## COMMISSION ON CALIFORNIA STATE GOVERNMENT ORGANIZATION AND ECONOMY



# A STUDY OF THE NEED FOR A MATERIALS MANAGEMENT SYSTEM

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# THE NEED FOR

# A MATERIALS MANAGEMENT SYSTEM

By the

COMMISSION ON CALIFORNIA STATE GOVERNMENT ORGANIZATION AND ECONOMY

May, 1970

STATE OF CALIFORNIA

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COMMISSION ON CALIFORNIA STATE GOVERNMENT ORGANIZATION AND ECONOMY

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May 14, 1970

Honorable Ronald Reagan
Governor, State of California

Honorable Jack Schrade
President pro Tempore, and to Members of the Senate

Honorable Bob Monagan
Speaker, and to Members of the Assembly

Gentlemen:

The Commission undertook this review of the State's warehousing and distribution practices to appraise the progress that has been made in implementing recommendations made by the Governor's Survey on Efficiency and Cost Control and to develop its own current proposals for improvement in the efficiency and effectiveness of management of the State's warehousing and distribution systems.

This follow-up study was conducted under the general guidance of a subcommittee consisting of the following Commission members: Nathan Shapell, Chairman; Andrew L. Leavitt; Assemblyman Jack Fenton; and Senator Milton Marks.* Staff work was performed by John W. Berke, Management Analyst on loan to the Commission, under the overall coordination of the Commission's Executive Officer, L. H. Halcomb, Jr. During the course of this study, several members of the Commission made personal inspections of facilities in the Los Angeles and Sacramento areas and discussed current problems with a number of people at operating levels.

The Commission finds that very little progress has been made in the past two years to improve the State's warehousing and distribution practices. With few exceptions, the same problems of inadequate policies, planning, and control persist. Little

management attention is being applied to the State's huge investment in inventory. In the absence of any real leadership or comprehensive policies or systems, too many decisions regarding inventory are made at clerical levels. The Commission strongly urges the Administration to organize and apply its resources to develop adequate policies and procedures and to clearly identify the responsibility of every agency for effective inventory management. While the Department of General Services must assume leadership in this effort, management of every other department must also assume its responsibilities for minimizing inventory investment and related operating costs. The report which follows sets forth, in more detail, the nature of the problem and possible solutions. This Commission intends to continue its active interest in this matter and to hold hearings from time to time to receive reports of progress in implementing the necessary changes.

Respectfully,

D. W. Holmes, Chairman
Harold Furst, Vice-Chairman
State Senator Alfred E. Alquist
Howard A. Busby
Assemblyman Jack R. Fenton
H. Herbert Jackson
James E. Kenney
Andrew L. Leavitt
Walter H. Lohman
State Senator Milton Marks
** Assemblyman Patrick D. McGee
Nathan Shapell

* Mr. C. E. Dixon was also a member of this subcommittee prior to his appointment as Director of the State Department of General Services.

** Assemblyman McGee's illness precluded his participation in this study.

## CURRENT STATUS OF MATERIALS MANAGEMENT PROGRAM

The Commission finds that substantial effort has been expended by various study groups to identify the State's problems in warehousing and distribution, but that little has been done to implement their recommendations. This lack of implementation appears to result from management weakness in two areas:

1. Management personnel in some operating departments have not felt that management of physical resources is particularly important. Little stress has been placed on achieving economy and efficiency in the use of physical facilities, equipment or expendable goods. Some of the largest departments have no one at headquarters level with continuing concern for inventory management in any meaningful way.

2. The Department of General Services has not provided as much leadership in establishing policies and procedures for effective management as this Commission envisioned when it reviewed the proposal for creating the department in 1963.* It was intended that the department be the State's principal business manager and have central responsibility for both real and personal property, but the department is not now organized in the best manner to accomplish this. The concept of functional organization would suggest that one of the Deputy Directors be made responsible for coordinating all divisions that acquire, construct, and maintail real property, while another deputy coordinates all divisions that deal with personal property. The State Office of Printing can be considered a supplier and included in this latter grouping, together with the Office of Procurement, Transportation Division, Office Services Division, and the Central Services Coordinator. Within this structure, one of the deputies of the department would be in a position to provide substantial assistance to the Director in applying the materials management concepts discussed in this report.

The State of California has so many warehouses of so many kinds in so many locations and serving so many different functions that merely taking an inventory of these facilities is no small task. The Governor's Task Force on Efficiency and Cost Control, in its report on "Warehousing and Distribution" completed in November, 1967, reported 140 warehouses with a total of about 2 million square feet. These facilities carried an average inventory of over $30 million, employed over 700 people, and had an annual operating cost of more than $6 million. Contrary to what one might expect, the central supply agency, the Department of General Services, operated only three major warehouses at that time (two now) principally to furnish office supplies to operating agencies. These General Services Central Stores warehouses had fewer personnel to run them and less space and stock than some of the operating departments' distribution warehouses. This is still true.

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* "Findings and Recommendations Concerning Organization for Central Staff Services", Commission on California State Government Organization and Economy, March 11, 1963.

The Governor's Task Force made twenty recommendations which can be summarized as follows:

1. Establish an adequate warehousing capability under the control of the Department of General Services that would eliminate the need for many of the intermediate warehouses and stockrooms operated by other departments.

2. Install an inventory control system using high-speed data processing and statewide standard commodity identification.

3. Install a quality control program and improve the development of product standards and specifications.

The Governor's Task Force study also included consideration of some specialty warehouses that are not part of the State's facilities for supplying its own operations. For example, the Task Force recommended that the textbook and surplus property warehouses now under the Department of Education be placed under the control of General Services. Much of what these facilities handle is for only a specialized clientele within local government and, therefore, these materials could never be fully integrated with other materials under the jurisdiction of General Services. With the numerous problems to be solved within the State's own system, the placement of these facilities under General Services can well wait.

Further development of information on the State's warehouses is contained in a November, 1967, report on "Expendable Goods Inventories and Related Operating Costs" prepared by a Department of General Services study team. Their study, which included consideration of small stockrooms, revealed 1,473 facilities at 646 locations, raised the estimate of operating manpower required to 1,000 man years and placed the cost of ownership for expendable goods at $8.7 million annually. Since most of the data and recommendations contained in this report on "Expendable Goods Inventories and Related Operating Costs" are still valid, a copy of the report is included herewith as Appendix A. Only Exhibit X of the report, which was a 16-page "Alphabetic Listing of State Operated Storage Facilities" has been omitted because it is now out of date.

The study team's companion study of "Accountable Equipment Inventories and Utilization" provides an estimate of the State's continuing investment in equipment at $330 million with an annual reinvestment of $40 million.

The General Services study team drew a clear distinction between expendable goods and equipment and its two separate reports pointed out that different systems of management control for each are required.

When this Commission began its review of progress in implementing the Governor's task force recommendations on warehousing and distribution, it was not informed of the depth of the work that had been done by the General Services study team.

The former Director of General Services, in his discussions with this Commission, talked of actions being taken in regard to various warehouses and particular purchasing activities but made no mention of the comprehensive study that had been made by his staff within the Department of General Services. Much of the lack of progress in implementing improvements may have stemmed from a lack of recognition of the need for broad, comprehensive changes.

Contacts with most of the departments of State government were made by Commission staff during the course of this study to determine if any substantial changes in these facilities had occurred as of December, 1969 and whether any progress had been made in the past two years by any of the departments in upgrading their management of expendable goods inventories. Very few departments could report any change in either facilities or systems. There are, however, a few exceptions:

1. The Departments of General Services and Water Resources completed the phase-out of the Water Resources redistribution warehouse in Sacramento and its consolidation with the adjacent General Services warehouse.

2. The Department of Water Resources phased out several of its local warehouses that were no longer needed or became inefficient as departmental programs changed.

3. The Department of Public Works reassigned its Service and Supply function from the Division of Highways to departmental administration, has designed a new inventory control system, has committed personnel and computer time to implement it, and plans to begin operating the new system with live data by July, 1970.

4. General Services upgraded the placement of supply operations within the Office of Procurement so its manager now reports directly to the Procurement Officer. Inventory management personnel have also been added to his staff. The Supply Operations Manager has done a thorough housecleaning job on the facilities under his jurisdiction and improved their materials handling and layout.

5. Contract purchases were increased from $20 million to $52 million annually within a total annual volume of purchases of approximately $140 million. Appendix B shows the breakdown by commodity groupings. The Office of Procurement improved its staff services in support of purchasing operations such as specifications, quality control and contract management. Development of these three capabilities simultaneously made increased use of contract purchasing possible.

6. Contract purchasing has been substituted for carrying inventories of maintenance supplies for the Division of Buildings and Grounds and the stockrooms that division formerly required have been eliminated.

While the foregoing improvements are significant and in keeping with the recommendations of the Governor's Task Force and the General Services study team, they represent only a small part of the total improvement needed.

A broad, overall concept of materials management must be adopted within which specific improvements can be made. Aggressive leadership by the Department of General Services and major commitments to improvement by operating departments will be required to solve the numerous problems involved in this change. The description of a comprehensive materials management concept in the following section of this report provides a beginning point for interagency discussion which can lead to such commitments.

## A MATERIALS MANAGEMENT SYSTEM

The modern concept of materials management as applied to any large enterprise is one of a broad system which consists of at least four major parts:

1. Standards and criteria for determining needs
2. Purchasing
3. Inventory control
4. Physical distribution.

Of these four elements of a materials management system, only one has been highly developed by the State. The State of California has had centralized purchasing for many years, with virtually all the State's purchases made or controlled by the Office of Procurement in the Department of General Services. However, the savings inherent in centralized purchasing are easily lost in inefficient or multiple handling or by overstocking warehouses and, as a result, the cost of materials at the point of use may be substantially greater than the purchase price. To obtain materials in the most efficient and economical way demands that materials management be dealt with as a total system--of which purchasing is only one part. The objective is to deliver the materials to point of use when needed, at the lowest cost, rather than merely purchasing at the lowest price.

Adopting a modern system of materials management is not simple. The overall system as well as each part of such a system, as discussed in the sections which follow, will require a greater application of both managerial and technical skills than are now being applied. The problem demands nothing less.

## STANDARDS AND CRITERIA FOR DETERMINING NEEDS

Statewide standards and criteria for determining material need--an essential part of a material management system--are almost totally lacking. Operating agencies are given little or no guidance in how to estimate, or how best to fulfill, their needs. This lack of standards was referred to by the General Services study team as a "policy vacuum". Employees at the lowest level in hundreds of locations are determining as best they can what and how much to buy or stock. Some find that the way to satisfy their immediate superiors is to simply "have plenty on hand". In the absence of statewide standards for management control or reporting of inventories, one State operation may have a huge inventory, much in excess of needs, while another operation is being starved. Great inconsistencies now exist among State agencies in every aspect of policy and practice concerning inventory content, value, turnover, reorder practices, taking physical inventories, etc. Aggressive leadership by General Services and commitment by management of operating departments will both be necessary to fill the policy vacuum that now exists.

