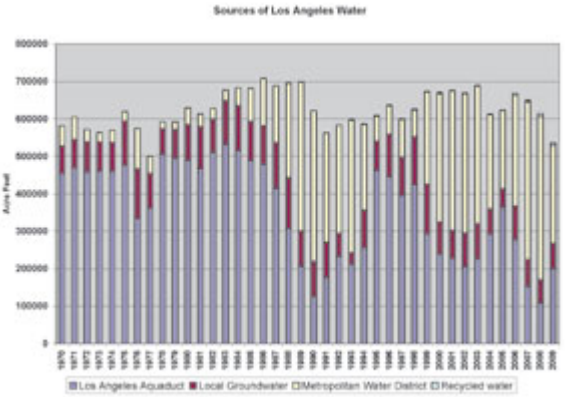
L.A.'S URBAN WATER MANAGEMENT PLAN

MULTI-YEAR PROJECTIONS ROUTINELY OVERSTATE ACTUAL SUPPLIES

By David Coffin

How is it that every small, medium and large development or project that comes before neighborhood councils, city planners and the city council is always cited by both developers and the water department as having 'sufficient water' yet we find ourselves in the grips of a permanent drought and under an emergency water conservation order?



An analysis of Department of Water and Power's Urban Water Management Plans dating back to 1985 shows that long term water projections have been grossly overstated on a routine basis by as much as 41 percent[i] leading planners and decision makers to believe that sufficient water would be available when projects before them were being evaluated.

This study compared the amount of water projected in each regularly published UWMP with the actual amount of water later received and found that not since the 1985 report have projections come acceptably close.

Every report from 1990 to 2005 has routinely projected water deliveries well above 700,000 acre feet with some projections as high as 799,000 AF. Yet a review of historical data shows that **LADWP has only once received more than 700,000 AF in the last 30 years and rarely have actual deliveries exceeded 680,000 AF.**

In spite of this, 13 out of 16 forecasts from the last four water management plans had water deliveries projected at over 700,000 AF. They were:

- The 1990 Urban Water Management Plan [ii] with 'projected' deliveries of **707,300** AF in 1995, **728,400** AF in 2000, **745,500** in 2005 and **756,500** AF in 2010.
- The 1995 plan[iii] with 'projected' deliveries of 673,000 AF in 2000, 695,000 AF in 2005, **725,000** AF in 2010, and **750,000** in 2015.
- The 2000 plan[iv] with projected deliveries of 679,000 AF in 2005, **718,000** AF in 2010, **757,000** AF in 2015, and **799,000** AF in 2020.
- The 2005 plan[v] with projected deliveries of 683,000 AF in 2010, **705,000** AF in 2015, **731,000** AF in 2020, and **755,000** in 2025 and **776,000** in 2030.

With hundreds of projects resulting in tens of thousands of housing units being approved over the last twenty years, each citing the UWMP as evidence of available water and actual deliveries averaging only 624,123 AF a year, it's not difficult to see why Southern California has become mired in a permanent drought.

1990 UWMP REPORT			Percent
Year	Projected	Actual	overstated
1986			
1990	689,900	621,476	11.0%
1995	707,300	608,754	16.2%
2000	728,400	669,549	8.8%
2005	745,500	623,438	19.6%
2010	756,500	536,554	41.0%
2015			
2020			
2025			
2030			
BOLD numbers are average yearly yield (1987/2009)			

2005 and 2010 projections were overstated by 122,000 and 220,000 AF. Water management plans published in 1995, 2000 and 2005 were similarly overstated.

GROUNDLESS OPTIMISM IN FUTURE WATER

Why are we routinely committing new water to every new housing project that is proposed when actual deliveries chronically fall short of projected deliveries? And why are laws designed to protect water supplies such as SB 610 and SB 221 failing to over-commitment water?

Exaggerated projections are not only an LADWP phenomena; many regional water districts also seriously overstate future supplies in their water plans. UWMP data suggests that water supply projections are developed to meet regional housing needs assessments[vi] (RHNA) that are distributed by local multi-county government agencies such as SCAG.

Rather than using infrastructure such as water and power as a determining factor in housing growth thus protecting water supply, the opposite occurs. Housing targets are cited first and water departments tweak their projections dramatically to achieve those goals. Even if it means citing projections that can never be met.

