28,800	31,300	34,100	37,700	35,500	35,000
PARMA	87,876	85,000	85,600	85,200	85,300	87,000	82,200	81,500
PARMA HEIGHTS	21,448	21,000	20,500	20,200	20,100	20,300	19,200	19,100
CUYAHOGA REGION	49,455	52,100	51,900	53,200	54,900	57,700	54,300	53,700
BRECKSVILLE	11,818	12,700	13,500	14,300	15,200	16,500	15,500	15,300
BROADVIEW HEIGHTS	12,219	13,900	13,600	14,200	15,000	16,000	15,100	14,900
BROOKLYN HEIGHTS	1,450	1,500	1,300	1,300	1,200	1,200	1,100	1,100
CUYAHOGA HEIGHTS	682	700	600	600	600	600	600	600
INDEPENDENCE	6,500	6,600	6,500	6,600	6,700	6,900	6,500	6,400
NEWBURGH HEIGHTS	2,310	2,100	2,100	2,000	1,900	1,800	1,700	1,700
SEVEN HILLS	12,339	11,900	11,500	11,200	11,000	11,000	10,400	10,400
VALLEY VIEW	2,137	2,600	2,700	3,000	3,200	3,600	3,400	3,300
CHAGRIN SOUTHEAST REGION	141,871	141,500	144,800	144,000	146,200	151,200	144,900	143,500
BEDFORD	14,822	14,500	14,900	15,000	15,200	15,700	14,800	14,700
BEDFORD HEIGHTS	12,131	11,700	11,500	11,300	11,100	11,200	10,600	10,500
BENTLEYVILLE	674	800	900	1,000	1,200	1,400	1,300	1,300
CHAGRIN FALLS TWP	202	200	300	300	300	400	400	400
CHAGRIN FALLS VILLAGE	4,146	3,900	4,100	4,100	4,100	4,200	4,000	3,900
GARFIELD HEIGHTS	31,739	30,500	29,700	29,100	28,600	28,700	27,200	27,000
GLENWILLOW	455	500	400	400	400	400	400	400
HIGHLAND HILLS		1,800	2,200	2,400	2,500	2,700	2,500	2,500
HUNTING VALLEY	648	700	700	700	700	700	700	700
MAPLE HEIGHTS	27,089	25,800	25,400	24,900	24,500	24,600	23,300	23,100
MORELAND HILLS	3,354	3,300	3,700	3,800	4,000	4,200	4,000	3,900
NORTH RANDALL	977	900	900	900	900	900	800	800
OAKWOOD	3,392	3,400	3,100	3,000	3,000	3,000	2,800	2,800
ORANGE	2,810	3,100	3,300	3,500	3,700	4,000	3,800	3,700
SOLON	18,548	22,900	24,800	26,900	29,700	32,000	30,100	29,700
WALTON HILLS	2,371	2,400	2,600	2,700	2,800	2,900	2,700	2,700
WARRENSVILLE HEIGHTS	15,745	15,700	15,400	15,300	15,300	15,600	14,700	14,600
WARRENSVILLE TWP	1,934						-	-
WOODMERE	834	700	800	800	800	800	800	800
HEIGHTS REGION	132,769	129,100	128,200	127,100	126,900	128,800	121,900	120,800
CLEVELAND HEIGHTS	54,052	53,600	53,100	53,000	53,200	54,400	51,400	50,900
EAST CLEVELAND	33,096	31,800	30,500	29,700	29,100	29,000	27,500	27,300
SHAKER HEIGHTS	30,831	30,400	30,000	29,900	29,900	30,500	28,800	28,600
UNIVERSITY HEIGHTS	14,790	14,100	14,600	14,500	14,600	15,000	14,200	14,000
HILLCREST REGION	154,618	151,500	149,200	148,100	147,800	150,200	142,200	141,100
BEACHWOOD	10,677	11,400	11,500	11,900	12,300	13,100	12,300	12,200
BRATENAHL	1,356	1,500	1,300	1,300	1,200	1,200	1,100	1,100
EUCLID	54,875	52,700	51,600	50,700	50,100	50,300	47,600	47,300
GATES MILLS	2,508	2,400	2,800	2,900	3,100	3,300	3,100	3,100
HIGHLAND HEIGHTS	6,249	7,800	6,800	7,100	7,400	7,900	7,400	7,300
LYNDHURST	15,982	15,400	14,500	14,100	13,700	13,600	12,900	12,800
MAYFIELD HEIGHTS	19,847	18,000	18,800	18,500	18,300	18,500	17,500	17,400
MAYFIELD VILLAGE	3,462	3,500	3,400	3,400	3,500	3,600	3,400	3,400
PEPPER PIKE	6,185	6,100	6,300	6,400	6,500	6,800	6,400	6,300
RICHMOND HEIGHTS	9,611	9,500	9,400	9,400	9,400	9,600	9,100	9,000
SOUTH EUCLID	23,866	23,200	22,800	22,500	22,300	22,600	21,400	21,200

ALLOCATED POPULATION ROUNDED TO NEAREST ONE HUNDRED.