Basic standards for the purchase, storage, and distribution of materials should be prescribed and distributed through such means as the State Administrative Manual (SAM). Such standards should be developed to encompass the needs of both large and small users and presented in terms of "how to" rather than "must not". Staff from the Office of Procurement should be available to assist agencies in improving their procedures so greater efficiency and economy can be achieved in the entire purchasing and distribution cycle. Office of Procurement responsibility should extend to approval of any existing, new, or extended warehouse facilities since there is a direct relationship between need for inventory and need for space.

Criteria governing the quantity and quality of goods required for various operations can best be developed by joint efforts of operating personnel and specialists in materials management. Operating personnel should define needs in terms of objectives and use while specialists develop the specifications for materials required and the best means for meeting those needs. The best means to meet any particular need may or may not involve maintaining an inventory. The guiding principle to apply is that operating agencies are to be provided the means to obtain materials as needed, not simply provided the means to store materials in anticipation of need. The central idea is (1) to carry only those items for which central warehousing represents the low net cost option and (2) carry no more of these items than needed to support the user. This means both materials analysis and inventory management must be applied to reducing costs.

In determining the need for keeping maintenance items on hand at a field location such as a hospital or prison, for example, it is possible to identify the few critical items that must be stocked locally to prevent operational halts. All other needs can be met from a central warehouse or by contracts which specify delivery on short notice at a given price. Whenever the State can avoid carrying its own inventory, it can save not only the obvious costs such as cost of space and personnel but it can also save the costs of deterioration, obsolescence, and wastage that result from having stock on hand.

The criteria developed for determining stock levels when an inventory is maintained should take into account the stock levels at other points in the system. It makes little sense to have two years supply of an item in a user's storeroom which is replenished from a central distribution warehouse that carries a 60 to 180-day supply. This relationship is all too common now.

In a specific case found during the course of this study, it took carbon paper 2½ years to get to the point of use after purchase. After being obtained from General Services Central Stores, it spent over two years going from the user's central redistribution warehouse, to their district warehouse, to the point of use--by which time it had seriously deteriorated.

Joint determination of needs among similar users could have a major impact on size of stocks of slow-moving items. The State operates many large-scale institutions, such as prisons and hospitals, which have many needs in common. As a beginning, for example, all the institutions under the Human Relations Agency in a given geographical area could cooperate in selecting one site for storing items needed for emergency repairs and eliminate stocking such items in the other institutions in that area of the State. Most of the State's institutions are no longer isolated and could well consolidate some of their requirements if encouraged by top management. Communications and transportation capabilities available today have removed the need to have "plenty of everything" on hand at each location. The concept of such consolidation of inventory at least among hospitals has been discussed at lower levels in the Department of Mental Hygiene. However, top management has not become involved and consequently the concept has not yet been implemented.

PURCHASING

The Department of General Services, through its Office of Procurement, serves as the State's central purchasing agent. Every purchase of supplies or equipment in excess of $25 is made by that office or under its supervision for all State agencies except the University of California, which is completely exempt, and the State Colleges, which are exempt for purchases up to $500.

For many years, the Office of Procurement played a rather passive role. Most of its effort was devoted to converting requisitions received from operating agencies into purchase orders. Emphasis was placed on obtaining the best price for materials or equipment on each order. The ultimate cost, which might be affected by warehousing and reshipping, service life, and ultimate trade-in or resale value, was given little consideration.

In its 1967 review, the Governor's Task Force criticized the Office of Procurement for not keeping abreast of the growth and changing conditions in the State. The Task Force advocated that "emphasis should be placed on: ... Purchasing on the basis of lowest ultimate cost considering economics of direct shipments, vendor versus state inventories, estimated service life and resale and maintenance costs." The Task Force recommended a cost reduction program which would tie together consolidated purchasing, standardization, and quality control procedures. It pointed out that standards and specifications had been developed at that time for only 20 percent of the purchased items lending themselves to standardization, and said "sound standardization and specification work is widely recognized as being essential to realizing major purchasing savings. The program has not realized its potential because of insufficient management interest and support, inadequate procedures for identifying and evaluating items on which action should be taken, and a lack of acceptance by other state departments."

Historically, the other elements of a materials management system such as specifications and warehousing have been placed in a position subordinate to purchasing in the State's organization structure. The Task Force recommended an organization plan that changed the title of the head of the Office of Procurement from Procurement Officer to State Materiel Officer and that placed the functions of traffic, warehousing, and administrative services (to include planning, quality control and developing standards and specifications) on an equal plane with the purchasing function. The organization changes of placing these units directly under the division head have been adopted by the department but the title of the top position has not been changed. Changing the title of the top position would have the benefit of reflecting the broader leadership role the department should have in improving the State's logistics system.

The modern distribution or logistics manager (called Materiel Officer by the Task Force) is responsible for all of the following:

1. Transportation and Traffic
2. Inventory Control
3. Purchasing

4. Warehouse Management

5. Logistic System Research and Development.

He may or may not manage his own information processing and communications system, but as a major user of the system he must be able to assert his interest in the system, obtain service, and work closely with system operators to extend applications in the logistics area. Within the Department of General Services, a lack of understanding between the distribution manager and the data processing systems operators was a major factor in the failure of the inventory control system as discussed below.

INVENTORY CONTROL

One of the basic elements of a good inventory system is centralized control to maintain uniform assignment of nomenclature and stock numbers to common-use items. This element of the system has been highly developed by many commercial manufacturers and distributors and by such federal agencies as the General Services Administration, Veterans Administration, and the Department of Defense. As pointed out by the Governor's Task Force and the General Services study team, the concept of uniform identification of items should be, but has not been, applied by the State of California. The Task Force said "A standard identification system ... should provide the basis for controlling inventories, developing usage data, obtaining essential purchasing information and prescribing proper freight rate classifications." The Department of General Services has started to assign uniform identification to items it carries in Central Stores but has not extended the concept further to establish central control over other agencies' assignment of uniform nomenclature and stock numbers for repetitively used items to permit identification of items anywhere in the system.

Another essential element of inventory control, when applied to a wide variety of items being supplied to numerous points of use, is a facility for high-speed data processing that can rapidly identify stocks on hand or on order, process orders from users to suppliers, and handle instructions to move or ship materials. For large-scale, widely dispersed operations, such as the State has, it may also be necessary to use satellite data processing centers linked to a central computer by high-speed data communications to serve major users. Low-volume users and users at remote locations may be adequately served by low-speed data communication such as U.S. mail. Whether high-speed data communication will pay for itself can be determined in each case by analyzing the cost of such facilities versus the reduction in inventory carrying costs which they make possible.

The third element of an inventory control system for large-scale operations is statistical forecasting of materials requirements on modern data processing equipment.*

Routine forecasting is designed to guide decisions on two questions in the normal replenishment of stocks--(a) when to order, and (b) how much to order. For each stock item an estimate is made of the expected (or average) demand during the lead time required for replenishment and a separate allowance for variation.

Forecasting systems have been developed by a number of large commercial enterprises and by several federal agencies. Package systems have also been prepared by data processing software vendors, that might be purchased and adapted to State use.

The essential elements of a system for inventory control include uniform item identification, high-speed data processing, and statistical forecasting. The significance of installing an adequate inventory control system was stressed

* See Brown, Robert G.: Statistical Forecasting for Inventory Control, McGraw-Hill Book Company, New York, 1959.

by both the Governor's Task Force and the General Services Study Team. The Task Force said, "Many of the difficulties being experienced in the warehouses are directly attributable to an inadequate data processing system. Therefore, a streamlined, integrated system ... is essential."; the General Services study team said, "No attempt to operate an integrated warehousing system can succeed unless adequate management control systems exist to both handle large inventories and produce forecasts and related control data necessary to reduce inventory investment." They went on to warn that the transfer of warehouses from other agencies to General Services should not begin until this capability has been developed.

At the time the Task Force and General Services Study Team recommendations were made in 1967, the Department of General Services had a system utilizing 90 column punch cards for inventory control and billing, applied only to its Central Stores operation. The Study Team report indicated that development of a new data processing system capable of accommodating an integrated warehousing system had begun.

The Commission finds that, not only did the department fail to develop and install the new system, but it also eliminated the old system and associated data processing equipment, leaving the department no way to either control inventory or to bill for shipments made from its Central Stores since September, 1969. The poor judgment used in eliminating the old system before a new one had been developed and tested is incredible.

The department has now found it necessary to develop a new system to handle just the billing portion of Central Stores operations on an interim basis, while it tries to find means to recover from the setback suffered in failure to implement an adequate inventory control system. At the request of the Secretary of Agriculture and Services, the Office of Management Services has begun to work jointly with the Department of General Services to develop an improved inventory control system.

The Department of General Services should tie its central inventory control system to those of operating agencies by:

1. Assisting agencies in developing their control systems to an appropriate level of sophistication, and in a way that they become compatible with the central system.

2. Requiring agencies to submit periodic reports of physical inventory.

3. Reviewing agency stocks on hand vs. usage to identify surpluses that should be made available to other agencies or disposed of.

PHYSICAL DISTRIBUTION

The physical distribution portion of a materials management system consists of two principal elements--storage and transportation. Physical distribution gives time and place utility to goods and serves as the link between supplier and user. Many organizations have found that the costs of physical distribution can exceed the cost to manufacture or purchase a product. Unfortunately, the true cost is seldom known when warehousing and transportation are as highly decentralized as they are in California State Government.

It was the discovery of excess storage that dramatized the 1967 studies of warehousing and distribution by the Governor's Task Force and the Department of General Services. Until then, it was not commonly known how many storage locations the State had. The Task Force identified 140 warehouses, excluding stockrooms of less than 2,000 sq. ft. By including small stockrooms, General Services identified 1,473 facilities at 646 locations. The General Services study team also called particular attention to the duplication in use of transportation facilities among the eight redistribution warehouses in Sacramento that belong to eight different departments. The team graphically depicted how the trucks delivering to 52 different cities in California from these eight warehouses were literally going over each others' tire tracks. (See Map B, Appendix A.)

Many of the costs related to physical distribution cannot be seen by looking at the accounts of individual operating departments; the duplication in use of transportation facilities cited above is one example. Also, capital is tied up in duplicate stocks (between levels or departments); rehandling of merchandise becomes excessive because space and materials handling equipment is inadequate or poorly utilized; and persons not classified as warehouse personnel spend their time on the function but their time is not charged. It must be recognized that, if distribution is centralized and placed under tighter control so all costs are charged, the centralized operation may appear to be more expensive than the former decentralized operation when in fact it may not be.

The Governor's Task Force was critical of the way each department had developed its own warehousing facilities and pointed to the excess inventory, poor use of space and high cost of transportation that resulted.

