



MEMORANDUM
Facilities Planning

Date: November 8, 2001
To: Monterey Peninsula Water Management District
Attn: Stephanie Pintar, Gabby Ayala, Ernie Avila
Via: Hand Carried
From: Frank Vitale
Re: **CHOMP Construction Plans and Changes to Water Demand**

Memo: *Background*

In 1997, the City of Monterey approved a Use Permit for Community Hospital to construct a three-phased expansion project. The project consisted of

- A Cancer Center, completed in December 1999
- A parking structure, currently being submitted to the Office of Statewide Health Planning and Development (OSHPD) for plan review
- A clinical care wing, also known as the South Pavilion

As you recall, in 1997 MPWMD enacted a "Community Benefit Ordinance" No. 87 to provide 18.28 acre-feet, the necessary water for the added clinical spaces in CHOMP's 1995 Amended PC Plan. MPWMD based its demand factor CHOMP, as established in the EIR for the 1995 Amended PC Plan and certified by the City of Monterey, at 0.0002 acre-feet per year per gross building area (p.45, CHOMP Amended Planned Community Plan EIR, by EMC Planning Group, 1996). The EIR determined the estimated usage of the permitted 91,430 square feet of clinical area of the 1995 Amended PC Plan by multiplying the area times the demand factor: 91,430 s.f. X 0.0002 = 18.28 acre-feet per year. In the table below, the 91,430 square feet of clinical area is rounded to 91,000 square feet, the amount authorized under the 1997 Use Permit.

Water Approved for the 1995 Amended PC Plan & the 1997 Use Permit

Cancer Center	17,070 s.f.	3.41*	acre-feet	MPWMD Permit 16235, 7/15/97
South Pavilion	<u>74,360 s.f.</u>	<u>14.87</u>	acre-feet	
TOTALS	91,430 s.f.	18.28	acre-feet	

*drawn from Community Benefit Allocation, MPWMD Ordinance No. 87

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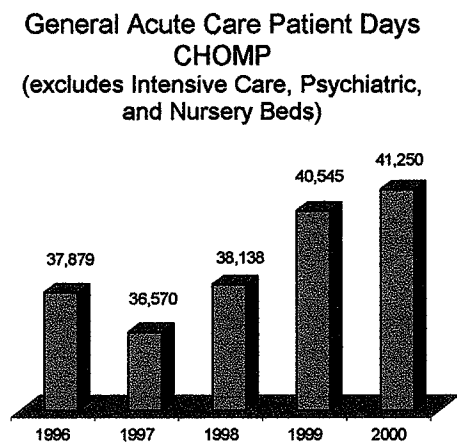
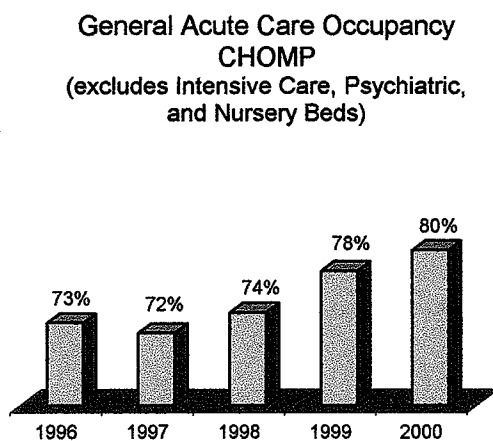
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Proposed Changes to the 1995 Amended PC Plan

At the time the 1995 Amended PC Plan was prepared it was recognized by both healthcare regulatory agencies and by the hospital that our existing 169 acute-care patient rooms fell short of optimum for contemporary levels of acuity, treatment modalities, and patient comfort. In addition, CHOMP's inpatient census has increased each year since 1996, growing from 76% to 80% in 2000. General acute care patient days have increased an average of 2% per year from 1996 to 2000.



This has created a need for a net addition of 48 new medical-surgical patient rooms, which are proposed to be provided in a new patient care wing known as the Forest Pavilion. The Forest Pavilion will have 60,040 square feet of Clinical Space and 25,015 square feet of support space.

To meet these changes and challenges, the CHOMP is preparing a revised Master Plan for submittal to the City of Monterey. This revision is called the 2001 Amended PC Plan.