COUNTY TOTAL POPULATION PREPARED BY STATE DATA CENTER,OHIO DEPARTMENT OF DEVELOPMENT.

SUB-COUNTY ALLOCATIONS PREPARED BY NOACA WITH ASSISTANCE OF CUYAHOGA COUNTY PLANNING COMMISSION.

TABLE 4-6 Continued
POPULATION ALLOCATED TO COMMUNITIES IN
GEAUGA COUNTY

	1990	1995	2000	2005	2010	2015	2020	2025
GEAUGA COUNTY	81,129	83,400	87,900	90,900	95,700	100,000	102,000	103,000
AUBURN TWP	3,298	3,800	4,400	5,000	5,800	6,600	7,100	7,500
BAINBRIDGE TWP	9,694	10,400	11,300	12,200	13,400	14,600	15,000	15,500
BURTON TWP	2,838	2,800	2,900	2,900	3,000	3,100	3,100	3,100
BURTON VIL	1,349	1,300	1,300	1,300	1,300	1,200	1,200	1,100
CHARDON TWP	4,037	4,300	4,400	4,500	5,300	5,700	6,000	6,300
CHARDON VIL	4,446	4,600	5,000	5,500	5,900	6,500	6,800	7,000
CHESTER TWP	11,049	10,800	10,800	10,800	10,900	11,000	11,000	10,900
CLARIDON TWP	3,016	3,100	3,300	3,400	3,600	3,700	3,800	3,800
HAMBDEN TWP	3,311	3,400	3,600	3,700	3,800	4,000	4,100	4,100
HUNTSBURG TWP	2,642	2,800	3,000	3,100	3,200	3,300	3,300	3,300
MIDDLEFIELD TWP	4,111	4,200	4,500	4,500	4,700	4,800	4,900	4,900
MIDDLEFIELD VIL	1,898	1,900	1,900	1,900	2,000	2,100	2,100	2,200
MONTVILLE TWP	1,682	1,600	1,600	1,600	1,600	1,600	1,600	1,600
MUNSON TWP	5,775	6,000	6,400	6,600	6,800	7,200	7,300	7,300
NEWBURY TWP	5,611	5,700	5,900	6,100	6,300	6,400	6,500	6,400
PARKMAN TWP	3,083	3,200	3,400	3,500	3,600	3,600	3,600	3,600
RUSSELL TWP	5,765	5,600	5,700	5,500	5,500	5,300	5,200	5,100
SOUTH RUSSELL VIL	3,402	3,700	4,100	4,400	4,500	4,700	4,700	4,700
THOMPSON TWP	2,219	2,200	2,300	2,200	2,200	2,100	2,100	2,000
TROY TWP	1,903	2,000	2,100	2,200	2,300	2,500	2,600	2,600

ALLOCATED POPULATION ROUNDED TO NEAREST ONE HUNDRED.
COUNTY TOTAL POPULATION PREPARED BY STATE DATA CENTER,
OHIO DEPARTMENT OF DEVELOPMENT.
SUB-COUNTY ALLOCATIONS PREPARED BY NOACA WITH ASSISTANCE
OF GEAUGA COUNTY PLANNING COMMISSION.

TABLE 4-6 Continued
POPULATION ALLOCATED TO COMMUNITIES IN
LAKE COUNTY

	1990	1995	2000	2005	2010	2015	2020	2025
LAKE COUNTY	215,499	218,500	220,300	220,200	221,700	224,700	225,800	225,800
CONCORD TWP	12,432	13,400	14,400	15,300	16,200	17,300	18,300	17,400
EASTLAKE	21,161	20,300	19,300	18,500	17,700	17,100	16,200	17,100
FAIRPORT HARBOR	2,978	2,700	2,400	2,100	1,900	1,700	1,500	1,700
GRAND RIVER	297	200	100	100	100	100	100	100
KIRTLAND	5,881	5,700	5,600	5,400	5,200	5,100	4,900	5,100
KIRTLAND HILLS	628	700	700	700	800	800	900	800
LAKELINE	210	200	200	200	200	200	200	200
LEROY TWP	2,581	2,700	2,900	3,100	3,300	3,500	3,700	3,600
MADISON TWP	15,477	16,400	17,300	17,600	17,900	18,400	18,700	18,500
MADISON VILLAGE	2,477	2,600	2,700	2,700	2,800	2,900	3,000	2,900
MENTOR	47,358	48,700	49,900	50,700	52,000	53,400	54,400	53,600
MENTOR-ON-THE-LAKE	8,271	8,500	8,600	8,700	8,800	8,900	8,900	8,900
NORTH PERRY	824	800	700	700	700	600	500	600
PAINESVILLE CITY	15,699	15,600	15,400	15,200	15,100	15,000	14,800	15,000
PAINESVILLE TWP	13,218	13,600	13,900	14,000	14,200	14,400	14,500	14,500
PERRY TWP	4,944	5,200	5,500	5,800	6,100	6,500	6,800	6,600
PERRY VILLAGE	1,012	1,100	1,200	1,400	1,500	1,600	1,700	1,700
TIMBERLAKE	833	800	700	700	700	700	700	700
WAITE HILL	454	400	400	400	400	400	400	400
WICKLIFFE	14,558	14,300	14,000	13,700	13,400	13,300	13,000	13,300
WILLOUGHBY	20,510	20,900	21,100	21,200	21,400	21,800	21,900	21,900
WILLOUGHBY HILLS	8,427	8,300	8,100	7,900	7,700	7,400	7,100	7,400
WILLOWICK	15,269	15,000	14,800	14,400	14,200	14,000	13,700	14,000