The Task Force said that centralized warehousing would:

1. Result in substantially less capital tied up in inventories.

2. Use less warehouse personnel.

3. Require less storage space.

4. Reduce transportation costs.

5. Permit greater standardization of products stored.

6. Provide cost reduction through volume purchases.

7. Permit concentration of effort and talents toward improving warehousing operations.

In advocating a centralized warehousing system, the Governor's Task Force made it very clear that it was not merely a matter of putting together what existed but really was proposing a new way of doing business. To bring the General Services operations up to a proper level of competence and service, the Task Force advocated making an investment of both money and effort, including addition of expert personnel, improvements in physical facilities, installation of an adequate EDP based inventory control system, and numerous detailed changes in mnnagement and operating systems. The Task Force stated operating departments were, at that time, reluctant to use the services of the Central Stores warehouse because of the slow service, and operating departments were finding other ways of meeting their needs. It is very significant that the average time to fill orders has since been cut by General Services from 30-40 days to 5-6 days--good progress. There is another indication of improvement that is even more clearly visible: two years ago parts of the Central Stores warehouses were filled with junk furniture and equipment. Now this junk is gone, the warehouses are clean and well-arranged, new efficient storage racks and shelves have increased utilization of space, and the entire operation has taken on a new look. What has not happened, however, is the installation of an adequate, rapid response inventory and control system. Without this system, there is no way that the degree of centralization which the Task Force recommended can be made to work. Obtaining the benefits of such centralization depends on General Services getting its own house in order first so it can handle added responsibilities. The State cannot simply close the warehouses which operating departments have now without providing an alternate means of supply. To merely place them all under General Services with an inadequate control system could result in chaos.

The State's warehouses can be placed in three broad categories:

1. Redistribution warehouses - serve statewide needs of one or more departments.

2. District warehouses - serve the needs of a single district of one department.

3. Local stockrooms - serve needs of one building or facility of one department.

Statewide Redistribution Warehouses. The Department of General Services operates two warehouses (one in Sacramento and one in Los Angeles) as part of its Central Stores operation to provide general office supplies and sundries to all departments statewide. The Department of Public Works also operates two warehouses (one in Sacramento and one in Los Angeles) to serve only its own needs, principally its Division of Highways. Six other departments--Social Welfare, Human Resources Development (formerly Employment), Franchise Tax, Equalization, Motor Vehicles, and Highway Patrol--operate one major facility each to supply the needs of their own field operations.

Each of these departments' redistribution warehouses draws upon General Services Central Stores for a portion of their stock. The duplication of items stocked by Central Stores and the redistribution warehouses of these

six other departments was found to vary from 15% to about 50% in the study by General Services, but it is more revealing to look at the percentage of duplication for specific commodity groups. Under office supplies, for example, one finds 80% to 100% duplication between the General Services warehouse and the other redistribution warehouses in Sacramento. This duplication is unnecessary and should be eliminated.

Several of these departmental redistribution warehouses are used as part of the facilities to manufacture as well as store a multitude of forms used exclusively by that agency. This applies particularly to agencies that use specialized forms on a massive scale such as Human Resources Development (Employment), Equalization, Motor Vehicles and Social Welfare. The other departments which have Sacramento redistribution warehouses handle forms that are exclusive to their agency on a much lesser scale. Unless an efficient form supply system is developed to substitute for these departments' facilities for manufacturing and distributing forms, only a partial consolidation of the Sacramento redistribution warehouses can be accomplished. This factor was ignored by both the Governor's Task Force and the Department of General Services in their 1967 reports on warehousing. It has to be recognized that a dependable supply of forms is like "life blood" to some of these agencies.

District Warehouses. These exist primarily in the eleven districts of the Division of Highways and six districts of the Division of Forestry. In neither agency does there appear to be any real need for such warehouses in each district. Substantial consolidation could and should be accomplished by these agencies with assistance from General Services. Much of what these district warehouses handle comes from a redistribution warehouse at either Sacramento or Los Angeles and is held for reshipping to a local warehouse or stockroom. Such rehandling at the district level should be avoided if at all possible by direct shipment from vendors to users or, when state warehousing is necessary, by shipment directly from redistribution warehouses to local stockrooms.

Local Stockrooms. These vary from closet-size rooms containing supplies for a small office to multi-warehouse complexes having tens of thousands of square feet of storage space serving a major institution such as a hospital or prison. Regardless of size, they are usually the final point of storage before use. Frequently, there are multiple facilities at a single location. For example, at the Metropolitan Hospital at Norwalk, four different buildings serve as warehouses.

Some of these local storage facilities are well-run by trained personnel who take a keen interest in providing efficient service, but all too often local storage facilities are not really managed at all; inventory control does not exist and, in fact, there may be no one specifically in charge. These physical facilities, which are at the end of the line in the State's system for materials management, reflect the general neglect of all other parts of the system. Some departments have not shown enough concern at headquarters level to even keep a reasonably current list of all their local storage facilities, much less

determine how well or poorly these facilities are being run, or what should be or is stored in them. There is no way that these local facilities can function properly solely on their own. Each local facility should be re-evaluated, some of them abolished, and the remainder improved. To maintain efficiency in physical distribution, periodic audits need to be conducted to determine the continuing necessity for each facility, what they should stock, and how they should be operated.

## SEQUENCE OF CORRECTIVE ACTIONS

The State's problems in warehousing and distribution have so many facets that it is necessary to establish a definite sequence of implementing the many recommendations that have been made by the Governor's Task Force and the General Services study team. Stated in simplest terms, it is necessary to: first, establish an improved system; second, eliminate the unnecessary inventory and facilities; and, third, provide controls to prevent back-sliding. The sequence of actions recommended by the Commission within those broad categories are:

A. Improve System

1. Increase the use of techniques to select the proper mix of contract purchasing and warehousing.

2. Establish inventory control systems which use standard item descriptions and coding.

3. Develop and disseminate State-wide policies and standards to be followed by all operating departments.

B. Reduce Inventory and Facilities

1. Consolidate inventories of general use supplies found in the eight redistribution warehouses in Sacramento and place them under the jurisdiction of the Department of General Services. Eliminate the surplus physical facilities.

2. Break the traditional pattern that exists in some agencies of having branch distribution warehouses at each district or regional office. Reduce the number to a minimum required for supplying emergency operations.

3. Provide central supply rooms to serve concentrations of State buildings as a substitute for the numerous supply rooms found in multi-tenant buildings.

C. Provide Continuing Controls

1. Establish policies and procedures under which every agency request for warehouse facilities will be reviewed by materials management specialists within the Department of General Services.

2. Conduct periodic on-site inspections of facilities and systems, using teams made up of persons knowledgeable in agency operations, together with persons knowledgeable in central supply operations.

APPENDIX A

REPORT BY GENERAL SERVICES
STUDY TEAM, COMPLETED
NOVEMBER 15, 1967

# EXPENDABLE GOODS INVENTORIES AND RELATED OPERATING COSTS

## Introduction

The Governor's Executive Letter 67-21 dated May 26, 1967, directed the Director of the Department of General Services to conduct a comprehensive survey of State's inventory investment and utilization. This survey was designed to provide the additional information necessary to implement recommendations of the Governor's Task Force on warehousing and inventory control. The goals of this study were:

1. The reduction of expendable goods inventories to the lowest economic level consistent with the need to be met.

2. The elimination of unnecessary operating costs related to expendable goods maintained in continuing inventories.

3. To establish a framework for an expendable goods inventory management system providing both adequate inventory accountability to guard against improper uses or losses of goods and inventory management standards under which the Department of General Services can carry out its responsibility to assure economic business management practices within the State.

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12. Require agencies operating warehouses at any one location of more than 2,000 sq. ft. with average inventories of expendable goods exceeding $10,000 to maintain stock records of expendable goods and to conduct annual physical inventories. 15

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## EXHIBITS



Maps

## I Scope of State Expendable Goods Inventory Investment and Operations

### A. General

The State maintains a continuing inventory investment in expendable goods of approximately $28,350,000 stored in 1,473 facilities at 646 locations varying in size from large warehouses to small stock rooms. An estimated additional $2 million of these supplies are continuously stored in desks, cupboards, shelves and bins at the final point-of-use.

This continuing inventory investment requires a major annual expenditure in related capital and operating costs. Over 3,000,000 sq. ft. of storage area is required to house these goods and a staff equivalent to approximately 1,000 man years annually is required to receive, store and distribute these goods. While the aggregate cost of the State's ownership of this inventory (space, manpower, equipment and funds invested) is virtually impossible to isolate because State accounting systems are not generally designed to expose such costs, we estimate that the direct cost of ownership of this inventory investment exceeds $8,700,000 annually. This estimate is made up of the following components:

| | | |
|---|---|---|
| Salaries and Wages | $6,000,000 | |
| Physical Facilities | $1,500,000 | (rent, lease or capital investment at $.50 per sq. ft. per year) |
| "Cost of Money" | $1,150,000 | |
| Equipment Depreciation | $ 50,000 | |

### B. Types of Inventory Operation (Map A)

The State's inventory operations fall into two basic categories.

1. Redistribution warehouses - Those shipping primarily to other warehouses and storage facilities. The State is currently operating 16 major redistribution facilities.

2. Point of use storage - Shipping or issuing goods to the unit which is the final consumer of the product or to storage facilities less than 2,000 sq. ft. These facilities are of five types:

## REDISTRIBUTION WAREHOUSES

| Name of Department or Division | City | Warehouse Space in Square Feet | Total Value Inventory | Total Number of Items | Number of Distribution Points |
|---|---|---|---|---|---|
| Highways * | Sacramento | 78,120 | $1,727,749 | 3,690 | 300 |
| Highways * | Los Angeles | 72,200 | 1,405,397 | 3,760 | 300 |
| General Services | Sacramento | 51,000 | 1,143,096 | 2,007 | 360 |
| Motor Vehicles * | Sacramento | 47,940 | 386,000 | 1,879 | 149 |
| Employment * | Sacramento | 32,207 | 500,000 | 2,515 | 365 |
| General Services | City of Industries | 30,366 | 490,904 | 2,007 | 300 |
| Water Resources * | Sacramento | 25,000 | 225,000 | 2,229 | 13 |
| Highway Patrol * | Sacramento | 19,980 | 500,000 | 1,929 | 100 |
| Social Welfare * | Sacramento | 14,500 | 121,500 | 2,360 | 131 |
| Forestry ** | Redding | 14,070 | 100,000 | 1,071 | 13 |
| Equalization * | Sacramento | 10,800 | 121,000 | 1,390 | 68 |
| Forestry ** | Monterey | 9,570 | 50,000 | 763 | 10 |
| Forestry ** | Santa Rosa | 9,300 | 100,000 | 986 | 14 |
| Forestry ** | Sacramento | 9,288 | 28,506 | 955 | 12 |
| Forestry ** | Riverside | 8,500 | 90,000 | 970 | 13 |
| Forestry ** | Fresno | 7,500 | 40,000 | 873 | 11 |
| TOTALS | | 440,341 | $7,029,152 | 29,384 | 2159 |

* Recommended for integration into Department of General Services centralized warehousing program.
** Recommended for Major Reduction or Abolishment.

