

# **WATER QUALITY IMPROVEMENT PROGRAM**

MUNICIPALITY OF ANCHORAGE  
WATER QUALITY IMPROVEMENTS CAPITAL PROGRAM  
Department: HEALTH AND HUMAN SERVICES

In October 1985, voters approved the first water quality bonds to address water quality in Anchorage streams, lakes, and shallow groundwater aquifers. The municipality was beginning to wrestle with surface and groundwater contamination problems created by rapid urbanization during the early 1980's. In general, these contamination problems pose a dilemma for those who live and work within the municipality and wish to preserve a high quality of life. The purpose of this presentation is to identify long-term funding for the programs committed to improving and preserving the quality of water throughout the municipality.

WATER QUALITY PROGRAM GOALS

The Department of Health and Human Services has established two programs to address the water problems. These are the "On-Site" and "Water Quality Monitoring Network" programs. Their established goal is to improve and preserve the quality of surface and groundwaters throughout the municipality. In order to attain this goal, each program has identified long range objectives that include the following:

- Installation of 230 groundwater monitoring wells to detect impacts from on-site wastewater disposal systems
- Development of a septic system/water well inspection and testing program
- Establish a municipal-wide baseline monitoring program for lakes, streams, and shallow groundwater aquifers
- Identify a drainage basin in 1988 for mitigation and restoration measures
- Continue to identify basins in subsequent years as part of the area-wide restoration program
- Installation of 102 groundwater monitoring wells in unsewered areas throughout the municipality
- Investigate study for determining pollution of surface and subsurface water in nine subdivisions along Little Campbell Creek
- Municipal-wide surface and groundwater monitoring program design
- Identification of water quality lab detection limits
- On-site Wastewater Disposal Ordinance
- Bi-annual Septic Tank Pumping Ordinance

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ON-SITE/GROUNDWATER MONITORING PROGRAM

The On-Site Services Section, of the Department of Health and Human Services, is implementing an area-wide shallow groundwater monitoring program. The objective of this program is to gain a better understanding of the seasonal water table fluctuations and determine the impact of 9,000 on-site septic systems on surface water and shallow groundwater aquifers.

The total number of groundwater monitoring wells under this program may ultimately reach 230 on an area-wide basis. The wells will be located in unsewered areas and will be installed through contracts with private engineering firms at a rate of approximately 50 per year. The well monitoring program will consist of water level and water quality determinations. Water levels will be measured quarterly (4 times per year) and samples for water quality analysis will be collected during the second and third quarters annually. Samples will be analyzed for fecal coliform bacteria and nitrates.

The life of the on-site groundwater monitoring program is indefinite provided a long-term funding source is identified. The funding level must be sufficient to cover well installation, sample collection, lab analysis, data analysis, and project management costs.

