

*Prepared for the
Sacramento Regional County Sanitation District*

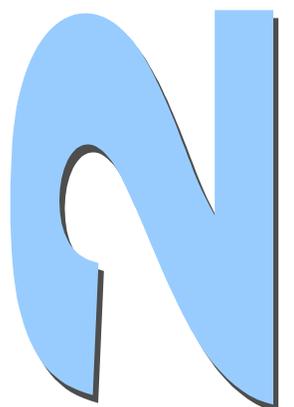
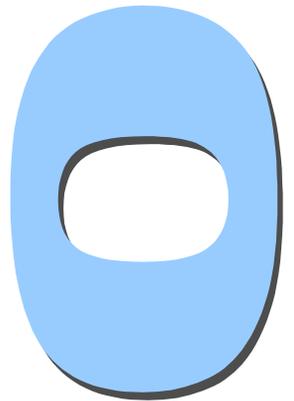
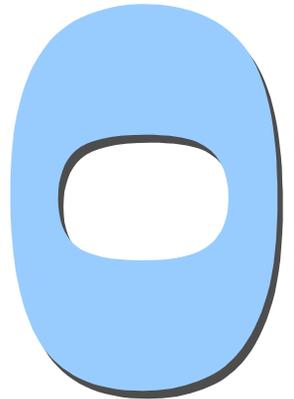
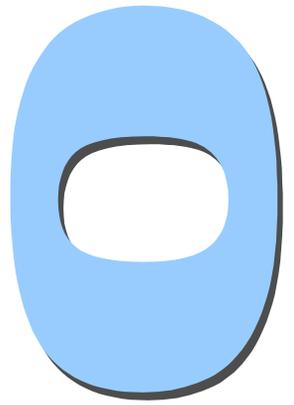
Interceptor System Master Plan 2000

Appendix C

Collection System Inventory

Black & Veatch

October 5, 2000



SRCSO Interceptor System Master Plan 2000

Table of Contents *Page*

6.0	Collection System Inventory.....	1
6.1	Purpose.....	1
6.2	Source of Information	1
6.3	Existing System	1
6.3.1	Interceptors	2
6.3.2	Pump Stations.....	3
6.4	System Expansion.....	3
6.4.1	Interceptors	4
6.4.2	Pump Stations.....	4

List of Figures *Page*

Figure 6-1	Following Page 2
Figure 6-2	Following Page 3
Figure 6-3	Following Page 3

List of Tables *Page*

Table 6-1	3
Table 6-2	4



6.0 Collection System Inventory

6.1 Purpose

The purpose of this technical memorandum is to describe the conveyance system inventory to be modeled for the SRCSD Master Plan 2000. For clarity, the existing and expanded conveyance systems have been defined in separate sections. The existing collection system includes all interceptors and pump stations, which are currently in operation. The expanded collection system consists of the existing conveyance system, plus all future interceptors and pump stations (including those currently under construction, and completed but not currently in operation). Interceptors are defined as any sewerage facility owned by the Sacramento Regional County Sanitation District (SRCSD) and designed for a capacity of 10 million gallons per day (mgd) or greater.

6.2 Source of Information

The SRCSD Master Plan 2000 (MP 2000) will identify existing and future system inadequacies and capital improvements required to convey wastewater for ultimate development within the SRCSD service area. Therefore the most reliable data sources were used to create both the existing and expanded conveyance system inventories. The existing conveyance system inventory data was obtained from the Sacramento County Water Quality Division in a GIS shapefile format, which included sewerage facility information from the Hansen database. The GIS database contains information such as the manhole location (northings and eastings), pipe sizes, depths, slopes, pipe material type, flow lines, and inverts. The entire existing interceptor GIS inventory was verified using As-built drawings.

The Bradshaw/Folsom and Northwest interceptor alignments and manhole location information was obtained from design reports. Other portions of the expanded conveyance system were developed using the USGS topographic maps to establish profiles, and the County GIS base map to establish interceptor alignments.

6.3 Existing System

The original regional conveyance system was constructed in the late 1970's and early 1980's as part of the Sacramento Regional Wastewater Management Program required to comply with the basin plan objectives of the California State Water Quality Control Board, Central Valley Region. The Sacramento Regional County Sanitation District (SRCSD) was formed to plan, administer, operate, and provide local funding for the required facilities for the wastewater management program. Additional funding for the wastewater management program was provided through grants received under the Clean Water Grant Program. However, the grant funding limitations confined the design efforts of the collection system to be based on the existing flows plus 20 years of growth. As a result,



the existing interceptors have reached capacity and require relief facilities.

