Vandenberg Village Community Services District

Strategic Plan

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Prepared for
VVCSD Board of Directors

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Table of Contents

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SECTION I

Introduction

One of the 1994-95 General Manager's performance goals established by the Board of Directors was to "Develop a Five-Year Strategic Plan." There were five objectives included in support of the goal which were:

1. Make recommendations for implementing the Water System Reliability Study
2. Develop a five-year Capital Improvement Plan
3. Make recommendation for establishing connection fees and/or developer fees.
4. Work with Finance Committee to develop a five-year financial plan
5. Work with the Finance Committee to provide Board Member education and training on District financial plan requirements

Section II through IV of this report correspond to the first three objectives stated above.

The Water Systems Reliability Study, conducted in 1993 and 1994 by Lawrence, Fisk & McFarland, was reviewed and accepted by the Board in May of 1994. The report was a comprehensive review of the vulnerabilities of the existing VVCSD Water System facilities. Additionally, the study reviewed capacity improvements necessary under various growth scenarios. The report made forty-two conclusions about the existing, and potentially expanded, water system and made eight specific recommendations for action on the part of the District in order to improve the reliability of service in the event of a number of perils such as earthquake, fire, flood, etc.

Since capital improvement planning and execution for the City of Lompoc's Wastewater Treatment facility is the City's responsibility, and the VVCSD Water and Sewer Enterprise funds are separate, and there are no known capacity related improvements to the Wastewater system necessary to make new connections, this report will be limited to determining appropriate wastewater connection fees composed of "system buy-in" and "capital contributions" by new connections to

recover the capital costs paid by existing users that allow for the excess capacity now existing in the wastewater plant. The data and calculations for these fees are shown in Exhibit E.

SECTION II

Recommendation for Implementing Water System Reliability Study

The Water System Reliability Study covered only "system vulnerabilities to perils" and requirements related to capacity (both to serve existing and incremental expanded customer counts). The Study did not address operational and maintenance vulnerabilities. It should be noted that a significant system reliability issue, replacement of deteriorated intake and discharge manifolds, has been identified by staff and is in the process of being remedied at this writing. (A similar vulnerability to two wastewater lift stations is also being remedied at this writing).

The forty-two conclusions of the study resulted in eight recommendations as listed in Exhibit A and which are summarized and analyzed below.

- Recommendation 1 - "Board of Directors should establish a policy concerning future growth...".

I believe the study misstates the recommendation by using the words "adopt a policy concerning future growth...". Land use decision-making and policy formulation, including issues related to growth, are by law, within the province of cities and counties. What I believe the study author intended to recommend, or at least should have recommended, is for the Board to make assumptions on the rate of growth anticipated during the planning horizon.

The study provides analysis of capacity impacts for seven growth scenarios, from zero growth to one thousand new connections by the planning horizon date of 2035. (LF&M, Pg II-1). The study assumed growth scenarios without reference to date, of two hundred, three hundred, four hundred, six hundred, eight hundred and one thousand new connections for impact on capacity analysis purposes only. Thus, Recommendation 1 should be disregarded as inapplicable to VVCSD.

- Recommendation 2 - VVCSD [should construct the second million-gallon tank regardless of growth scenarios].

I concur with the recommendation. Although some portions of the study portray the existing treated water storage as inadequate, the VVCSD existing storage, at more than one day supply on average demand day, is greater than most small to medium-sized water systems in California. The study misses the fact that the safest, largest,

most reliable storage is contained in the underground aquifer from which our wells pump. Thus, the key to VVCSD's system reliability lies more in the reliability of wells and boosters than in storage of treated water.

It is desirable to have as much treated water storage as possible, because one could never have too much. However, in our situation the amount of treated storage becomes more of an economically driven decision than a decision based on threshold amounts.

I thus recommend the addition of the second million-gallon tank be accomplished as soon in the capital improvement program as it can be afforded. The 1996 cost is estimated to be $325,000.

Since the second tank is both desirable for existing customers for reliability purposes, and a necessary requirement for future customers (new connections), then the capital cost should be shared by existing customers out of net revenues and by new customers out of development fees. The Board can establish the split between the two groups, but regardless of the split, it will be a subjective decision. I would suggest a 25-75 split. From a practical standpoint, the District should finance the whole project out of net revenues and then collect later from new connections to repay the capital cost of the new connections' share. To do this, the Board will have to decide on:

∈ how long a period of time is available for new connection contributions, and
∉ how many units will be connected during the collection period (percentage of build-out?).