WATER QUALITY MONITORING NETWORK

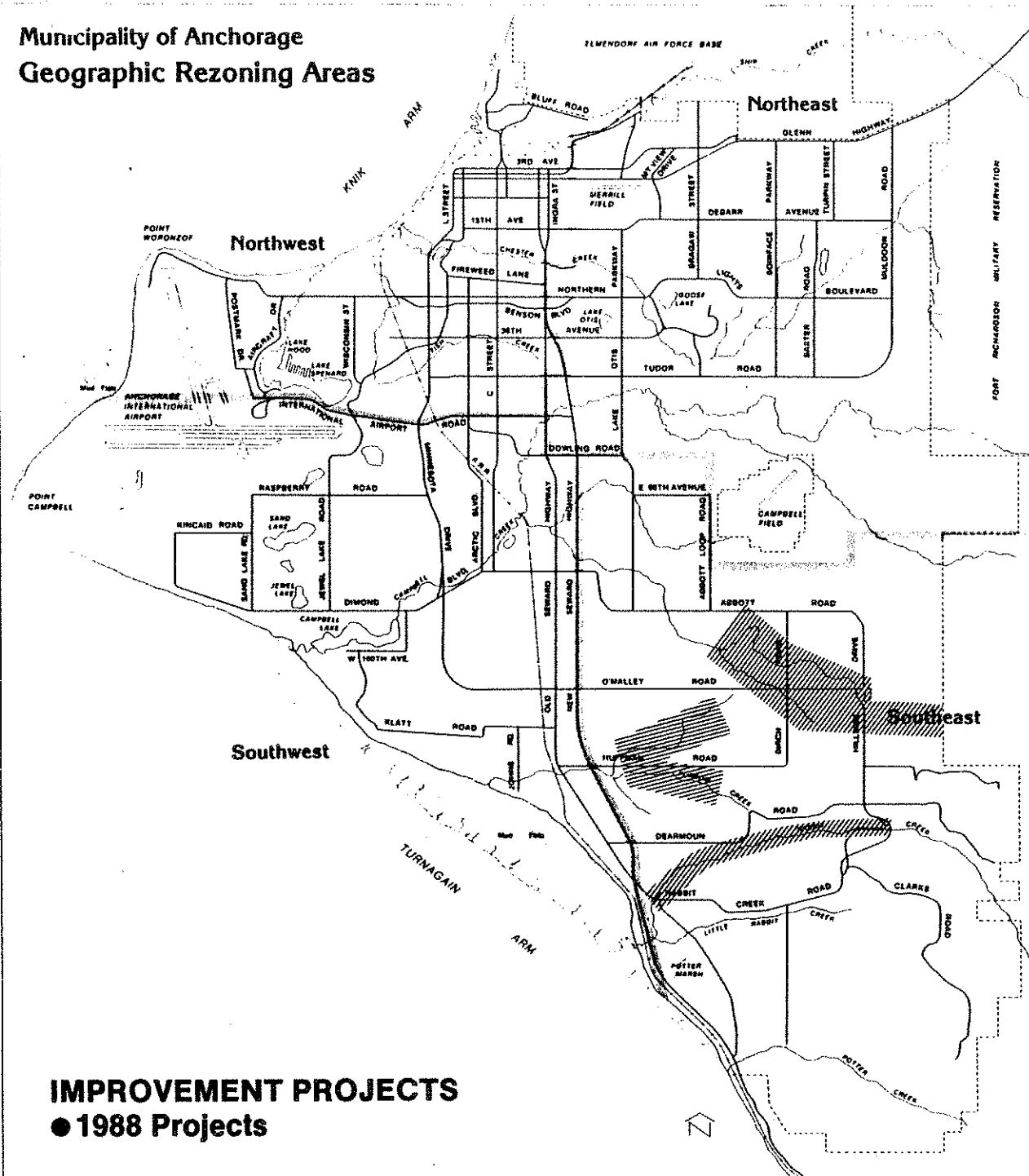
A municipal-wide baseline monitoring network is currently being developed. The goal of this program is to establish and maintain long-term water quality monitoring of streams, lakes, and shallow groundwater throughout the municipality. The scope of this program will include up to 27 streams, 17 lakes, and 84 groundwater monitoring wells. A primary objective of this monitoring program will be the development of a water quality data base that will allow the identification of water quality trends.

This program is recommended in order to establish a well distributed network of monitoring stations throughout the municipality. Smaller, rural watersheds may have but one station to monitor water quality in that system, while urban streams, such as Campbell and Little Campbell Creeks may warrant as many as a dozen stations to provide an effective water quality.