EXHIBIT I

EXHIBIT II

| | | Number of Locations* | Size in Sq. Ft. | Estimated Inventory Value |
|---|---|---|---|---|
| a | Facilities associated with institutional operations (hospitals, prisons, colleges, schools, etc.) | 81 | 1,366,334 | $11,531,858 |
| b | Facilities associated with special purpose material support to remote located operations (Fire fighting, construction, parks and etc.) | 181 | 653,260 | $ 5,513,514 |
| c | Urban facilities associated with large complexes of office type activity | 47 | 194,974 | $ 1,645,580 |
| d | Facilities supporting special maintenance and repair facilities | 58 | 192,678 | $ 1,626,203 |
| e | Facilities associated with non-urban field office activity (CHP, DMV, Employment) | 263 | 118,893 | $ 1,003,457 |
| | | 630 | 2,526,139 | $21,320,612 |

* State agencies operate 1473 separate storage facilities, many of which are at closely adjacent locations. For purpose of this report, such multiple facilities operated by one department at a single location are combined and considered as one "warehouse" or "stockroom".

C. Current Inventory Management Methods

The State does not have any overall plan, system or uniformly applied procedures designed to minimize both expendable goods inventory investment and related operating costs. With some encouraging exceptions in the Department of General Services, Highways and Employment and in institutional feeding programs, regularly produced inventory data is designed primarily to answer the question "what did we spend our money for?" rather than to produce management control data on inventory investment. Agencies can generally identify the total amount of money expended for expendable goods, but the study team found limited evidence that the traditional management questions of inventory control relating to on-hand stock (units and dollars), volume and purpose of usage, turnover rate, cost of ownership, etc. are being asked or answered by State agencies.

The most consistent deficiency in inventory management practices is the absence of policies or procedures which clearly identify agency management's responsibility for effective inventory management. The only

statewide policy statements found on the subject of expendable goods inventories appear in SAM 8652, Property Accounting and 10800-10890, Institutional Stores Accounting. This latter section relates only to General Fund supported institutions with resident populations. Even in this limited context, stock records are maintained only for goods directly related to inmate care. Little attention is given in the State Administrative Manual to controlling or managing expendable inventories or providing management standards for inventory control.

As a result of this policy vacuum, the key decision affecting inventory investment (i.e. what is stocked in warehouses, the establishing of reorder points, total dollar investment, etc.) have generally evolved onto the lowest employee levels. In addition, the study team found that only in a few instances were the results of these key decisions (average inventory investment, turnover, costs, service level, etc.) receiving any kind of management review.

Other indications of the general absence of a sense of management responsibility for expendable goods inventory operations is the inconsistency in the taking of physical inventories. Consistent annual physical inventories are taken covering only about $12,000,000 of the $28,350,000 inventory identified. In several other units bi-annual physical inventories are taken. In general, however, probably less than 50% of the State's expendable goods inventories are consistently subjected to reconciliation with book inventories. This is not particularly surprising since accurate stock records adequate for a reconciliation are currently required by the State Administrative Manual only for institutions financed by the General Fund and having resident populations.

In the majority of interviews, agencies were unable to readily produce current or accurate information on inventory contents, value, turnover, shipments, or operating costs, or provide a clear statement of reorder policies or practices. Based on information developed by the study team, however, the following general observations are possible.

Stock Status - It appears that aggregate stocks equal to at least 6 months of usage are being held in various levels on inventories in the State.

Turnover - It is unlikely that a turnover rate substantially exceeding 2.0 is being achieved by any but a few very active facilities. The overall State average would probably fall in the range of 1.50 - 2.0.

Reorder Policy (Investment in Stock) - The establishing of minimums and maximum stock levels appears to be largely left to the discretion of lower level storekeepers and stock clerks. As a result, widely varying practices were found. One of the most common was directly related to the quarterly purchase cycle in which the minimum quantity was roughly the equivalent of one quarter's usage and maximum quantity represented roughly two quarters usage. Since, at best, this system could produce a turnover rate of 2.5 (and usually a considerable lower rate due to the tendency to hedge quantities upward), such a common practice results in an inventory investment of as much as double that required.

It is interesting to note that, despite this unnecessarily large investment, agency warehousing personnel quite typically complained of their

inability to avoid "stock outs". This is the common result of the absence of a system which is not based on accurate unit records and cannot correctly take into account variations in usage patterns in establishing reorder points (too much of what you don't need and too little of items required).

D. Summary

With a few notable exceptions, the State is not effectively managing its investment in expendable goods. Nowhere is this management philosophy more clearly in evidence than in the State Administrative Manual Section 8652 which dismisses expendable property as that which has a unit cost of less than $25.00 and, as such, does not have "sufficient value to merit item control" and is of "a nature that makes formal property accountability impractical". It is reasonable to say that agency managers do not, as a rule, feel accountable for the size of their inventories or the costs created by them.

The study team finds this attitude difficult to understand. Roughly 50% of the State's $140,000,000 annual expenditure for materials, supplies and equipment is for expendable goods. All of these items are, at some time or place, stored before consumption, creating an additional annual cost of approximately $8.7 million. Over $30,000,000 of State funds are continuously tied up in expendable goods inventories. This area of materials management cannot continue to be ignored or written off as too "expensive to keep track of".

The study team concurs with the Governor's Task Force that, under effective management, both the State's average inventory investment and cost of ownership could be substantially reduced. To that end, the following recommendations are made as the beginning steps to achieve a statewide expendable goods inventory management program.

## II Recommendations for Short Range Actions (Results Achievable in 1-12 Months)

Since the State generally does not uniformly maintain unit stock records for expendable goods, usage information necessary to arithmetically establish correct quantities for storage is not available to either the study team or agency management. Short range actions to reduce inventories, therefore, must depend largely on administrative directives and intensive screening of expendable goods purchases.

In private industry, it is generally accepted that "ownership" of goods (warehousing, handling, record keeping, etc.) increases cost of goods from 15% to 25% each time it is handled. In some State agencies, expendable goods are passing through as many as four levels of warehouse handling before being consumed (i.e. Central Stores to agency redistribution warehouse to "district" warehouse to local stock room). The unnecessary handling nearly doubles the actual cost of goods in some instances. In addition, State inventories at all levels frequently duplicate inventories maintained by suppliers able to deliver to the point of use on a timely basis.

We, therefore, recommend several immediate actions to reduce this multiple handling and the unnecessary duplication of supplier inventories and to identify existing surpluses of expendable goods.

1. Request the Governor to issue a general policy statement on statewide inventory management.
Exhibit III is a proposed draft of such a general policy statement. This general policy statement will establish the framework in which actions by the Department of General Services to reduce on-hand stocks can be taken.

2. Require agencies operating storage facilities to conduct a physical inventory of such stocks (except for stock for which a physical inventory has been taken within the previous 12 months) and report surplus to the Office of Procurement.
Such surplus stocks, once identified, may be usable by other State agencies. If the Office of Procurement has a record of existing surpluses of expendable goods against which to screen agency purchase requests, it may be possible to effect interagency transfers or sales in lieu of the purchase of additional supplies. The study team is, however, realistic enough to anticipate that no large amounts of surplus will be "found" by State agencies and probably only limited stock transfers will be achieved. The immediate value of requiring agencies to conduct inventories and seek out surplus will be to alert agency managers to the size and value of their inventories and equip them to report information needed by the Office of Procurement to establish contracts for expendable goods which rely on supplier inventories rather requiring large stocks be maintained in State inventories (see recommendation #3).

3. Require the Office of Procurement to screen all purchase estimates for expendable goods and, where possible, establish local purchases contracts for such goods which rely on supplier inventories.
Many items now maintained in agency inventories in quantities equivalent to a 90-180 day supply are readily available from suppliers able to deliver to the point of use without substantial price increase or delay. In such instances, State inventories unnecessarily duplicate those maintained by local suppliers.

We recommend that agencies submitting purchase requests for expendable goods to be maintained in inventory storage be required to show on the purchase estimate the following information:

That the ordered goods are regularly maintained in inventory stocks.

The average or estimated quantity required for a 6 to 12 month period.

The minimum delivery lead time required by the agency.

The Office of Procurement will accept the purchase estimate as authorization to establish contracts with suppliers to fill such needs. Such contracts will provide for simple and direct ordering by the agency from the supplier at predetermined prices and/or discounts but limit such orders to quantities not exceeding a normal 30 day supply. Such contracts will also stipulate that items covered by the contract may not be maintained in inventories in quantities exceeding a normal 30 day supply.

Office of Procurement will assume expendable goods purchases for which a delivery lead time of less than 3 days is unacceptable or "contingency" stocks maintained in inventory at all times to meet emergency needs

involving the protection of public health, safety or welfare. Purchase requests for such contingency stock should be accompanied by a description of the anticipated emergency, the probable consequence of not having replacement stock immediately on-hand and the quantity of stock normally required to meet such emergencies, so that the ordering agency management recognizes it is creating a continuing inventory cost and reviews the validity of doing so. This information will also permit the Office of Procurement to establish supplier contracts specifically designed to meet the crisis needs associated with these expendable goods.

We recommend that such purchase estimates for "contingency" stocks be reviewed and approved by the chief administrative officer of the department, institution or college or an appropriate managerial person to which this approval authority has been delegated.

The Office of Procurement will actively screen such "contingency" supply requests and isolate those requests which appear to be unjustified. Such requests will be returned to the ordering agency for re-evaluation.

By requiring agencies to provide such information, the Office of Procurement will be able to convert many such expendable goods purchase requests from stocks held in storage to contract purchases relying upon supplier inventories. Within 12 months agencies will then have the opportunity to reduce or eliminate continuing inventories of goods available, under such contracts, from local suppliers. Exhibit IV is a suggested management memo on this subject.

We estimate that if this procedure is actively pursued, a $4-5 million inventory reduction can be achieved in a period of 12 months.

4. Require agencies, when ordering supplies from the Department of General Services, Central Stores, to have such commodities delivered directly to the facility nearest the point-of-use.
Exhibit V is a suggested State Administrative Manual revision on this subject. This policy will substantially reduce multiple and unnecessary handling of goods available from the Department of General Services, Central Stores.

Summary

It must be noted that reduction of on-hand inventories does not automatically reduce the State's continuing related operating costs. A half-empty warehouse costs substantially as much to operate as does a full one. Corollary reductions in warehouses, staff and equipment must be made by individual agencies to achieve an effective inventory management program. Section III of this report includes actions to substantially reduce these operating costs and must be aggressively implemented to accomplish the overall savings envisioned by the Governor's Task Force.

## III Recommendations for Long Term Materials Management (12 - 36 Months)

The State faces several basic problems in permanently reducing inventory costs (1) overcoming the current management apathy toward inventory management (2) duplicate inventories in redistribution warehouses and (3) overstocking at point-of-use facilities. The study team, therefore, makes two basic policy recommendations followed by a series of recommended actions necessary to implement these longer term policies.