Because water projections are overstated by such large margins, this all but guarantees that every new housing project proposed within the scope of the UWMP will be green-lighted as having sufficient water supplies by LADWP officials.

A DROUGHT IN THE PLANNING

Distinct from the drought of 1987 where growth was the primary factor, today's drought has its roots dating back to the 1990 UWMP when the long term projections inexplicably rose 10 to 12 percent[vii] over the previous UWMP. Urban Water Management Plans were supposed to provide a layer of protection for our water supplies after the 1987 drought, but instead the new projection models have been used to assure project approvals.

The increased projections in UWMP's are primarily due to overly optimistic projections in groundwater and to a lesser extent recycled water, seawater desalinization, the collection of urban runoff, other forms of water conservation . On top of that is a big dose of MWD purchases to make up for the shortfall.

For example, the last four UWMP's cited increased groundwater yields ranging between 106,000 and 170,000 AF. However groundwater yields dropped significantly in 2000 and the actual deliveries never materialized. The actual yields of underground water averaged about 86,000 AF and were as low as 48,000 AF.

Four UWMP's in a row tout increased supplies while water trend downward.

Similarly recycled water is cited to increase to 15,000 to 29,000 AF in the latest water plan but the average amount received between 2000 and 2009 has only been 3,457 AF. This year's recycled water is 118% below 2005 UWMP projections.

In 2000 and 2005 UWMP's the LA Aqueduct was projected to deliver 321,000 AF and 271,000 AF respectfully. But what actually came through the pipe since 2000 was an average of just 229,000 AF.

Water plans also rely heavily on imported MWD water to make up the shortfall but that supply is uncertain as MWD struggles to procure enough water from the State Water Project and Colorado River to deliver to water not only to the LADWP but also the dozens of other water agencies all over the Southern California region.

State laws like SB 610 and SB 221 are supposed to protect water supply by requiring planners and developers to provide written verification[viii] of sufficient supplies by water agencies. However the laws weakness is that it allows developers, planners and water agencies to merely cite UWMP 'projections' to get projects approved instead of 'real' water.

Another weakness is that neither SB 610 or SB 221 require that UWMP's be accurate, nor do they require the figures to be reviewed, updated or amended as actual supplies come in at the projected times. The

projections that were approved in the original plan remain continue to be cited for as long as five years later. Even when supplies dwindle to record per capita lows.

Since there is no requirement by law to review actual deliveries against projections, this virtually guarantees that projects of any size will be assured to receive a letter by LADWP acknowledging sufficient water supply when the plans targets have not been met in the past,.

LACK OF CRITICAL REVIEW LEADS TO DROUGHT

As the last twenty years projections in urban water management plans have become so overstated, even contrived, this has led to an absence of critical review by people who review and make decisions about a project. After all, if we have 680,000 AF of water today and in 2010 we are expecting to reach 750,000 AF what is there to worry about?

Planning commissioners, elected leaders, neighborhood councils and community residents have generally treated the conclusions of 'sufficient water' in each report as 'fact' when new developments come to them for approval.

This lack of critical review is repeated over and over again and is especially in plain view when questions are raised or when written comments to draft environmental documents for new developments cite the obvious disconnect between 'sufficient water' and the recent need for the *Emergency Water Conservation Order* (2008)[ix] and later the mayor's *Water Supply Action Plan* (2008)[x]. City planners and developers routinely dismiss the comments out of hand by merely pointing out the latest UWMP cited in their EIR and the future water projections in them.

WATER – A KEY PLANNING ELEMENT

A water assessment is a mandatory element to the planning process. As a prerequisite to approving a new project, a developer or city planner has to provide evidence that there is 'sufficient water' in normal and dry years over the next twenty years for their project.

Evidence that a project has the water it needs is typically provided by citing the latest UWMP in the projects Environmental Impact Reports (EIR) and obtaining a letter from the water agency acknowledging the availability of water over this twenty year period. Water agencies themselves generally just cite their own UWMP in the acknowledgement.

Similarly, cities and counties must demonstrate in their housing plans that they have sufficient water supplies if growth is projected in their General Plan.