After a series of committee and Board meetings during FY 95-96, the Board adopted a planning figure of 600 new connections as a reasonable number of new connections in the planning horizon. This was based in part on the fact that there are 541 acres of undeveloped land within the District and those lands are currently zoned for 993 lots. The present General Plan allows for more than 2200 additional homes within the District on those parcels.

- Recommendation 3 - VVCSD [should implement fire resistance improvements to existing wooden buildings].

I concur with this recommendation. The existing wooden buildings are in as much danger of collapse from dry-out or termite infestation as from fire. The buildings are a patchwork of repairs and/or additions made at various times. Many are over

thirty years old, most are over twenty years old. The dry wood makes a real hazard for fire in the event of wildland fires spreading hot cinders, or for ignition due to a rather mild electrical short. Either way, the wooden buildings pose a significant threat to the water system reliability because virtually all existing control wiring and instruments are installed on wooden walls within these buildings. The buildings should be replaced (or eliminated) in the near term with fire resistant materials. Rather than replacement in-kind, system-wide needs should be addressed in the design of the new buildings. In addition, the materials, instruments, and power supply lines currently hung on walls should be reconfigured into a "motor control center" cabinet designed for the purpose. This would centralize controls formerly spread out in numerous locations and would facilitate system operation and connection of more system components to the SCADA system.

The motor control center should be located in the "electrical building" rather than the booster building. Both the "booster/chlorination building" and the "electrical building" should be demolished and replaced with steel framed prefabricated buildings meeting current code requirements. Current efforts are underway to improve the situation; in the electrical building, we are currently removing an old unused pipe running through the middle of the building at about two feet above the floor grade; in the booster building, we are removing abandoned wiring, controls, piping, and equipment.

The necessity of doing this work exists regardless of whether additional connections are made to the system. Therefore, funding of this work should be from system net revenues rather than from development fees.

Planning estimates are:

Motor Control Center conversion	$25,000
Replace Electrical Building	$30,000
Replace Booster Building	$60,000
Total	$115,000

- Recommendation 4 - [select and install an emergency standby generator for Site No. 1].

The study recommends installation of a standby electrical generator at Site 1. I concur with the recommendation. The Study estimates the cost at about $60,000 for a 250KW generator set, however, a new unit with installation costs including necessary disconnect switch and rewiring would likely be significantly higher.

Since the Study was done, one major power outage due to the 1994 Highway 41 fire lasted for seven hours. This outage depleted about half of the stored water available to the system and underlines the criticality of getting sufficient standby power to operate wells, treatment plant, and boosters.

I began work to resolve this problem of standby power soon after arriving in the District by enrolling in the State Surplus Property Program. At this writing, a satisfactory solution of lower cost is being implemented; that is, we are currently in the process of relocating the existing 205KW generator from Site 2 (where it is underutilized and not able to operate under full-load) to Site 1. We have also acquired a 150KW generator from the Surplus Program that is being technically evaluated at this writing. I intend to install this 150KW generator at Well Site 3. With both generators, we will be able to operate at current average daily demand, or better.

I believe that the actions taken and planned for standby generation will satisfy the study recommendation at a significantly reduced cost from the study proposal. The need to provide standby power is independent of any new connections to the system, therefore, the argument could be made that funding should be made from system net revenues rather than development fees. However, the addition of more connections to the existing system would exacerbate the limited storage capacity available to meet demand in the event of a prolonged power outage. (A given amount of storage would not last as long with additional connections, as without). I therefore recommend a 50/50 percent split between existing customers from net revenues and development fees for new connections.

The estimated costs are:

Install 150 KW generator and disconnect Site 3	$25,000
Relocate and install existing 205KW and disconn.	$25,000
Total	$50,000

- Recommendation 5 - [Reduce the operating levels of Standpipes 1, 2 and 3 to minimize seismic tipping hazard].

I concur with this recommendation. The Study recommended lowering the operating levels of the standpipes when the District "determined it to be prudent and feasible." This is an operational matter that can be accomplished at virtually no cost.

Until the second million-gallon tank is installed, the three existing standpipes provide a significant amount of treated water storage (when full, another one million gallons at Sites 1 and 2 combined). Considering the limited treated water storage now available, reducing the standpipes to 44% capacity, as recommended, poses risk of water depletion from several perils, not just the seismic peril. Therefore, I would not recommend implementing the Study recommendation until after the second million-gallon reservoir is put in service. Immediate implementation could then follow without capital or operating costs.