5. The Department of General Services act as the central warehousing program for the State and the eight redistribution warehouse programs operated by agencies other than the Division of Forestry be transferred to the Department of General Services. (See Exhibit I)
The eight redistribution warehouses maintain inventories duplicating those at point-of-use. Operating such overlapping warehouse programs not only represents an uneconomic use of inventory funds ($5,000,000), manpower (148 positions), equipment (86 pieces) and space (300,000 sq. ft.) but also results in the shipments from these warehouses to virtually identical locations being split into uneconomically small and multiple units. (Map B)

The inventories maintained in these facilities already contain substantial amounts of items obtained from the Department of General Services, Central Stores (see Exhibit VI). In addition, a number of items in these warehouses purchased from non-stores suppliers appear to be substantially similar and, therefore, unnecessarily duplicated because of the multiple inventories.

We estimate the total operating costs of these eight agency-operated programs to be at least $1,500,000 annually exclusive of freight on outbound shipments.

Integration of these eight facilities into a centralized warehousing program will produce savings in several ways.

Operating Costs - We estimate that an integrated warehousing program can reduce space required from 300,000 sq. ft. to less than 200,000 sq. ft. and staff from 148 to less than 80 positions. This would result in an annual savings of at least $700,000.

Inventory Reduction - Average inventory investment in these eight programs can be reduced from $5,000,000 to $2,500,000 for an annual savings of approximately $100,000 ($2,500,000 at 4%).

Freight Costs - Based on total shipments from the warehouses of about $10,000,000 annually, current freight costs are $500,000 to $600,000 annually. This cost can be reduced at least 20% or $100,000 by freight consolidations from integrated facilities (see Map B).

The study team is confident that such an integrated central warehousing program can result in annual savings of at least $900,000 and a one-time net inventory reduction of at least $2,500,000.

Implementation of an integrated central warehousing program requires the following basic actions in the general sequence in which they are listed:

6. Establish within the Department of General Services an ADP based inventory control system capable of accommodating up to 50,000 line items.

No attempt to operate an integrated warehousing system can succeed unless adequate management control systems exist to both handle large inventories and produce forecasts and related control data necessary to reduce inventory investment. An integrated program as recommended above would have to accommodate a total inventory investment of about $4,000,000 and between 20,000 and 25,000 line items shipping to about 1,000 points throughout the State. Such an ADP system would cost at least $100,000 annually.

Such a system has, as a basic ingredient, the adoption of standard nomenclature and commodity coding similar to and based on the Federal GSA system. This step is already nearing completion of its design and application to expendable goods in the Department of General Services, Central Stores program.

We are informed that implementation of such an ADP system, including design, programming and trial periods, would require at least one full man-year assuming one of several available software programs (e.g. Honeywell "Profit", IBM "Impact", etc.) were used. We also are informed that originally designed systems would require at least twice to three times as many man-years to implement.

7. Re-engineer existing Department of General Services warehouse program systems and methods to accept larger and more complex warehousing activity.

The present Department of General Services, Central Stores, program is not adequately effective in such areas as stock handling, space and manpower utilization and shipping consolidation to accept management of substantially larger inventory responsibility. The services of a qualified industrial engineering consultant are required to establish effective stock handling methods and standards for full utilization of manpower and space.

Exhibit VII shows the sequence of actions required to prepare the Department of General Services, Central Stores, program for operation as an integrated centralized warehousing activity.

8. Augment the Service Revolving Fund in the amount of $2,500,000 to fund a centralized inventory.

This $2,500,000 additional Service Revolving Fund allocation will be required to fund the inventories required in the recommended centralized integrated warehousing programs. The inventories of the eight agency programs recommended for integration are funded from various sources, other than the Service Revolving Fund. In a majority of programs, funds used are essentially the operating expense allocations for supplies of the parent departments.

This $2,500,000 additional capitalization of the Service Revolving Fund is in lieu of the $5,000,000 now continuously required to fund the aggregate inventories of these eight agency-operated redistribution programs.

9. Achieve orderly transfer of these eight agency-operated warehousing programs to the Department of General Services including required staff, equipment and facilities (see Exhibit I).
These programs should be transferred, one at a time, to the Department of General Services at 60-90 day intervals to permit the smooth transition to a centralized program. This transfer should begin only when the Department of General Services, Central Stores program has developed both the ADP and operating capabilities described in recommendations #7 and 8 above.

Assuming that the Department of General Services, Central Stores, achieves the required capabilities described above by 12/1/68, we recommend that these programs be integrated in the following order:

1. Department of Water Resources - 12/1/68
2. Board of Equalization - 2/1/69
3. Social Welfare - 4/1/69
4. California Highway Patrol - 7/1/69
5. Department of Motor Vehicles - 10/1/69
6. Employment - 1/1/70
7. Division of Highways, Sacramento - 3/1/70
8. Division of Highways, Los Angeles - 7/1/70

10. Establish a statewide program for effective management of agency-owned expendable goods inventories.
The State's current policy on inventory management of expendable goods is largely one of "abstinence." The Department of General Services, through its uniform accounting system, should require departments maintaining point-of-use inventories to (1) maintain adequate basic inventory control stock records and (2) identify and report both inventory investment and cost of ownership information. In addition, the Department of General Services must develop and enforce general standards for agency inventory management including, at least, space and manpower utilization standards for warehousing operations and general standards for levels of inventory investment.

The following are specific actions required to implement such a policy:

11. Establish, in the State Administrative Manual, a basic Statewide inventory management policy, to be augmented by individual agencies and require that the responsibility for inventory management within individual agencies to be specifically assigned to an accountable person or position.
Exhibit VIII is an outline of a recommended general State inventory management policy. Within the framework of this policy, individual agencies should develop their own specialized policies and procedures for effective inventory management. The responsibility for achieving effective inventory management must be clearly identified as an area for serious and continuing management concern. Funds budgeted for expendable goods cannot be considered simply an unavoidable cost of doing business but must be tightly managed and controlled.

12. Require agencies operating warehouses at any one location of more than 2,000 sq. ft. with average inventories of expendable goods exceeding $10,000 to maintain stock records of expendable goods and to conduct annual physical inventories.
Facilities of the size described above represent what the study team believes to be the smallest practical unit for which unit stock records can be economically maintained. Typically, smaller units do not have the capabilities for required record keeping and are supplied from larger warehouse facilities capable of maintaining overall stock records. There are 216 units of the capacity described above which should maintain basic stock records.

13. Utilize the ADP system established to manage the Department of General Services Central Stores inventories to store and report basic data on shipments to point-of-use warehouses both from the Department of General Services Central Stores and other suppliers.
While a complete inventory control system for all State expendable goods inventories is probably prohibitively costly, basic data easily drawn from shipments by Central Stores and purchases made from suppliers by the Office of Procurement for delivery to point-of-use warehouses will provide adequate control data on inventories not directly managed by the Department of General Services. This data, in conjunction with regular by-product reports from annual physical inventories, will permit the Department of General Services to oversee and control expendable goods inventories throughout the State.

14. Require agencies maintaining point-of-use inventories to classify items stocked as either "contingency" stock or "regular expendable" stock and to record the individual or unit to whom "contingency" items are chargeable.
Most point-of-use inventories contain stock items which are maintained as insurance against serious emergency needs for which immediate replenishment is required (i.e. critical electrical, plumbing, and communication parts, firefighting supplies, etc.). Such items should be largely exempt from general inventory standards derived from usage history. To prevent the arbitrary and uneconomic overstocking of such items or the improper classification of items as "contingency", however, agencies must identify which person or unit is responsible for this portion of the inventory investment and be required to periodically review the validity of the management decision to maintain such stock without regard to ownership cost. Such stock classification greatly expedites auditing of inventory investment and control procedures.

15. Require agencies to annually report to the Department of General Services, Office of Procurement, all expendable goods regularly maintained in continuous inventory by classification, commodity description, value and approximate annual usage.
Information on inventories maintained by agencies, including the usage history of such items, will permit the periodic review of overall State inventory investment and the identification of repetitively used items suitable for contract purchase or inclusion in a central warehousing program. Such information should be made a regular by-product of regular physical inventories.

16. Establish general standards for audit of unit stock records.
Expendable stock should turn over at least 3.0 times annually. Stock with less active usage should either be purchased in smaller quantities, purchased seasonally (if usage is seasonal) or should not be stored at

all. Periodic field audits should be made to determine if inactive, obsolete or excessive stocks are being maintained. Such an audit review can be included in the regular Department of Finance audit or internal department audition activity but will require sampling audit by the Department of General Services. Exhibit VIII, Outline of Basic State Inventory Management Policy, contains such auditable standards.

17. Establish, in the Department of General Services, Office of Procurement, sufficient staff capability in inventory management to (1) effectively manage the Department of General Services operated central warehousing programs (2) recommend to the Director statewide inventory management policies and standards (3) conduct periodic field audits of agency-operated warehousing programs and (4) assist agencies in increasing the effectiveness of their inventory management.
Nowhere in State government is there any organization specifically responsible for, or sufficiently expert to advise on statewide inventory management particularly as this field relates to activities such as purchasing, traffic, transportation and warehousing. Clearly all of these areas of State's business activity are within the scope of the Department of General Services' interest. Private industry has long recognized that effective management of its inventory operations is one key to economies in operation and have developed staff capability to achieve it. The Federal Government has, in both its military and civilian operations, developed major inventory management programs. For example, in the San Francisco regional office of G.S.A., nearly 25% of the staff assigned to that office are in its inventory control activity (as distinguished from its purchasing, warehousing and quality control department). Such a basic unit is recommended in the Governor's Task Force and initial first phase staffing is contained in the recent Office of Procurement reorganization plan.

18. Establish standards for and maintain a master record of State warehouse facilities.
The study team found no central record of the State's capital investment in warehouses and related facilities nor did it encounter any policies or standards covering the expenditure of funds for such facilities. The study team strongly recommends that the Department of General Services, Facilities Planning Division or other appropriate unit, utilize the data gathered for this report to establish and maintain such a master record. We further recommend that warehousing space, manpower and utilization standards evolved from the re-engineering of the Department of General Services, Central Stores warehouses, as recommended in #3 above, be expanded into statewide standards which can be used both for audit of existing facilities and to assess agency requests for additional storage facilities.

19. Reduce and consolidate district type warehousing operated by State agencies.
Within several large agencies such as Division of Highways, Forestry, Fish and Game, Parks and Recreation and Water Resources a special problem has been created by the geographic organization of these agencies. The problem is best described as "stepped warehousing" in which the agency divides the State into regions or districts and establishes within each self-contained warehousing systems, operating largely independently of both other warehousing systems within the same agency and similar warehousing systems operated by other agencies.

The principal criticisms the study team has of such situations are:

1. Patterning warehousing and distribution systems around geographic divisions of work does not result in economic or effective inventory management. While it may be necessary, for example, to divide the State in 12 highway districts it does not follow that required warehousing and distribution requires 12 independently operating warehouses.