ALLOCATED POPULATION ROUNDED TO NEAREST ONE HUNDRED.
COUNTY TOTAL POPULATION PREPARED BY STATE DATA CENTER,
OHIO DEPARTMENT OF DEVELOPMENT.
SUB-COUNTY ALLOCATIONS PREPARED BY NOACA WITH ASSISTANCE
OF LAKE COUNTY PLANNING COMMISSION.

TABLE 4-6 Continued
POPULATION ALLOCATED TO COMMUNITIES IN
LORAIN COUNTY

	1990	1995	2000	2005	2010	2015	2020	2025
LORAIN COUNTY	271,126	281,500	287,400	298,800	303,600	315,600	321,900	325,100
AMHERST CITY	10,332	10,700	10,800	11,200	11,300	11,600	11,800	11,900
AMHERST TWP	5,879	6,200	6,400	6,800	7,000	7,400	7,600	7,700
AVON	7,337	7,700	8,000	8,400	8,700	9,200	9,400	9,600
AVON LAKE	15,066	16,800	18,300	20,200	21,700	23,900	25,600	26,500
BRIGHTON TWP	812	900	1,000	1,100	1,100	1,200	1,300	1,400
BROWNHELM TWP	1,416	1,500	1,600	1,700	1,800	2,000	2,100	2,100
CAMDEN TWP	1,239	1,300	1,400	1,500	1,600	1,700	1,800	1,800
CARLISLE TWP	7,554	7,800	8,000	8,300	8,400	8,800	8,900	9,000
COLUMBIA TWP	6,594	7,000	7,200	7,600	7,800	8,300	8,500	8,700
EATON TWP	6,516	6,800	6,900	7,200	7,300	7,600	7,700	7,800
ELYRIA CITY	56,746	59,000	60,300	62,800	63,800	66,400	67,800	68,300
ELYRIA TWP	3,699	3,400	3,100	2,800	2,500	2,200	1,900	1,900
GRAFTON TWP	2,013	2,100	2,200	2,400	2,400	2,600	2,700	2,700
GRAFTON VILLAGE	3,344	3,500	3,700	3,900	4,000	4,200	4,400	4,500
HENRIETTA TWP	1,795	1,800	1,900	1,900	1,900	2,000	2,000	2,000
HUNTINGTON TWP	1,172	1,300	1,400	1,500	1,600	1,800	1,900	1,900
KIPTON	283	300	200	200	200	200	100	100
LAGRANGE TWP	3,445	3,700	4,000	4,300	4,500	4,800	5,100	5,200
LAGRANGE VILLAGE	1,199	1,200	1,200	1,300	1,300	1,300	1,300	1,300
LORAIN	71,245	72,400	72,400	73,700	73,400	74,700	74,600	74,500
NORTH RIDGEVILLE	21,564	22,600	23,300	24,400	25,000	26,200	26,900	27,300
OBERLIN	8,191	8,300	8,300	8,500	8,500	8,600	8,600	8,600
PENFIELD TWP	1,312	1,400	1,500	1,600	1,600	1,800	1,800	1,900
PITTSFIELD TWP	1,546	1,700	1,800	1,900	2,000	2,200	2,300	2,400
ROCHESTER TWP	421	400	500	500	500	500	500	500
ROCHESTER VILLAGE	206	200	200	200	200	200	300	300
RUSSIA TWP	1,886	2,000	2,100	2,200	2,300	2,400	2,500	2,600
SHEFFIELD VILLAGE	1,943	2,100	2,200	2,300	2,400	2,500	2,600	2,700
SHEFFIELD LAKE CITY	9,825	9,900	9,900	10,000	9,900	10,100	10,000	10,000
SHEFFIELD TWP	3,751	3,700	3,600	3,600	3,500	3,400	3,300	3,200
SOUTH AMHERST	1,765	1,800	1,800	1,900	1,900	1,900	1,900	1,900
VERMILION	5,644	6,100	6,400	6,800	7,100	7,600	8,000	8,100
WELLINGTON TWP	1,246	1,300	1,300	1,400	1,400	1,500	1,500	1,500
WELLINGTON VILLAGE	4,140	4,300	4,500	4,700	4,800	5,000	5,100	5,200