Because of this, the Urban Water Management Plan becomes a vitally important document to the planning process. If reports consistently overstate the amount of available water, planners ratchet up the housing production and approvals to meet established housing goals. Years later when water supplies do not meet the previously cited water projections, emergency solutions have to be enacted to minimize environmental damage and keep the taps flowing. This is the situation that exists today.

INFRASTRUCTURE IMBALANCE

Overstating future water supplies in water management plans results in housing inventories that outstrip water availability. This imbalance affects local residents by reducing their base price (Tier I) allocations, produces higher water bills, forces a curtailment of outside irrigation, and creates penalties. And it doesn't stop there, both the Central and Southern California regions have been seriously affected as drought restrictions have led California's agriculture industry to fallow land and lay off workers resulting in a loss of one billion dollars to the state in 2009[xi].

THE URBAN WATER MANAGEMENT PLAN

Why are accurate Urban Water Management Plan so important?

No single document is more regularly cited in the dozens of Draft Environmental Impact Reports (DEIR) **submitted by developers to the city planning department** and approved by planning commissions and city councils than the Urban Water Management Plan.

In order for the public and decision makers to understand how a large proposed project will impact neighbors, traffic, sewers, water, power, fire, police, libraries, parks, etc., an environmental impact report is drawn up.

The projects DEIR provides important details on infrastructure, traffic, demographics, demands for public safety and community services, and other information. Go online and download any of the dozens of DEIR's that the city makes available and you will find the UWMP cited in the Utilities section. When DEIR's are first published there is a comment period where the public is invited to comments on the project.

When questions and comments on the project are received, they are answered and noted and then added to the appendix of the final report. When completed and published in its final form the document becomes known as the Final Environmental Impact Report or FEIR. It is this document that zoning administrators, area planning commissions, and city officials review when deciding to approve or deny a project.

With tens of thousands of "housing units projected" to be proposed and built in the city of Los Angeles between 2006 and 2014 it is of the utmost importance that the information provided for these reports be accurate otherwise serious infrastructure imbalances will occur as successive projects are green-lighted.

THE BUNDY EXAMPLE

As noted before, water assessments provided for major projects rely entirely on the original projections published in the water plan. A projects water assessment completely ignores the -actual- supplies received after the water plan was published approved.

I could have picked any project since they all cite water availability the same way but the *Bundy Village and Medical Park* was most convenient. This projects Water Supply Assessment (WSA) was based on "water supplies available during normal, single-dry, and multiple dry water years during the 20-year projections" like all other assessments. It was predictably approved later on by the LADWP Board of Water and Power Commissioners which cited the 25 year projection of 776,000 AF in the 2005 UWMP as evidence of sufficient water for the project.

In response to the projects DEIR, one local neighborhood council submitted a comment asking that the Water Supply Assessment be re-evaluated in light of the fact that the city reduced water supplies due to drought and regulatory restrictions."

The planning department's reply to the neighborhood council comment merely restated the water supply assessment saying that it "continued to remain adequate" citing sections of the California water code and noted that the twenty year projection is sufficient to meet water demand. It sidestepped the request to re-evaluate the water supply assessment and punted that task to elected officials who would have to approve the project.

WHEREAS, the projected water demand associated with the Project is within the range of water demand projections anticipated in the City of Los Angeles' Year 2005 Urban Water Management Plan Update; and

WHEREAS, LADWP anticipates that its projected water supplies available during normal, single-dry, and multiple-dry water years as included in the 25-year projection contained in its 2005 Urban Water Management Plan can accommodate the projected water demand associated with the Project, in addition to the existing and planned future demands on LADWP.

NOW, THEREFORE, BE IT RESOLVED, that the LADWP Board of Water and Power Commissioners finds that LADWP can provide sufficient domestic water supplies to the Project and approves the water supply assessment prepared for the Project, now on file with the Secretary of the Board, and directs that the assessment and a certified copy of this resolution be transmitted to the Planning Department.

City planners always quote the results of a UWMP as 'fact' while ignoring the years of projections that were not met including 2005 UWMP projection of 718,000 AF by 2010 cited in the plan. Next years level is not likely to come close to being achieved given this year's delivery of 536,554 AF reported by LADWP. They also ignore the historical fact that every previous UWMP's projection above 700,000 has been missed and missed by far, ranging from 60,000 to 190,000 AF.