The existing conveyance system inventory will include all facilities currently in operation. The interceptors contained in the existing collection system inventory include McClellan, Dry Creek, Natomas, Arden, Northeast, Central, Folsom, Cordova, and the City. A map showing the interceptor system is shown in Figure 6-1. The SRCSD also owns and operates a small pump station and force main at Mather Field. However, since this minor facility has limited flow since the decommission of the Air Force Base it was modeled as a point load to the Central Interceptor and is not shown in the figure.

6.3.1 Interceptors

Modeling the conveyance system will determine whether the existing system has adequate capacity to convey existing and future design flows. Each of the interceptor manholes has been entered into the modeling program with positioning coordinates and a numeric designation. The interceptor information including the pipe size, slope, flow lines, and depth are added to complete the components of the model.

All of the existing interceptor manholes have been assigned a nine-digit number based on the Assessor's Parcel (AP) books by the Water Quality Division. The first three numbers denote the book number. The next three digits describe the page number. The last three numbers state the manhole number, starting at one and progressing consecutively. However, Hydroworks, the modeling program being used for this project can only accept labels up to eight characters, the manhole numbers will be modified exclusively for modeling purposes. The labeling convention for these manholes will be as follows:

- For manholes numbered 1-99, the leading zero will be eliminated. For example, a manhole labeled 259-023-019 will be converted to 259-023-19.
- For manholes numbered from 100-109, the original last three digits will be converted to two characters. The first of the last two characters will be A. For example, a manhole with the label 259-023-108 will be changed to 259-023-A8.
- For manholes numbered 110-119, the first of the last two characters will be B. For example, a manhole with the label 259-023-112 will be changed to 259-023-B2.
- The existing junction structures and pump stations were labeled using the nine-digit convention, usually with a manhole number above 900. These facilities designations will be modified so that the original last three digits will be converted to two characters. The first of the last two characters will be C. For example, a manhole with the label 292-022-999 will be changed to 292-022-C9.
- Secondary diversion structure labels will be modified to a new designation, which includes the AP book and page number and the manhole number will be replaced with a D. For example, a secondary diversion structure with the label 062-004-005-1 will



be changed to 062-004-D.

6.3.2 Pump Stations

The existing interceptor conveyance system contains three pump stations: Arden, Cordova, and Natomas. Table 6.1 lists the pump station AP numbers. Figure 6-1 shows the locations for these pump stations.

Table 6.1. Pump Station information

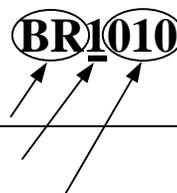
Pump Station	AP Number
Arden	285-016-027
Cordova	056-023-027
Natomas	225-018-021

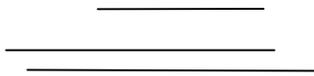
6.4 System Expansion

The expanded conveyance system includes the existing interceptor system facilities and future interceptors and pump stations necessary to serve future development. Future conveyance facilities are shown in Figure 6-2, and the entire expanded conveyance system is shown in Figure 6-3.

In order to maintain consistent cataloguing for all interceptor manholes that were not previously assigned AP numbers, a numbering system was created. The following paragraph describes the general outline of the numbering system convention.

A 6-character label denotes each future interceptor manhole. The first two characters describe the interceptor designation. The third character indicates the project or section number. The last three characters denote the manhole number. The manhole numbers start with ten and progress in multiples of ten (*i.e.*, Bradshaw Section 1, use BR1xxx, starting with BR1010 as the first manhole), all numbers in between are for future manhole additions. The future junction structures and pump stations will be labeled with the same convention as the manholes. Short lengths of interceptors, which connect into longer interceptors, were called out with the first number of the manhole designation being replaced with an S. For example the Mather Interceptor has two stubs which were denoted as MA3Sxx and a MA4Sxx. The xx portion of the label denotes the manhole numbers, starting with ten and progressing consecutively in multiples of ten.





6.4.1 Interceptors

The expanded conveyance system was created using the best available information. Construction drawings were used to establish inventory for Bradshaw Interceptor Sections 1&2, 3, 4, 5A, and 5B. Inventory for other sections of the Bradshaw/Folsom Interceptor and the Upper Northwest Interceptor was developed from the respective design reports. Inventory for remaining future facilities were developed as part of the work in the MP 2000 using the 93/94 Sacramento Sewerage Expansion Study (SSES) as a starting point.

6.4.2 Pump Stations

The expanded collection system contains three additional pump stations including the Van Maren Pump Station, Folsom South Pump Station and the Folsom East 3 Pump Station and the expansion of the Natomas and Arden Pump Stations. Table 6.1 lists the facility designation for the pump stations. A fourth pump station may be required to lift flows in the future South Interceptor, however, this is still being evaluated.

Table 6.2. Pump Station Information

Pump Station	AP Number
Van Maren	UNW-8
Folsom South	FS-1
Folsom East 3	FE-3PS

Interceptor Designation
 Project Number
 Manhole Number