- Recommendation 6 - [Study the installation of additional treated water storage at Site 1].

The study recommends an unspecified amount of treated water storage at Site 1 to supplement a second million-gallon tank and to make up for lost storage from operating standpipes at reduced levels.

I totally disagree with this recommendation. If additional treated water storage was necessary, (which I believe is not beyond the second million-gallon tank) then that storage should be located at the top of the system where it could feed the system by gravity flow in the event of other system disruptions. As stated earlier, the safest, largest, and most reliable storage is in the underground aquifer. If sufficient reliability, through redundancy, is provided for wells, treatment, and boosters, then greater amounts of treated storage are not cost justifiable. I believe the standby generation will provide the necessary redundancy to insure reliable service within practical funding levels.

- Recommendation 7 - [VVCSD should plan for an additional well, expansion of Site 1, and access road improvements at Davis Creek, as well as possible inter-connection with other purveyors].

I disagree with the conclusion that additional well capacity is needed. We currently have three wells; the lowest yielding well meets daily demand for about seven months per year and during that time the well always runs less than 18 hours per day. For a significant amount of the seven months, the well runs less than ten hours per day. Thus, with two other wells of greater capacity it would be possible, practical, and effective to supply the necessary amount of well water for a greatly expanded system. This is not to say that replacement wells may not become necessary due to well failures, or that other system improvements in treatment, pumping, or storage may be necessary for expanded, system-wide capacity.

Since I disagree with the Study recommendation for additional treated water storage at Site 1, then the main rationale for expanding Site 1 is eliminated. Thus, unless other reasons for expanding Site 1 become known (such as a change in treatment process to a four-step conventional process) then there is no reason to consider expanding the site further.

The District has already recognized the need to resolve the flood risks associated with the treatment plant access road by authorizing the 1995 Davis Creek Culvert Replacement Project. The necessity of this Project exists regardless of additional connections or not, therefore the costs ($75,000∀) should be paid out of system net revenues rather than by development fees.

Interconnection with other water purveyors at a cost of approximately $300,000 cannot be financially justified, particularly if other system reliability measures are implemented and system redundancies are created. By implementing increased treated storage and providing standby generating capacity, the probability of needing interconnection becomes very remote. In the event that a disaster of such magnitude occurred, an emergency, above-ground, expedient piping/pumping system could be installed with rental pipe and fittings. (Consideration in this regard should be made to the willingness or ability of adjacent purveyors to provide mutual aid in a disaster of such magnitude as to overcome our redundant systems). I therefore, cannot recommend proceeding with an emergency connection to other purveyors in advance of a demonstrated need.

- Recommendation 8: [The District should budget and finance certain improvements out of water revenues and finance others].

I agree with the recommendation, and the District staff is recommending projects and funding in the annual District operations budget. A greater degree of specificity in capital improvements and the funding and scheduling of some are a later part of this report.

SECTION III

CAPITAL PROGRAMS

Capital Plan - - General

During FY 93-94 and 94-95, staff embarked on a program to implement some of the recommendations contained in the Water System Reliability Study, even before the study was published. Among these efforts were: joining the Federal/State Surplus Property Program in an effort to obtain standby power generation, improving the pump design/operating scenario for system efficiency, and preparing to replace the Site 1 access road culvert crossing. These steps were taken without formal Board approval of a Capital Improvement Plan, but on the basis of Board approval of individual projects programmed in the annual budget (standby generation) and by individually authorized projects (Booster Station 4 & 5, and culvert replacement). These projects were funded out of net revenues from District operations.

Since it is not practical to accomplish all recommended capital improvements at once, prioritizing the needed improvements is necessary. Likewise, it is necessary to determine the degree to which existing customers and future customers share in the cost of each improvement. As a result of these two requirements, Exhibit B is a proposed prioritized list of projects with estimated costs, estimated date of funding, and the proportional share of funding by existing and future customers. The rational for the share of funding is provided below.

Capital Improvement Plan

Standby Generators: The installation of standby generators at Sites 1 and 3 are necessary for system reliability as recommended in the Reliability Study. The reason new connections should share in the cost of these improvements is that the need for standby power becomes more critical as more new connections are added to the system. The more connections that are made, the less time reserve storage will be available to serve customers in the advent of a power outage. Standby power at Site 1 (for treatment and pressure boost) and at Site 3 (for primary well production) is of greater necessity with the reduced amount of time the system can last on treated storage with an increased demand from more customers. Therefore, new customers should contribute to the generator costs.