**MUNICIPALITY OF ANCHORAGE**  
**1988 CAPITAL IMPROVEMENT BUDGET**

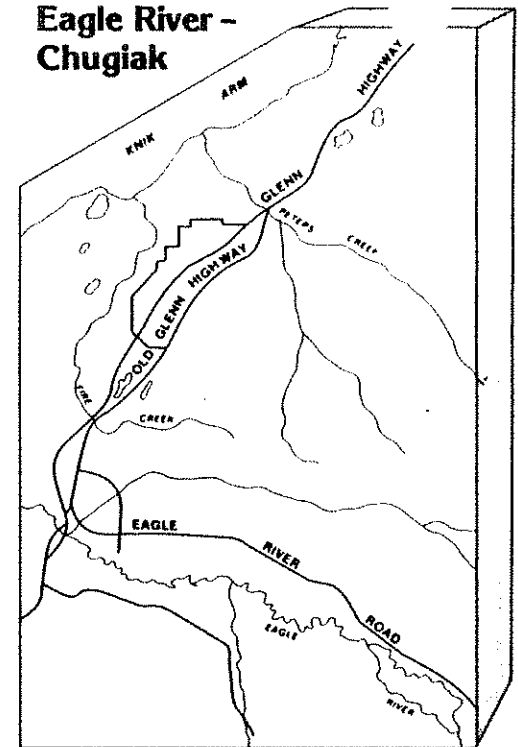
Department	Project Category				Fund Code
Health and Human Services	Improvement Projects				0401
PROJECT TITLE AND DESCRIPTION	1988 PROJECT COST <small>S-State O-Other F-Federal B-Bonds</small>	COSTS IN THOUSANDS OF DOLLARS			
		ESTIMATED START DATE	ESTIMATED COMPLETION DATE	O&M COST	COMMUNITY COUNCIL
				DEBT SERVICE	
Water Quality Monitoring Network - Extend and expand the current water quality monitoring system so as to establish a comprehensive and municipal-wide baseline ground and surface water monitoring program. This will allow study of current conditions and the establishment of a data base for assessing future developmental impacts.	B-25	3/88	12/88	0.0 2.6	Areawide (All)
On-Site Groundwater Monitoring System - Monitoring wells for systematic investigation of selected subdivisions in unsewered areas. The purpose is to determine if the on-site septic system in these subdivisions are contaminating the shallow water and, in turn, the nearby lakes and/or streams. The project calls for installation of permanent groundwater monitoring wells.	B-325	3/88	12/88	0.0 33.1	Areawide (All)
<b>TOTALS</b>	S-0 F-0	O-0 B-350		0.0 35.7	<b>1988</b>