Under the MPWMD formula, the proposed Forest Pavilion addition of 68,040 square feet of clinical space would create a demand for 13.61 acre-feet of water; ($68,040 \times 0.0002 = 13.61$).

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However, revisions to both the Cancer Center, as built, and the South Pavilion, as designed, reduce the Clinical Space in each, with a corresponding reduction in actual and projected water consumption. As a result, the approved allocation is not being fully utilized, as shown in the table below.

	Clinical Space	Support Space	Total	Approved Water	Water Demand	Unutilized Allocation
Permitted by 1997 Use Permit	91,000	179,000	270,000			
TOTAL	91,000	179,000	270,000			
As-built to date (Cancer Center)	6,417	10,653	17,070	3.41	1.28	2.13
Proposed, 2001 PC Plan						
South Pavilion	36,975	60,925	97,900	14.87	7.40	7.47
Forest Pavilion	68,040	27,260	95,300		13.61	
TOTAL	111,432	98,838	210,270	18.28	21.01	9.60
Increase (Decrease) in As-built and Proposed Areas, over (under) 1997 Permit Approvals	20,432	(80,162)	(59,730)			

Supply of Water for the 2001 Amended PC Plan

CHOMP proposes to meet the requirements for the 2001 Amended PC plan through three resources: 1) through historical conservation efforts; 2) the reduction in built area, and hence in consumption, illustrated above; 3) water-saving retrofits.

CHOMP proposes to provide water for this project through its MPWMD allocations, its successful conservation measures and potential retrofits.

Conservation.

Three meters that serve the hospital proper measure CHOMP's water usage. The following chart plots the combined water usage from these three meters from December 1995 through December 2000. This chart shows a very significant trend: despite the addition of over 32,000 square feet of new space since 1995, CHOMP's water usage has decreased by nearly one-third during that time. Its usage in 1999 was

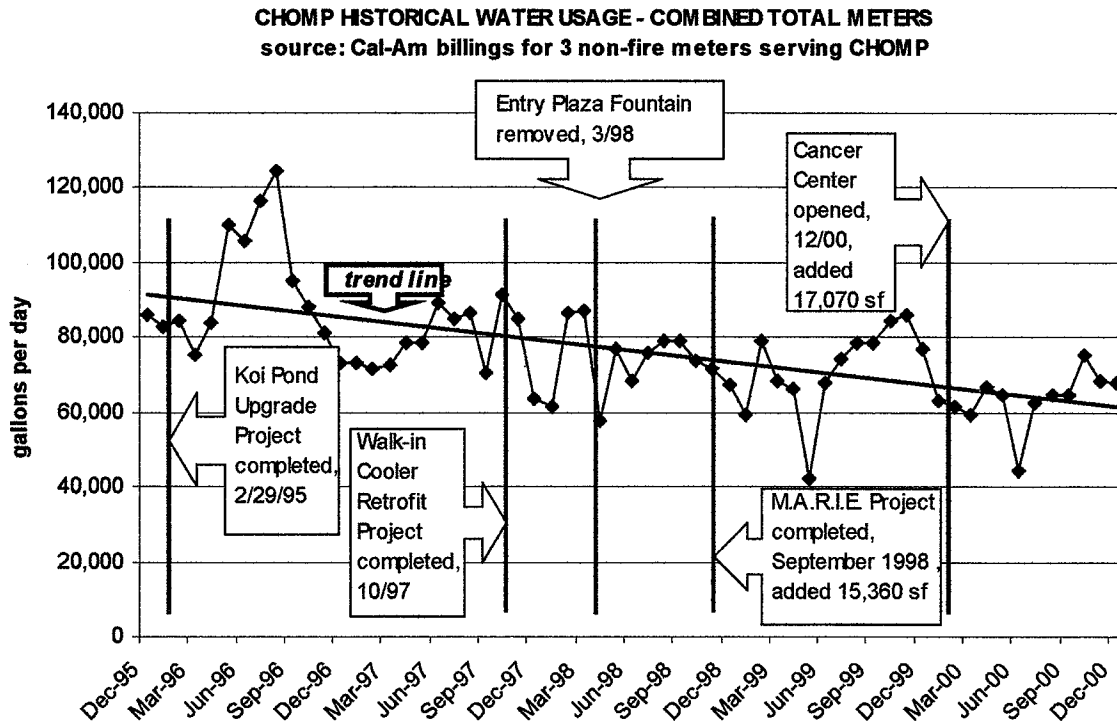
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less than 60% of its usage in 1987. In 1996, CHOMP used over 104 acre-feet of water; in 1999, less than 81 acre-feet. This decrease in usage occurred while general acute care patient days were increasing 12.8% (from 36,570 to 41,250) from 1997 to 2000, and hospital occupancy went from 72% in 1997 to 81% in 2000. Although there continues to be variation from month to month, CHOMP's successful continuing efforts at conservation are evident in this trend.