Health and Sanitation Facilities: Construction of health and sanitation facilities for VVCSD field employees is required whether new connections are made or not. This work involves the installation of adequate restroom facilities, including a shower, and renovation of the shop crew work area for lighting, heating, insulation and furnishing. Therefore, the costs of this work should not be shared by new connections.

Additional Treated Water Storage: The addition of more treated water storage as recommended in the Reliability Study is important to existing customers. But additional storage is a mandatory requirement for the system capacity for additional connections. Without the additional treated storage, the already slim margin of safety for existing customers would be worsened by additional connections. Therefore, new connections should share the cost of the second million-gallon tank on the basis of 25% existing and 75% new connections.

Installation of Second 1500 GPM Filter: Installation of a second 1500 gpm filter is desirable for the existing system to provide redundancy to the statutorily required treatment of VVCSD groundwater. As the Reliability Study indicates, the current capacity of the treatment plant is the limiting factor on the amount of water that can be produced to meet system demand. The fact is, that current peak day demand is equal to the filter plant capacity. Thus, the cost of the second filter should be shared by both existing customers (from net revenues for reliability purposes) and by new connections (through developer fees). The share should be 25/75 (existing to new) because of the mandatory increase in treatment capacity that will be necessitated by additional connections.

Capital Replacement Plan

Site 1 Access Culvert Replacement: The replacement of Site 1 access culvert was recommended to be accomplished by the Reliability Study and needs to be done whether additional new connections are made or not. Therefore, the funding should be borne by existing customers.

Replacement of Saddles: Replacement of saddles on the south side of the system needs to be accomplished whether or not there are new connections. Therefore, the cost should be borne by existing customers.

Replace Wooden Buildings: Replacement of wooden buildings at Sites 1 and 3 is required both to reduce the threat of fire damage to pumps, motors, and controls, and to replace aged and deteriorated structures which have dry rot and termite infestation. The replacement, as recommended in the Reliability Study, is required regardless of the additions of new connections, therefore, net revenues from past operations should be used to fund the replacement of the buildings.

Capital Outlay Program

The proposed Capital Outlay Program is provided in Exhibit B. The cost of the items in the Capital Outlay Program should be borne by existing customers. As additional capital items are identified in the future which are necessitated by additional connections, then those costs can be allocated to new connections as determined by the Board.

SECTION IV

Recommendations for Connection/Developers Fees

Requirements of AB1600 (GC Section 66000, et.seq.) The "monetary exaction of a fee charged by a local agency ... in connection with approval of a development project" in California is subject to stringent requirements of Government Code Section 66,000, et. seq. Significant requirements of the law include requirements to:[1]

X make a determination covering:

1. The "purpose" of the fee
2. The "use" to which the fee will be put
3. The "reasonable relationship" between the "use" and the "type development"
4. The "reasonable relationship" between the "need" for the facilities and the "type development"
5. How there is a "reasonable connection" between the "amount of the fee and the cost of facilities attributable to the development"

X establish a nexus between the cost of facilities and the developer fees

X account for developers' fees separately from other funds; include interest earnings separately

X "commit" the funds to a specific use for which a nexus exists between the cost of facilities and the developers fee within 5 years of collecting the fee

X if fees are not "committed" within 5 years, refund, with interest, the funds collected to developers

Components of Developer Fees

Developer fees normally would be composed of components to take care of direct impacts on a system, indirect capacity impacts, and "system buy-in".

Direct impacts would include such things as requiring more wells, larger pumps and pipelines, more storage tanks, or additional filtration plant capacity in order to

[1]Requirements are summarized and restated from an undated paper by Connie Barker, ACWA Director of Gov't Relations, which is a recommended guide as Government Code 66000 applies to Special Districts. Paper titled: AB1600-Pitfalls and Interpretation Issues.

meet the increased capacity *requirements* of a specific development. (Were it not for the development, the capacity would not be necessary for existing users). Developers are normally required to make direct capacity improvements as part of the development itself (on-site improvements) or system improvements (off-site improvements) as part of a **development agreement** with a utility. These direct impacts would be paid for directly by the developer as part of the development cost. Therefore, no developer fee/connection fee would be required.

