BACKGROUND

During the past few years, the City Council has repeatedly expressed concern for providing an adequate level of public services to citizens in order to improve the quality of life in San José. Out of this concern the Urban Service Program was developed and a Sanitary Sewer Level of Service concept was introduced.

On June 15, 1982, the City Council adopted the recommended Sanitary Sewer Level of Service Policy, but directed language be included that made it clear that no project would be allowed to proceed that would impact or create a Level of Service "F" situation.

PURPOSE

The primary purpose of the Sanitary Sewer Level of Service Policy of the City of San José is to ensure that we will not have sewage spills from the collection system. This will be done through an orderly process of ensuring that there is adequate capacity in existing sewer mains before development occurs which could overtax the ability of our system.

Other benefits that will accrue because of this Level of Service Policy include greater assurance that the Capital Improvement Program will fund the most critically needed new sewer mains and through the allocation of sanitary sewer capacity, it will preclude the necessity for such drastic measures as a moratorium on building permits that could result from uncontrolled growth without adequate sewer capacity.

POLICY

1. **Definition of Sanitary Sewer Level of Service:**

   The level of service for a sanitary sewer main is a comparison between the existing sewage flow in the main and the capacity of the main. Level of Service "A" is the highest level of service and the most desirable condition, Level of Service "F" is the least desirable level of service.

   After the level of service of all existing sewer mains is determined, the expected flows from approved or proposed developments will be added to the existing flows in all mains downstream from such development to determine an existing plus approved level of service. The following table contains a written description of each level of service and an equation which compares the main's capacity to other parameters:

<table>
<thead>
<tr>
<th>LEVEL OF SERVICE DESCRIPTION</th>
<th>FLOW COMPARISON</th>
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<tbody>
<tr>
<td>A. Sewage flow is unrestricted, and there is capacity available to serve reasonable development to the limit of the drainage basin.</td>
<td>Q Capacity &gt; Q Possible</td>
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   **SANITARY SEWER LEVEL OF SERVICE TABLE**
2. Calculation of Sanitary Sewer Level of Service

The capacity of each major sewer line in the City will be calculated based on the diameter and the slope of the pipe. The existing flow in the pipe will be calculated based on the tributary area and the land use within that tributary area. These existing flows will be verified by actual flow measurements performed on each major sewer main. After the existing flows have been verified they will be compared with the capacity to determine the existing level of service for each sewer main.

The anticipated sewage flow from each approved development in the City will be added to the existing flow in all mains downstream from such approved development. The existing plus approved flow will then be compared to the capacity to determine an existing plus approved level of service for each sewer main. When a new development is proposed either through a change in zoning or a development permit, the expected sewage flow from that development will be added to the existing plus approved flow in all downstream sewer mains and the effect of the added sewage flow will be analyzed to determine its effect on each main's level of service.

3. Controls on Development

In terms of development control the various Sanitary Sewer Levels of Service (SLOS) may be described as follows:

(SLOS A) Sewer capacity exists and will continue to exist even with expansions of the urban service boundary and changes in existing zonings.

(SLOS B) Sewer capacity is available and will continue to be available unless there are major changes in the urban service boundary or land use.
(SLOS C) Sewer capacity is available; however, supplements to the existing sewage system may be required to serve all development that could occur with existing zoning.

(SLOS D) The sewer main is occasionally running full; however, the maintenance problems associated with completely surcharged lines do not exist. Sewage flow can be added to these lines with minimal effect on sewer life or maintenance costs.

(SLOS E) Under this condition the pipe is flowing full more than 4 hours of each day. Sewage flow can be added to these lines; however, maintenance is becoming expensive and there is a definite effect on the life of the sewer mains.

(SLOS F) Under this condition there are actual spills of sewage from manholes onto the streets. Maintenance is frequent and expensive and there is a potential public health problem. Sewage flow cannot be added to these lines.

The funding mechanisms are in place to provide all of the sanitary sewer mains that will be needed for the build-out of the existing San José General Plan. This Level of Service Policy will be used to insure that development and sewer construction are coordinated to such a degree that sewage spills will be prevented. In order to accomplish that objective, development permits will not be issued for any development that would create a Level of Service "E" condition in any sewer main downstream from such development. Therefore, development will be allowed to take place if at least Level of Service "D" is available and the development does not create a lower level of service in any downstream sewer main. If a lower level of service exists, or if the development would create a lower level of service, the development will be conditioned to either install supplements to improve the Level of Service to "D" or better, or to coincide with such a supplement being provided by the City's Capital Improvement Program.

In order to encourage infill, any infill project that would add less than 2,000 gallons per day to the collection system, and does not impact a Level of Service "F" line, will be exempt from this Level of Service Policy. Two thousand (2,000) gallons per day of sewage flow would result from a development of approximately 10 single family detached units or a commercial office building of approximately 10,000 square feet.

One method of mitigating a level of service problem is for one or more developers to enter into an agreement with the City to fund a sanitary sewer project that is scheduled in future years of the City's Capital Improvement Program. Developers would advance the funds for construction and the City would reimburse the developers in the year in which the City would otherwise construct the sewer project.

In areas where limited amount of excess sewer capacity exists, the City would cooperate with developers in allocating such capacity, in a manner consistent with the City's goals, to insure equitable distribution of sewer capacity to proposed developments.

4. Implementation

A necessary tool in the operation of our Sanitary Sewer Level of Service Policy will be the City's computerized sewer mapping program. This program is expected to be in place in mid-1983. Until such time as the computer mapping and design system is in place, there will be some uncertainty associated with the Level of Service Policy. In an attempt to remove as much uncertainty as possible from the implementation of this program, the Department of Public Works will generate maps showing those areas where sewer capacity is known to exist. Maps will also be generated showing those areas where sewer capacity is known not to exist without the construction of a supplemental sewer. All such supplemental sewers will be identified and the year in which they are programmed in the City's Five Year Capital Improvement Program will also be identified.

During this implementation period, when a project which is located in an area of uncertain sewer capacity is submitted for development review, the City will physically measure peak sewage flows
downstream from the proposed project. An estimate of the approved flow increase and the project flow increase will be added to this measured flow to determine the level of service which would exist if the development was approved. As this process continues more and more empirical data will be accumulated and the areas of uncertainty on our maps will be decreased.