Looking at historical indicators there no category of supply (aqueducts, groundwater, recycled, MWD, etc.) there to believe that anything above 699,000 AF can be routinely reached now or in the future. The last four water management plans, an expensive product to produce, have not been worth the paper they are written on.

Basing today's planning policies on doubtful long range future water projections that trend up while real supplies trend down or flat is a fool's game and one that will irreversibly damage the community economically and in quality.

Sources:

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[i] LA Sources of Historical Water (2009)

[ii] 1990 Los Angeles Urban Water Management Plan

[iii] 1995 Los Angeles Urban Water Management Plan

[iv] 2000 Los Angeles Urban Water Management Plan

[v] 2005 Los Angeles Urban Water Management Plan

[vi] Regional Housing needs Assessment – SCAG 2007

[vii] LA sources of Historical Water (2009)

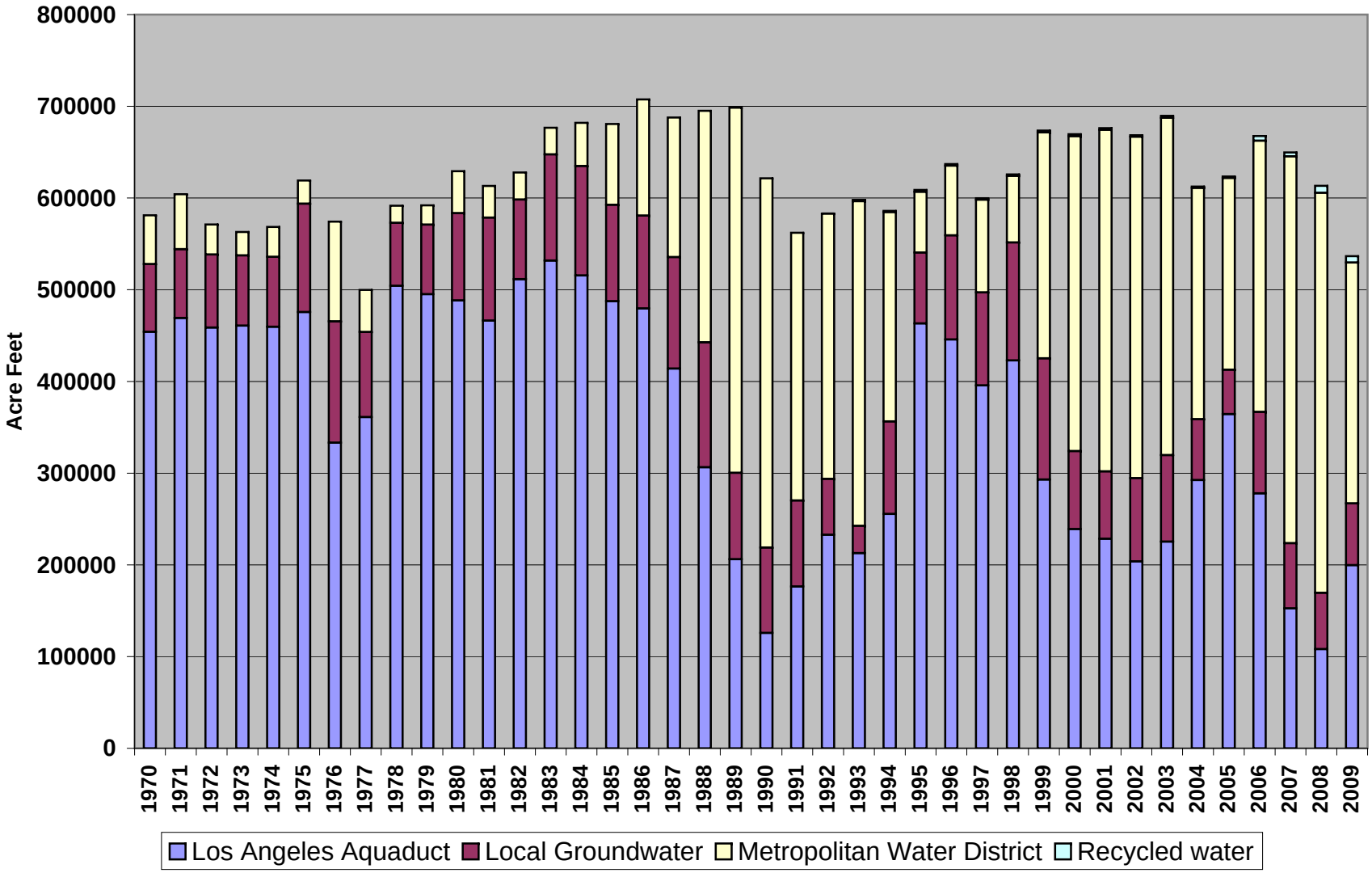
[viii] 2005 Urban Water Management Plan (page ES-2)