Through its house-wide conservation efforts, after a peak of over 100 acre-feet per year in both 1995 and 1996, CHOMP has consumed less than 85 acre-feet per year every year since 1997. This is a saving of a minimum of 15 acre-feet per year.

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HISTORICAL WATER CONSUMPTION, CHOMP THREE COMBINED METERS

<u>Year</u>	<u>Acre-feet</u>
1987	134.58
1992	95.08
1993	83.33
1994	112.70
1995	101.11
1996	104.66
1997	88.27
1998	82.59
1999	80.49
2000	77.67

Unutilized Allocation. The 18.28 acre-feet of water dedicated by MPWMD Ordinance No. 87 provides for the 91,430 square feet of Clinical Space in the 1995 PC Plan, which included the Cancer Center and the South Pavilion. As shown in the table above, the Cancer Center's actual clinical square footage as built is only 6,417 square feet, so its use of water is 1.28 acre-feet, or 2.13 acre-feet less than the projected and allotted 3.41 acre-feet. This is borne out by the historical water usage table above. Similarly, detailed design for the South Pavilion now projects only 36,975 square feet of clinical space, and its use of water is thus 7.40 acre-feet, or 7.47 acre-feet less than the projected and allotted 14.87 acre-feet. These reductions in total clinical space area for the 1995 PC Plan translates into a total of 9.60 acre-feet that are unused from the Community Benefit Allocation of Ordinance No. 87.

Retrofits. Since 1995, CHOMP has voluntarily undertaken several retrofit water conservation projects. These include a new filtration system for the koi pond and a recirculation loop for the walk-in cooler in the hospital kitchen. Studies are underway to analyze the feasibility of reclaiming cooling tower water.

Proposed Sources of Water

Historic Conservation, 1995-2000*	15.00	acre-feet
Community Benefit Unutilized Allocation	9.60	acre-feet MPWMD Ordinance 87, 2/28/97
CDF Site Credit, 1995	1.26**	acre-feet MPWMD letter 4/21/95
Cooling Tower Retrofit, 2001-2002	<u>2.02</u>	acre-feet (estimate, to be verified)
TOTAL WATER SOURCES	27.88	acre-feet

* includes Koi Pond Retrofit, 1995 and Walk-in Cooler Retrofit, 1998

**expired on 4/21/2000, may be extended for 60 months subject to conditions, per MPWMD letter of 11/1/96.

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PROJECT ANALYSIS

Current water use at the hospital is approximately 77 AF per year. By comparison, water use in 1987 was 134.58 acre-feet and 112.70 acre-feet in 1995. Water consumption at CHOMP in 2000 was less than 58% of its 1987 use.

The proposed Forest Pavilion project will add 68,040 square feet of new building area for hospital clinical functions. Based on the MPWMD water use factor of .0002 acre-feet per year will result in an increase in water demand at the hospital for the Forest Pavilion by approximately 13.61 acre-feet per year ($68,040 \times .0002 = 13.61$).

This increase in demand can be met from several sources, and more than offsets the increase:

- Historic conservation measures at CHOMP over the past five years have saved approximately 15.00 acre-feet per year.
- Due to decreased as-built clinical building areas for the Cancer Center and reducing modifications to the South Pavilion design since the 1997 Use Permit, 9.60 acre-feet of the 18.48 acre-feet authorized by Ordinance 87 are / will be unutilized.
- Elimination of water usage on the former CDF site freed up 1.26 acre-feet.
- Ongoing voluntary efforts, particularly with respect to retrofit of existing cooling towers, may save as much as 2.02 acre-feet.

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