Indirect impacts would include system capital improvements for which all connected parties would benefit, but would not be exclusively required for the development itself. Such things as building redundancy, making improvements to capacity components (such as storage or filtration), making general plant improvements to meet codes, safety requirements, or enhanced operations, etc. The cost of indirect impacts are normally shared, pro-rata by developer/connection fees and existing users.

Indirect capacity components can include planned plant improvements, plant replacement, and capital equipment purchase and replacement. An appropriate means for a utility district to identify these components for which a developer fee will be imposed is to prepare, adopt, review and update annually, a capital plan. Such a plan proposed for Board adoption by VVCSD was provided in the previous Section of this Strategic Plan and is summarized in Exhibit B.

"**System buy-in**" would cover the equity previous system users have built up over time that allow a new user to benefit by joining a system already in place. In the extreme, for example, a new development connected to a fully-paid-for-system in which no new capacity improvements were needed or planned, then without a requirement to "buy-in", the new users would make no contribution to capital and old users would have paid all capital costs for the benefit of new users as well as old users. A recommended "buy-in" computation for FY 95-96 is included in Exhibit C for both Water System and Wastewater systems. This exhibit may be updated annually and be adopted with the annual budget or whenever there is a change in the proposed Capital Plan.

Proposed Developer Fees (Indirect Impacts)

In order to identify developer fees for connecting to a utility system, it is necessary to identify the number of connections to be made for each component of improvement where there is a nexus of development-induced-cost with improvements so that fees can be established per connection. In VVCSD, we are in

a very favorable condition where the District boundaries are fixed and surrounded by properties which will not allow District expansion. Therefore, a determination only needs to be made as to number of additional connections that can or will be made up to VVCSD build-out. The build-out figure for VVCSD, obtained from Santa Barbara County Planning and Development Department, is contained in Exhibit G. This figure shows that there are potentially 993 to 2212 more potential connections to the VVCSD system to reach build-out. The Board must make an assumption about how many connections will be made in the planning horizon in order to set developer fees.

The Reliability Study (Table II-2) addressed a range of growth scenarios from no-growth to an assumed build out of 3180 connections by the year 2035 (one thousand more connections than now). Differing rates and amount of new connections will require differing system improvements. Therefore, the Board must make an estimate, to use for planning purposes, of the number of new connections that will be made during the planning horizon. In the past, for varying purposes, the District used the planning figure of twenty connections per year. Twenty connections per year for forty years would amount to eight hundred new connections in a forty-year planning horizon, *a reasonable figure as a percent of build-out?* Eight hundred connections at the actual calendar year 94 residential average ∈Ox : O consumption rate of 0.472 AFA would require 377.6 acre-feet of water per year to meet the demand of 800 residential units.

Proposed Developer Fees

Vandenberg Village Community Services District's existing customers, since the District was formed in 1988, developed $2,064,993 worth of Water System equity. (Source: FY 93-94 year-end audit report). In addition, during FY 94-95, the additional equity to be added is estimated to be $219,000, based on the District's unaudited financial statements. Thus, the equity at the beginning of FY 95-96 is estimated to be $2,283,993. This is the amount that serves as the basis for new connections to "buy-in" to the capital value of the water system.

A method to determine a pro-rata share of "buy-in" (taken from Appendix B, Financing and Charges for Wastewater Systems, a joint publication of the American Public Works Association, the American Society of Civil Engineers, and the Water Pollution Control Federation, 1984) is to pro-rate on the basis of "average investment per connection equal to the equity in the system attributable to existing customers."

Thus, using Vandenberg Village Community Services District historical data tied to annual average daily well production and the average daily water consumption per residential service, (both since 1988 when the District was formed), the per connection water system "buy-in" charge per single family equivalent should be $1,236.47 (Data and calculations are contained in Exhibit C).For the Wastewater System, the existing equity from the FY94-95 audited financial statements is $873,648. Using the same methodology as for the Water System, the Wastewater System Buy-in component for FY 95-96 should be $460.07 per new single-family equivalent (Data and calculations are provided in Exhibit D). Wastewater capital component data and calculations are contained in Exhibit E.

Total Proposed Developer Fees

The total developer fee per residential dwelling equivalent in FY 95-96 should be the sum of the developer share of capital improvement, capital replacement, and capital outlay programs plus the buy-in fee. Computation of the per connection fee for FY95-96 Water and Wastewater connection fees are included in Exhibit F.