ALLOCATED POPULATION ROUNDED TO NEAREST ONE HUNDRED.
COUNTY TOTAL POPULATION PREPARED BY STATE DATA CENTER,
OHIO DEPARTMENT OF DEVELOPMENT.
SUB-COUNTY ALLOCATIONS PREPARED BY NOACA WITH ASSISTANCE
OF LORAIN COUNTY PLANNING COMMISSION.

TABLE 4-6 Continued
POPULATION ALLOCATED TO COMMUNITIES IN
MEDINA COUNTY

	1990	1995	2000	2005	2010	2015	2020	2025
MEDINA COUNTY	122,354	134,000	143,200	153,500	163,200	175,900	182,900	186,600
BRIARWOOD BEACH VIL	682	700	800	900	900	1,000	1,000	1,000
BRUNSWICK CITY	28,230	29,400	30,000	30,700	31,200	32,200	32,000	31,500
BRUNSWICK HILLS TWP	4,328	5,300	6,100	7,100	8,000	9,200	10,000	10,700
CHATHAM TWP	1,799	1,800	1,900	1,900	1,900	1,900	1,900	1,800
CHIPPEWA-ON-THE-LAKE VIL	271	300	300	400	400	400	400	400
GLORIA GLENS PARK VILLAGE	446	500	500	500	500	500	500	500
GRANGER TWP	2,932	3,200	3,500	3,800	4,000	4,400	4,600	4,700
GUILFORD TWP	2,963	3,300	3,600	3,900	4,200	4,500	4,800	4,900
HARRISVILLE TWP	1,734	1,900	2,000	2,100	2,200	2,400	2,500	2,500
HINCKLEY TWP	5,845	6,600	7,200	7,800	8,500	9,300	9,800	10,100
HOMER TWP	1,196	1,300	1,400	1,600	1,700	1,800	1,900	2,000
LAFAYETTE TWP	3,851	4,100	4,200	4,400	4,500	4,700	4,800	4,800
LITCHFIELD TWP	2,506	2,700	2,900	3,100	3,300	3,500	3,600	3,700
LIVERPOOL TWP	3,713	3,900	4,000	4,100	4,200	4,400	4,400	4,300
LODI VILLAGE	3,042	3,200	3,400	3,500	3,600	3,800	3,900	3,800
MEDINA CITY	19,231	23,000	26,300	30,100	33,800	38,400	41,700	44,100
MEDINA TWP	4,864	6,100	7,100	8,400	9,600	11,200	12,300	13,200
MONTVILLE TWP	3,371	3,800	4,100	4,500	4,800	5,300	5,600	5,700
SEVILLE VILLAGE	1,810	2,100	2,300	2,500	2,700	3,000	3,200	3,300
SHARON TWP	3,234	3,200	3,200	3,100	3,100	3,000	2,900	2,700
SPENCER TWP	1,060	1,100	1,100	1,100	1,100	1,100	1,000	1,000
SPENCER VILLAGE	726	700	700	700	700	700	600	600
WADSWORTH	15,718	16,700	17,400	18,200	18,800	19,800	20,100	20,100
WADSWORTH TWP	3,375	3,400	3,300	3,200	3,100	3,100	2,900	2,700
WESTFIELD TWP	2,164	2,400	2,500	2,700	2,800	3,000	3,100	3,200
WESTFIELD CENTER VIL	784	800	800	800	800	900	800	800
YORK TWP	2,479	2,500	2,500	2,600	2,600	2,600	2,500	2,400

ALLOCATED POPULATION ROUNDED TO NEAREST ONE HUNDRED.
COUNTY TOTAL POPULATION PREPARED BY STATE DATA CENTER,
OHIO DEPARTMENT OF DEVELOPMENT.
SUB-COUNTY ALLOCATIONS PREPARED BY NOACA WITH ASSISTANCE
OF MEDINA COUNTY PLANNING COMMISSION.
NOTE THAT A SIGNIFICANT DISCREPANCY EXISTS BETWEEN THE
COUNTY PROJECTIONS AND RESULTING ALLOCATIONS OF THIS TABLE
AND THE ESTIMATED CURRENT (1995) POPULATION IN MEDINA COUNTY.
USERS ARE CAUTIONED TO COMPARE THIS TABLE TO TABLE B-2.
QUESTIONS SHOULD BE DIRECTED TO NOACA OR THE MEDINA COUNTY
PLANNING COMMISSION.