2. Despite differences in program missions of individual agencies, many such "district" type storage facilities tend to cluster at the same points. It is not unusual to find, within one small area, several "district" storage facilities operated by several agencies functioning almost completely independently. Stocks in these warehouses are, at least in part, duplicate items and the aggregate square footage, manpower and equipment utilized substantially exceeds that which would be required by a consolidated facility.

   Some examples of such concentration of independent storage facilities within single small cities are:

| Bishop | | San Bernardino | |
|---|---|---|---|
| Forestry | 4,710 sq. ft. | Forestry | 3,520 sq. ft. |
| Fish & Game | 5,320 sq. ft. | Highways | 8,236 sq. ft. |
| Highways | 7,880 sq. ft. | General Services | 2,340 sq. ft. |
| | 17,910 sq. ft. | | 14,096 sq. ft. |
| **Eureka** | | **San Luis Obispo** | |
| Highways | 12,292 sq. ft. | Forestry | 2,310 sq. ft. |
| Parks & Rec. | 2,738 sq. ft. | Highways | 21,989 sq. ft. |
| Fish & Game | 777 sq. ft. | | 24,299 sq. ft. |
| | 15,807 sq. ft. | | |
| **Red Bluff** | | **Stockton** | |
| Fish & Game | 2,000 sq. ft. | Agriculture | 1,250 sq. ft. |
| Forestry | 8,420 sq. ft. | Highways | 9,670 sq. ft. |
| Water Resources | 9,300 sq. ft. | General Services | 1,634 sq. ft. |
| | 19,720 sq. ft. | | 12,554 sq. ft. |
| **Redding** | | | |
| Fish & Game | 7,760 sq. ft. | | |
| Forestry | 18,070 sq. ft. | | |
| Highways | 7,816 sq. ft. | | |
| | 33,646 sq. ft. | | |

   We must recognize that many of these facilities are associated with general purpose installation and complete elimination of independent storage activities in favor of consolidated facilities is not feasible.

   We do, however, believe, that (1) more district type facilities have been established than are actually required because of the "self-contained district" organizational concept and (2) jointly housed and operated facilities in such areas as Bishop, Eureka, Red Bluff, Redding, San Bernardino and San Luis Obispo, under the management of the largest tenant, could materially reduce inventory management cost.

Agencies operating district facilities should be required to explore methods of sharing space and consolidating inventories. In addition, the agencies should be required to thoroughly re-evaluate their self-contained district warehousing programs and consolidate facilities into regional systems capable of multi-district supply support. Exhibit IV lists all State storage facilities identified by this study used for expendable goods inventories and clearly reflects this overlapping supply and distribution system problem.

EXHIBIT III

SUGGESTED EXECUTIVE LETTER

Agency Administrators
Department Directors

Recently completed task force studies indicate that some State agencies are maintaining inventories of expendable goods in uneconomically large quantities. This results not only in an unnecessarily large amount of State funds continuously tied up in such inventories but also requires large continuing expenditures for storage facilities, staff and equipment.

I have, therefore, instructed the Director of the Department of General Services to immediately initiate a continuing statewide program to reduce such inventories and related operating costs and to establish effective management standards and policies governing such inventory investments.

As such programs and standards become operative, the management of individual departments must reduce or eliminate all possible items from continuing inventory storage and consolidate or eliminate unneeded storage and distribution programs.

Ronald Reagan
Governor

EXHIBIT IV

SUGGESTED MANAGEMENT MEMO

TO: All State Agencies

SUBJECT: Expendable Goods Inventories

The Governor's Executive Letter _____, requires all departments to eliminate unnecessary expendable goods inventories. To achieve this, the following actions are required:

1. All departments must review existing inventories of expendable goods and identify surplus stock. For purposes of this review, stock exceeding a normal 60 day supply should be considered surplus to immediate needs with the exception of (a) items readily available from supply sources (b) contingency stock maintained for emergency needs involving public health, welfare or safety or (c) items which must be accepted in large single deliveries to conform to market practice or to achieve significant unit cost savings.

2. Purchases of expendable goods for which surplus exists must be deferred until such surplus is consumed. Departments must report to the Office of Procurement surplus expendable items suitable for use by and available for sale or transfer to other State departments. Departments which have not conducted a physical inventory of expendable inventories within the preceding 12 months should do so in determining the appropriateness of inventory quantities.

3. Effective _____, all purchase estimates, Form 66, submitted to the Office of Procurement for repetitively used expendable goods (except subsistence and related commodities) which are or will be maintained in continuing inventory storage prior to consumption, must contain the following:

   A. Anticipated requirements for a period of at least 6, and preferably 12 months and funds adequate for anticipated purchases during a comparable period.
   Where inadequate data is avilable to project anticipated usage of all items within a general class of expendable goods (maintenance, laboratory, photographic supplies, etc.) agencies may select the individual items repetitively used in the largest quantities and include estimates of anticipated usage of these benchmark items. Usage of remaining items within the same general class of goods may be estimated in terms of total dollars for the period.

   B. Minimum delivery lead time required (interval between placing of order and receipt of goods).
   All such required delivery lead times must be stated as either (a) contingency stock maintained for emergency use involving public health, welfare or safety or (b) not less than 3 days (longer intervals may be specified if acceptable).

Purchase estimates for contingency stock must be approved by the department director, college president or chief financial officer of the ordering organization and be accompanied by a description of the emergency need anticipated, the probable consequence of delay in obtaining the items and the maximum quantity normally required by such emergencies.

Such expendable goods purchase estimates will be accepted by the Office of Procurement as authority to establish local purchase contracts with suppliers able to provide required expendable goods within the specified delivery lead time.

Local purchase contracts will provide for direct ordering by the State agency under predetermined prices or discounts from the supplier by sub-purchase order and, except for contingency stocks, in quantities not exceeding a normal 30 day supply. Agencies will use such contracts with the stipulation that on-hand inventories of expendable goods, other than contingency stocks, covered by the contract will be reduced to a 30 day supply or less or, if possible, completely eliminated.

C. Agencies may specify, for inclusion in the purchase contract, information to the supplier on authorization to place orders, invoicing, delivery instructions, etc.
Agencies are encouraged to adopt the simplest and most direct method possible for placing orders and paying invoices under such contracts. Unnecessary reviews, approvals, documentation and other delays will negate much of the value of such rapid stock replenishment contracts.

EXHIBIT V

## RECOMMENDED SAM REVISION

ORDERING SUPPLIES FROM STORES 3543

Requisitions for Stores stock items are submitted only on Form 116, Supply Order. (Sub-purchase order forms will not be used for ordering of Stores stock.) All supply orders, regardless of area of origin, should be forwarded to the Central Stores Manager, P.O. Box 20191, Sacramento 20. All supply orders must indicate the catalog stock item numbers in the space provided on Form 116.

Delivery addresses shown on Form 116 must be the facility nearest the point of use capable of accepting shipments. Agencies may not order delivery of supplies from Stores to intermediate warehouses for redistribution to other locations. While agencies are encouraged to order supplies as infrequently as practical, those agencies located in buildings with limited storage space should order supplies delivered directly to those buildings in whatever quantities that can be conveniently handled. List prices of Stores supplies include freight, therefore, no additional cost to agencies results from increasing the frequency and decreasing quantities of orders to conform to available space at the point of use.

CENTRAL STORES CATALOG AND PRICE LIST 3544

Stores issues a catalog and interim revisions listing and describing all available stock items and providing information necessary for requisitioning commodities from Stores stock. Periodically, Stores issues a supplemental price list for agency information and, on a more frequent schedule, a bulletin containing information about new products, product uses, changes in procedure, etc. List prices are F.O.B. destination and freight on all shipments are prepaid by Central Stores regardless of destination within the State.

EXHIBIT VI

## SACRAMENTO REDISTRIBUTION WAREHOUSE LINE ITEMS ANALYSIS

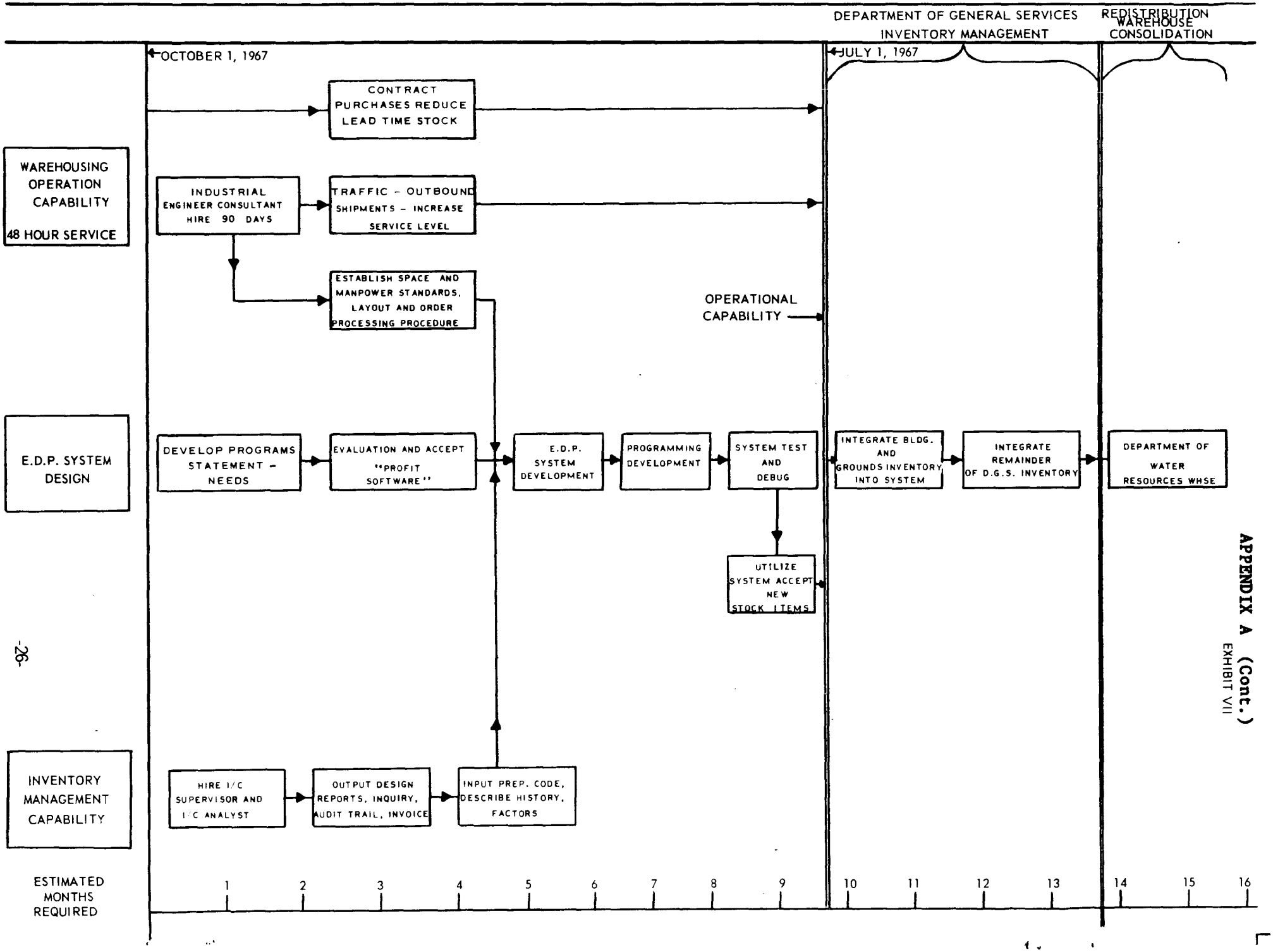
| Commodity | EMPLOYMENT | | | EQUALIZATION | | | FORESTRY | | | HIGHWAY PATROL | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total Line Items | Total Items C/S | Percent Items Duplicated | Total Line Items | Total Items C/S | Percent Items Duplicated | Total Line Items | Total Items C/S | Percent Items Duplicated | Total Line Items | Total Items C/S | Percent Items Duplicated |
| Forms | 1625 | 47 | 2.9 | 600 | 100 | 16.6 | 335 | 35 | 10.4 | 500 | 50 | 10 |
| Janitorial Supplies | 78 | 33 | 42.3 | 10 | 10 | 100 | 84 | 42 | 50 | 170 | 85 | 50 |
| Office Supplies | 782 | 424 | 54.2 | 600 | 590 | 98.3 | 175 | 175 | 100 | 700 | 630 | 90 |
| Handtools | 1 | | | | | | 120 | | | 6 | | |
| Medical Supplies | 29 | | | | | | 24 | | | 25 | | |
| Automotive Supplies | | | | | | | 19 | 5 | 26.5 | 500 | | |
| Other Misc. | | | | 180 | | | 198 | 16 | 8.1 | 28 | | |
| Total | 2515 | 504 | 20.1 | 1390 | 700 | 50.4 | 955 | 273 | 28.6 | 1929 | 765 | 39.6 |
| | Total Whse. Sq.Ft. | C/S Sq.Ft. Used | % Duplication | Total Whse. Sq.Ft. | C/S Sq.Ft. Used | % Duplication | Total Whse. Sq.Ft. | C/S Sq.Ft. Used | % Duplication | Total Whse. Sq.Ft. | C/S Sq.Ft. Used | % Duplication |
| Space | 32,207 | 7,118 | 22.1 | 10,800 | 4,374 | 40.5 | 9,288 | 1,393 | 15 | 19,980 | 7,393 | 37 |