[ix] Emergency Water Conservation Order 2008

[x] Water Supply Action Plan – Securing LA's Water Supply 2008

[xi] http://aic.ucdavis.edu/publications/whitepapers/Water%20Supply%20and%20Demand.pdf – Water supply and demand – UC Davis

	Fiscal year	Los Angeles Aquaduct	Local Groundwater	Metropolitan Water District	Recycled water	Total Los Angeles Water supply
1970	1970-71	454,142	73,847	53,194	0	581,183
1971	1971-72	469,180	75,033	59,852	0	604,065
1972	1972-73	458,699	79,726	32,766	0	571,191
1973	1973-74	460,890	76,517	25,525	0	562,932
1974	1974-75	459,647	76,253	32,611	0	568,511
1975	1975-76	475,688	118,203	25,197	0	619,088
1976	1976-77	333,258	132,280	108,689	0	574,227
1977	1977-78	361,166	92,738	45,904	0	499,808
1978	1978-79	504,318	68,574	18,673	0	591,565
1979	1979-80	495,173	75,743	21,113	0	592,029
1980	1980-81	488,336	95,179	45,714	0	629,229
1981	1981-82	466,312	112,231	34,544	0	613,087
1982	1982-83	511,522	86,878	29,373	0	627,773
1983	1983-84	531,742	115,809	29,051	0	676,602
1984	1984-85	515,523	119,367	47,143	0	682,033
1985	1985-86	487,500	105,014	88,237	0	680,751
1986	1986-87	479,549	101,323	126,676	0	707,548
1987	1987-88	414,008	121,547	152,175	0	687,730
1988	1988-89	306,371	136,295	252,392	0	695,058
1989	1989-90	206,162	94,185	398,145	0	698,492
1990	1990-91	125,819	93,019	402,638	0	621,476
1991	1991-92	176,385	93,761	291,891	0	562,037
1992	1992-93	232,760	60,941	289,201	192	583,094
1993	1993-94	212,849	29,647	354,072	1,301	597,869
1994	1994-95	255,514	100,845	228,252	1,306	585,917
1995	1995-96	463,291	77,272	66,171	2,020	608,754
1996	1996-97	445,719	113,510	76,039	1,747	637,015
1997	1997-98	395,767	101,286	101,184	1,449	599,686
1998	1998-99	422,959	128,504	72,702	1,596	625,761
1999	1999-00	292,971	132,264	246,350	1,984	673,569
2000	2000-01	238,997	85,067	343,403	2,082	669,549
2001	2001-02	228,396	73,541	372,357	1,907	676,201
2002	2002-03	203,842	90,707	372,272	1,635	668,456
2003	2003-04	225,418	94,279	367,815	2,053	689,565
2004	2004-05	292,421	66,433	252,152	1,501	612,507
2005	2005-06	364,335	48,486	209,092	1,525	623,438
2006	2006-07	277,942	88,906	295,602	5,125	667,575
2007	2007-08	152,642	71,023	421,732	4,227	649,624
2008	2008-09	108,098	61,341	436,230	7,685	613,354
2009	2009-10	199,739	67,417	262,565	6,833	536,554
2010						


Sources of Los Angeles Water
Acre Feet
800000
700000
600000
500000
400000
300000
200000
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Los Angeles Aquaduct
Local Groundwater
Metropolitan Water District
Recycled water