# Municipality of Anchorage Geographic Rezoning Areas

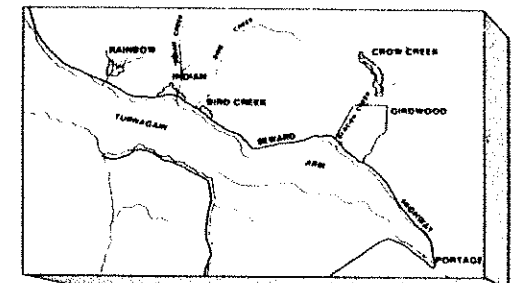


**IMPROVEMENT PROJECTS**  
**● 1988 Projects**

## Eagle River - Chugiak



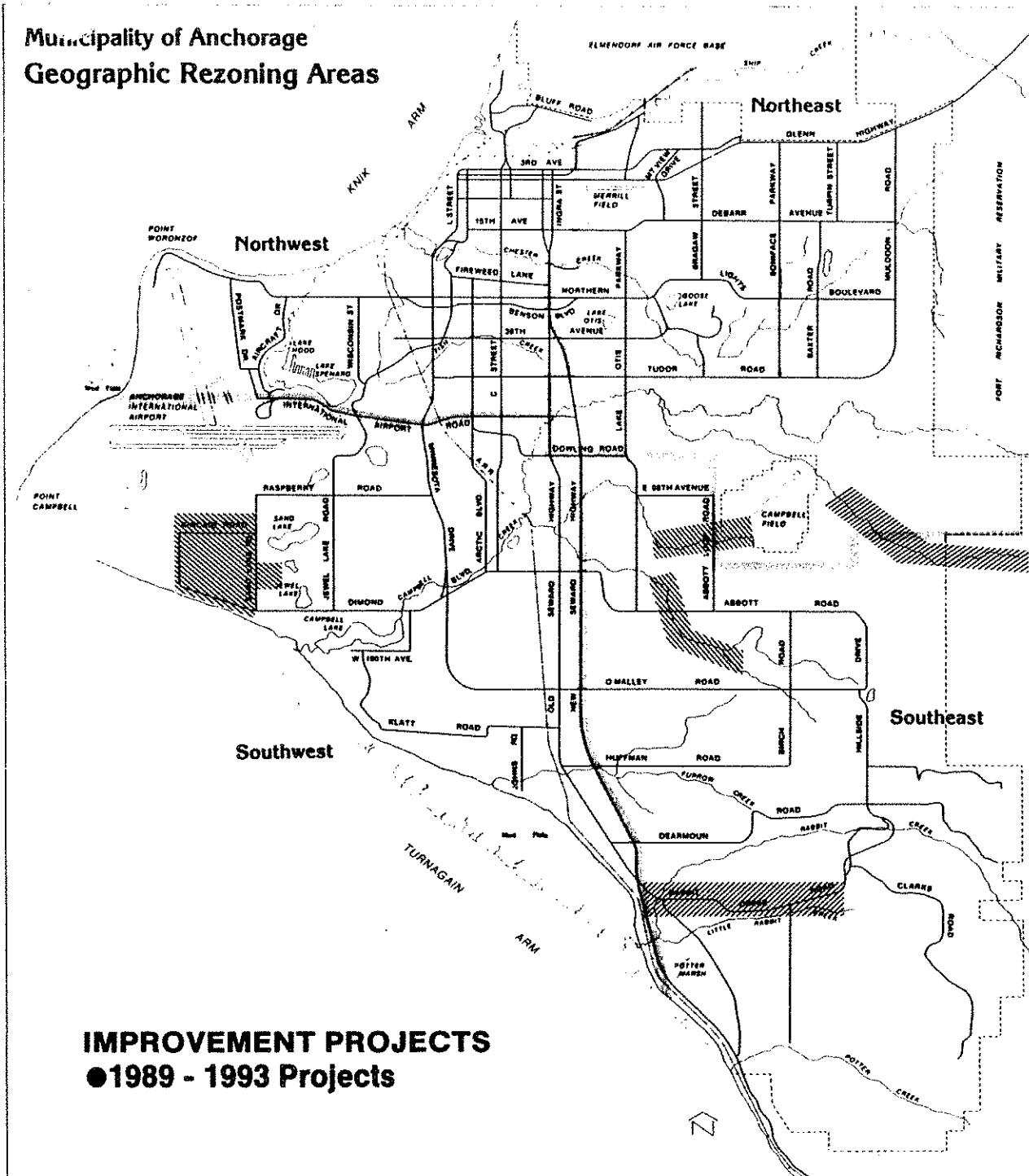
## Turnagain Arm



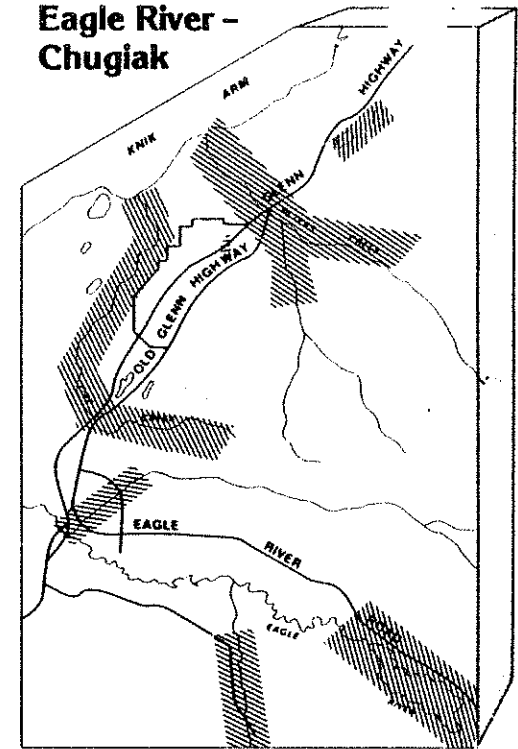
**MUNICIPALITY OF ANCHORAGE**  
**1988 - 1993 CAPITAL IMPROVEMENT PROGRAM**

Department	Project Category					Fund Code
Health and Human Services	Improvement Projects					0401
PROJECT TITLE AND DESCRIPTION	COSTS IN THOUSANDS OF DOLLARS					S-State O-Other F-Federal B-Bonds
	1988.	1989	1990	1991	1992	1993
Water Quality Monitoring Network - Extend and expand the current water quality monitoring system so as to establish a comprehensive and municipal-wide baseline ground and surface water monitoring program. This will allow study of current conditions and the establishment of a data base for assessing future developmental impacts.	B-25					
On-Site Groundwater Monitoring System - Monitoring wells for systematic investigation of selected subdivisions in unsewered areas. The purpose is to determine if the on-site septic system in these subdivisions are contaminating the shallowwater and, in turn, the nearby lakes and/or streams. The project calls for installation of permanent groundwater monitoring wells. Study will be ongoing and long term.	B-325	B-310	B-270	B-235	B-205	B-175
<b>TOTALS</b>	S-0 F-0	O-0 B-1,545	<b>1988 - 1993</b>			

## Municipality of Anchorage Geographic Rezoning Areas



**Eagle River -  
Chugiak**



## Turnagain Arm