APPENDIX A (Cont.)

SACRAMENTO REDISTRIBUTION WAREHOUSE LINE ITEMS ANALYSIS
(Page 2)

| Commodity | HIGHWAYS | | | MOTOR VEHICLES | | | SOCIAL WELFARE | | | WATER RESOURCES | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total Line Items | Total Items C/S | Percent Items Duplicated | Total Line Items | Total Items C/S | Percent Items Duplicated | Total Line Items | Total Items C/S | Percent Items Duplicated | Total Line Items | Total Items C/S | Percent Items Duplicated |
| Forms | 500 | 225 | 45 | 1080 | 11 | 1 | 1,776 | 71 | 4 | 438 | 134 | 30.6 |
| Janitorial Supplies | 62 | 6 | 9.6 | 86 | 63 | 73.2 | | | | 69 | 59 | 85.5 |
| Office Supplies | 500 | 400 | 80 | 600 | 490 | 81.5 | 485 | 422 | 87 | 1,500 | 1,200 | 80 |
| Handtools | 100 | | | 5 | | | | | | 102 | | |
| Medical Supplies | 26 | | | 16 | | | | | | 46 | | |
| Automotive Supplies | 1 | | | 1 | 1 | 100 | | | | | | |
| Other Misc. | 2,501 | 81 | 3.2 | 91 | | | 99 | | | 74 | 18 | 24.4 |
| Total | 3,690 | 712 | 19.3 | 1,879 | 565 | 30.1 | 2,360 | 493 | 20.9 | 2,229 | 1,411 | 63.3 |
| | Total Whse. Sq.Ft. | C/S Sq.Ft. Used | % Duplication | Total Whse. Sq.Ft. | C/S Sq.Ft. Used | % Duplication | Total Whse. Sq.Ft. | C/S Sq.Ft. Used | % Duplication | Total Whse. Sq.Ft. | C/S Sq.Ft. Used | % Duplication |
| Space | 89,405 | 21,099 | 23.6 | 47,940 | 7,239 | 15.1 | 14,500 | 2175 | 15 | 25,000 | 7,875 | 31.5 |

# INVENTORY REDUCTION




APPENDIX A (Cont.)
EXHIBIT VII

EXHIBIT VIII

## OUTLINE OF BASIC STATEWIDE INVENTORY

## MANAGEMENT POLICY - EXPENDABLE PROPERTY

I General Policy

A. The Department of General Services will function as the central warehousing organization for all State agency requirements of repetitively used expendable items. Agencies may maintain continuing inventories of expendable items only at the point of use of such items. Except in storage facilities at or near the point of use, agencies may not duplicate inventories of expendable goods maintained by the Department of General Services, Central Stores, or operate warehousing facilities for this purpose.

B. Agencies are responsible and accountable for their continuing investment in expendable property inventories and for operating costs generated by the continuing maintenance of such inventories. Such inventories and operating costs shall be no greater than is actually required or economically justified and will be subject to periodic audit to assure that individual agency managers have regularly and effectively maintained such inventories and related operating costs at the lowest practical level.

C. Expendable items will be maintained in continuing inventory storage only where such items are required for emergency needs involving public health, welfare or safety, are not readily available from supplier inventories or, because of their specialized nature, must be accepted in large single shipments to achieve maximum net savings or conform to market practice.

The Department of General Services, Office of Procurement, will be responsible for establishing effective purchase methods for expendable items which provide means to reduce the quantity and type of expendable items in State inventories. The Office of Procurement will also be responsible to recommend policies and procedures to reduce the State's expendable inventories investment, review agency inventory control practices and recommend to agencies actions to achieve more effective inventory management.

II Agency Inventory Management

A. Agencies will maintain such unit stock records as are required to permit (1) management analysis of probable future needs for expendable items (2) identification and reporting of the value and content of such continuing inventory and (3) the reconciliation of periodic physical inventories of such items.

B. Agencies will annually report to the Department of General Services, Office of Procurement, all expendable items maintained in continuing inventory in any one location in quantities averaging $100 or more during the previous 12 months, except those items obtained from the Department

of General Services, Central Stores. Such reports will show for each item, the description, location, source of supply, last unit price paid and total quantity used for the period.

C. Expendable items maintained in continuing inventory will be classified by stock categories indicating the purposes for which they are stored to permit the reporting of inventory information in terms directly related to the program mission of the agency. Such categories must be designed to clearly show which agency sub-program needs are creating these inventory costs and the specific program function to which such continuing inventory costs should be related. Continuing management review must be given to contingency stocks maintained to meet emergency needs involving public health, welfare or safety to assure that the most economic and effective methods are employed to meet such emergencies. Program managers ordering that such stocks be held in stock must be made aware of, and periodically required to review and justify the continuing cost of maintaining such inventories.

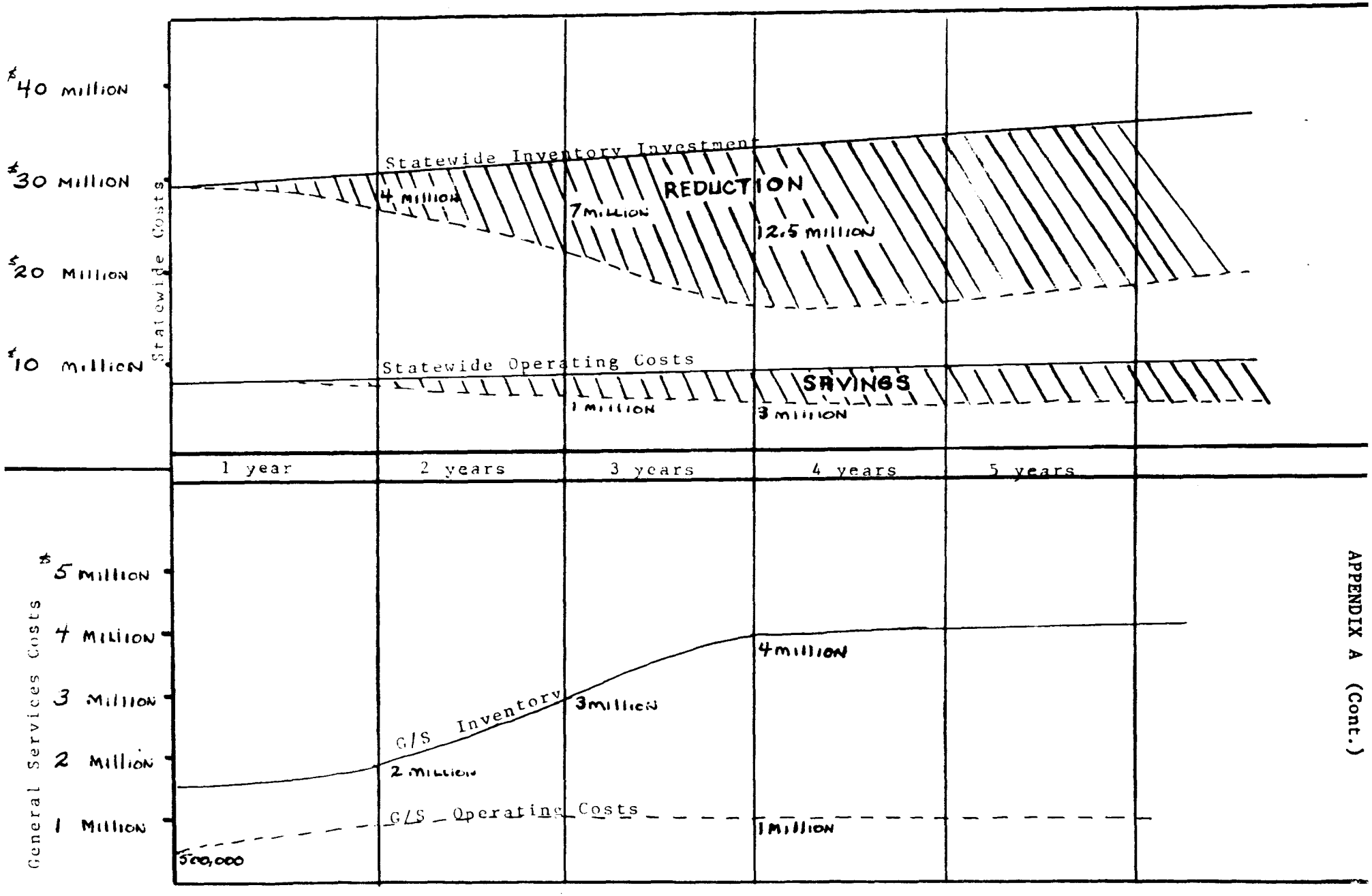
D. Agencies shall, within the general framework of this policy, develop and establish internal policies and procedures to control and minimize inventory investment and related operating costs. Such policies and procedures must contain at least the following:

1. Specific assignment of management responsibility for effective inventory control of both agency wide level and within each organizational unit which maintains continuing inventories of expendable goods.

2. Policies and procedures governing the size and scope of continuing inventory investment, criteria for establishing stock levels, methods for generating control data for management of inventory investment and operating costs; standards for utilization of storage space and related manpower and equipment and procedures for periodic management review of inventory control effectiveness.

3. Procedures for generating and reporting to the Department of General Services, Office of Procurement, information on expendable property requirements necessary for the effective consolidated purchase of such items.

COST-SAVINGS ANALYSIS




APPENDIX A (Cont.)

EXHIBIT IX

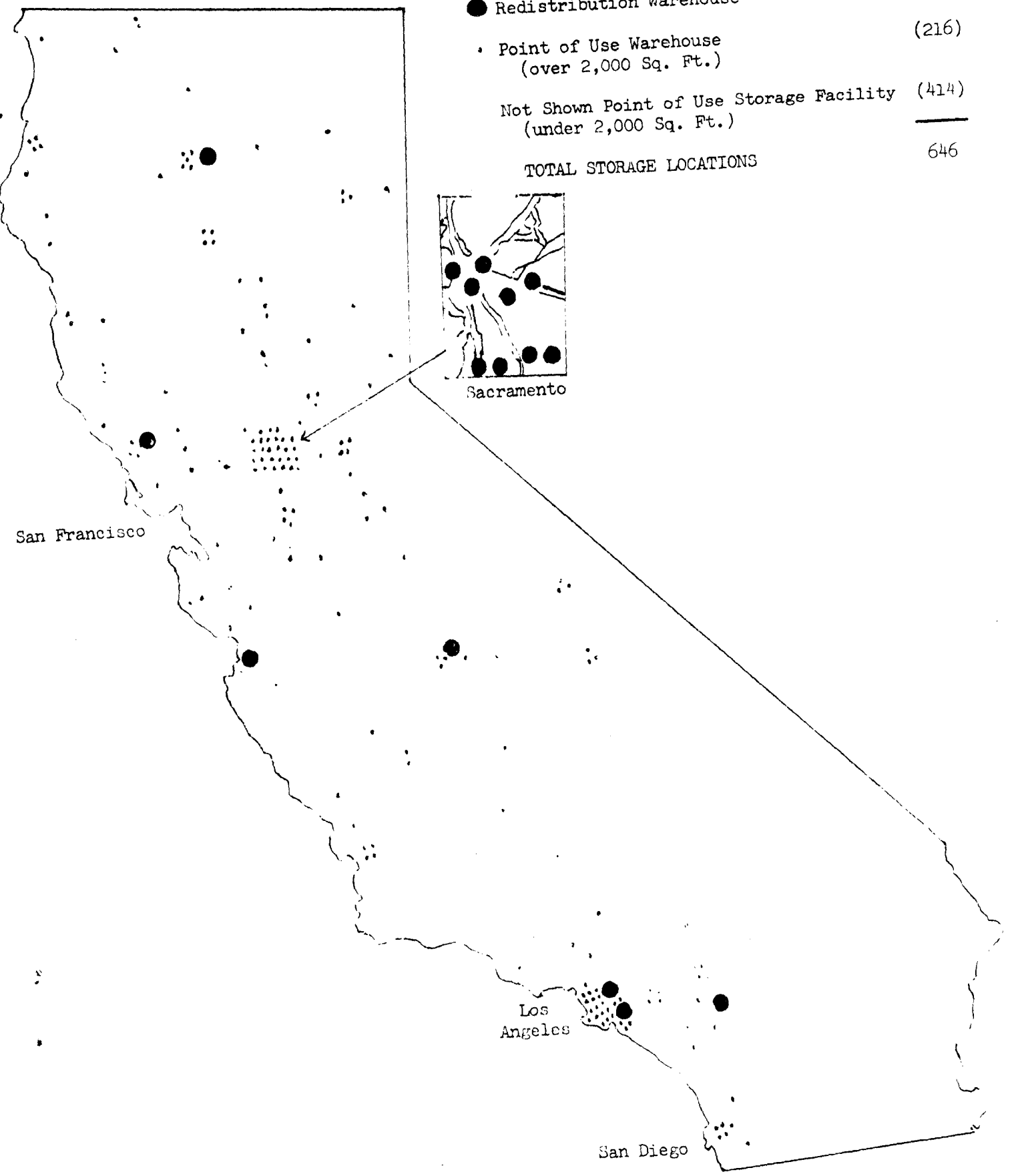
**APPENDIX A (Cont.)**

MAP A

STATE OF CALIFORNIA

STORAGE LOCATIONS

| | |
|---|---|
| ● Redistribution Warehouse | (16) |
| • Point of Use Warehouse (over 2,000 Sq. Ft.) | (216) |
| Not Shown Point of Use Storage Facility (under 2,000 Sq. Ft.) | (414) |
| TOTAL STORAGE LOCATIONS | 646 |

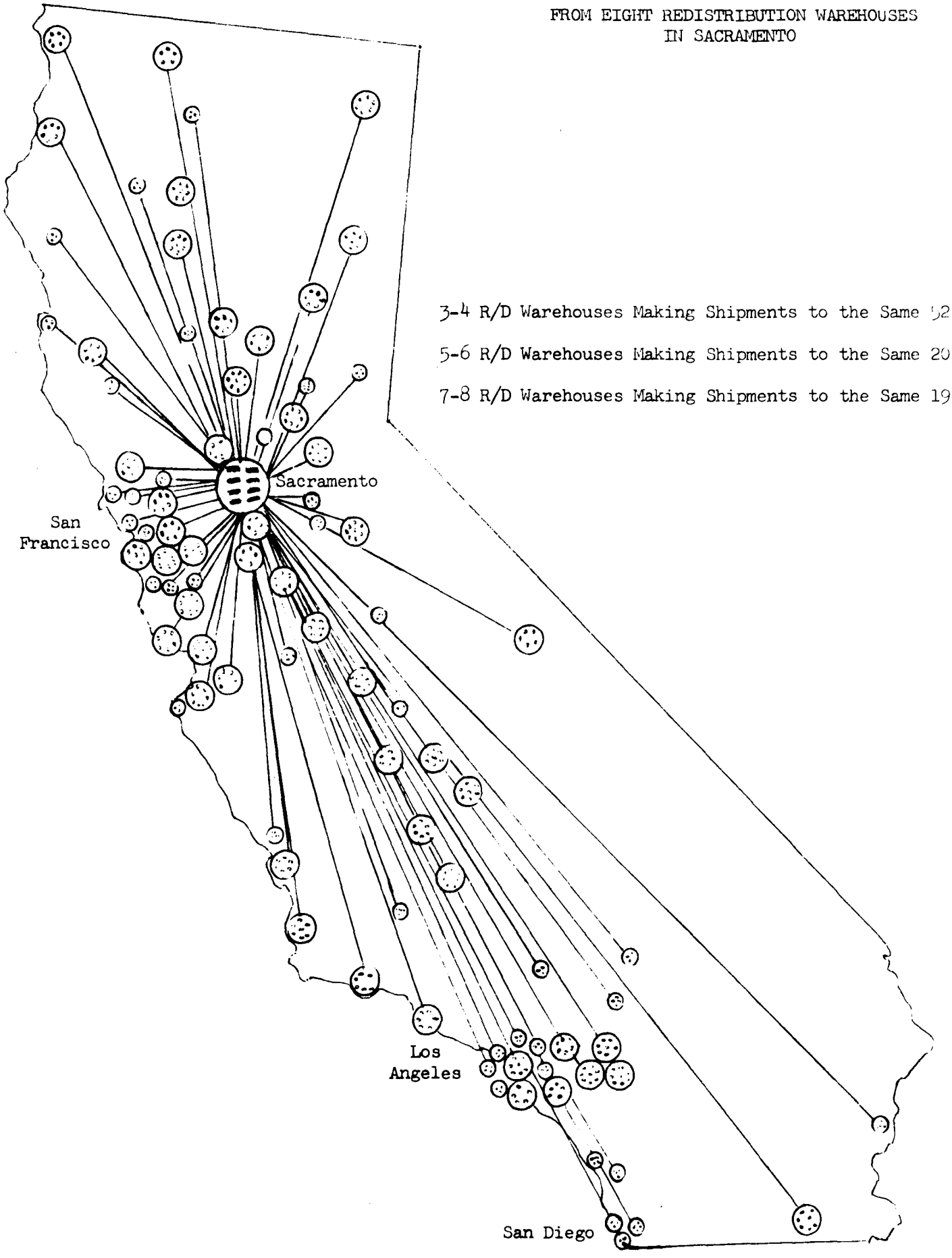


**APPENDIX A (Cont.)**

**MAP B**

STATE OF CALIFORNIA

DUPLICATE ROUTING OF SHIPMENT
FROM EIGHT REDISTRIBUTION WAREHOUSES
IN SACRAMENTO



State of California — Revenue and Management Agency

# Memorandum

To : Mr. John Berke
Commission on California State Government
Organization and Economy
11th and L Building, Suite 550
Sacramento, CA 95814

Date : February 19, 1970

File No.:

From : **Department of General Services**
OFFICE OF PROCUREMENT—Sacramento

Subject:

Per your phone request, here is a current list of the State Office of Procurement's annual purchases by broad commodity groupings:

| Commodity | Purchase Orders | Annual Contracts |
|---|---|---|
| Electrical Equipment | $ 8,569,000 | $ 406,000 |
| Research & Laboratory Equipment | 5,139,000 | -- |
| Highway Patrol Vehicles | -- | 5,564,000 |
| Automotive General Purpose Vehicles and Equipment | 6,877,000 | 4,930,000 |
| Food | 14,667,000 | 10,842,000 |
| Office Supplies & Stationery | 4,449,000 | 771,000 |
| Agric. Supplies & Feed | 3,311,000 | -- |
| Communication & Electronic Equipment | 5,188,000 | 480,000 |
| Mineral Construction Materials | 6,712,000 | -- |
| Office Machines | 2,563,000 | 961,000 |
| Furniture | 3,076,000 | 614,000 |
| Drugs | 3,619,000 | 2,276,000 |
| Gasoline & Petroleum | 137,000 | 11,177,000 |
| All Others | 23,319,000 | 14,353,000 |
| TOTALS | $ 87,626,000 | $ 52,374,000 |

Frank E. Oliver

Frank E. Oliver
State Procurement Officer

FEO:kt

cc: J. S. Babich
R. L. Vance
J. Knibb