APPENDIX 1-B
Documentation and presentation for the Coordination Workshops with Metropolitan Water District of Southern California and MWDOC member agencies

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COORDINATION MEETING FOR URBAN WATER MANAGEMENT PLAN

August 30, 2004

Name	Agency	Contact #
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Ray Burk	Santa Ana	647-3317
Janet Morningstar		(714) 755-3100
Anatole Falagan	Metropolitan	213-217-6830
Debra Man	"	
Dirk Reed	"	water transfer/GW Storage/
Dan Ferons	SMWD	949 459 6590
John Schatz	SMWD	949 459 6601
Sergio Ferro	DWR	(818) 543-4652

Coordination Meeting for 2005 Urban Water Management Plan

Municipal Water District of Orange County

August 30, 2004

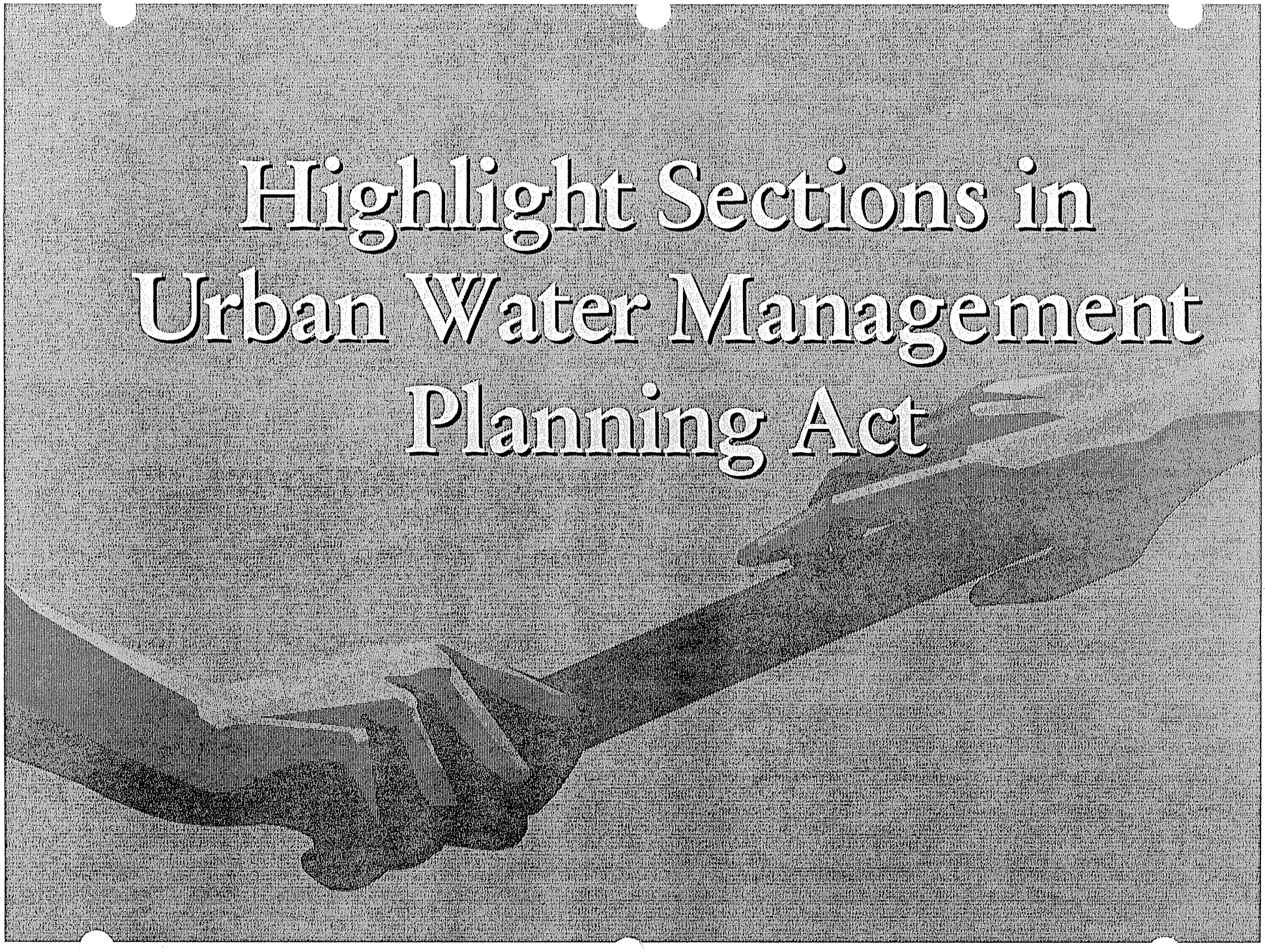
Agenda

- Goal
- Highlight of Urban Water Management Planning Act
- Flow chart of data preparation and coordination
- Questions need to be answered
- Next Step

Goal of this Meeting

- Formulating strategies to prepare the Urban Water Management Plans, so that they are capable of meeting the standards set forth by SB 610 and SB 221 and can be used to facilitate compliance with these two laws.
- Simply state: What can we do now to prepare ourselves in the best position for future challenges?

Highlight Sections in Urban Water Management Planning Act



Section 10620(c)

- "An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies."
- Article 2 states the required contents of the plans
- Question: What is the implication of this section on the regional plans prepared by Metropolitan and MWDOC, who are the suppliers indirectly providing water to customers?

Section 10620(d)(2)

- "Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable."

Section 101620 (f) -New

- "An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions."

Section 10621 (b) -New

- "Every urban water supplier required to prepare a plan pursuant to this part shall notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision."

- Comment: A step that tries to tie the land use planning at the county and city level to water management planning.
- Question: Does the regional supplier, such as MWDOC or Met, also need to notify the cities and the counties?

Section 10631 (b)(1),(2),(3),&(4) - New

- "…… If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan: "
- "(1) A copy of any groundwater management plan adopted by the urban water supplier,……"
- "(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. ….For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition."
- "(3) A detailed description and analysis of the location, amount,and sufficiency of groundwater pumped by the urban water supplier for the past five years. …"
- "(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. …"

Section 10631 (h)

- New paragraph to the Act
- "Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program."
- Comment/Question: Does that mean the projects referenced should be consistent at all planning levels (Projects implemented at Metropolitan's level and retail agency's level)? Should the descriptions of the projects be repeated at all planning levels?

Section 10631 (j)

- New paragraph to the Act
- "Urban water suppliers that rely upon a wholesale agency for a source of water, shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available.
- The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c)."

- Comments/Questions: Does that mean the wholesale agencies such as Metropolitan, MWDOC, and OCWD shall adopt the demand projections provided by the retail agencies?

Section 10643 (a)

- A modified paragraph
- "An urban water supplier shall file with the department and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption...."
- Comments: The updated Act requires the supplier to file the plan not only with DWR but also with the cities and counties that it provides water supplies.

See Insert - Flow Chart of Data Preparation and Coordination

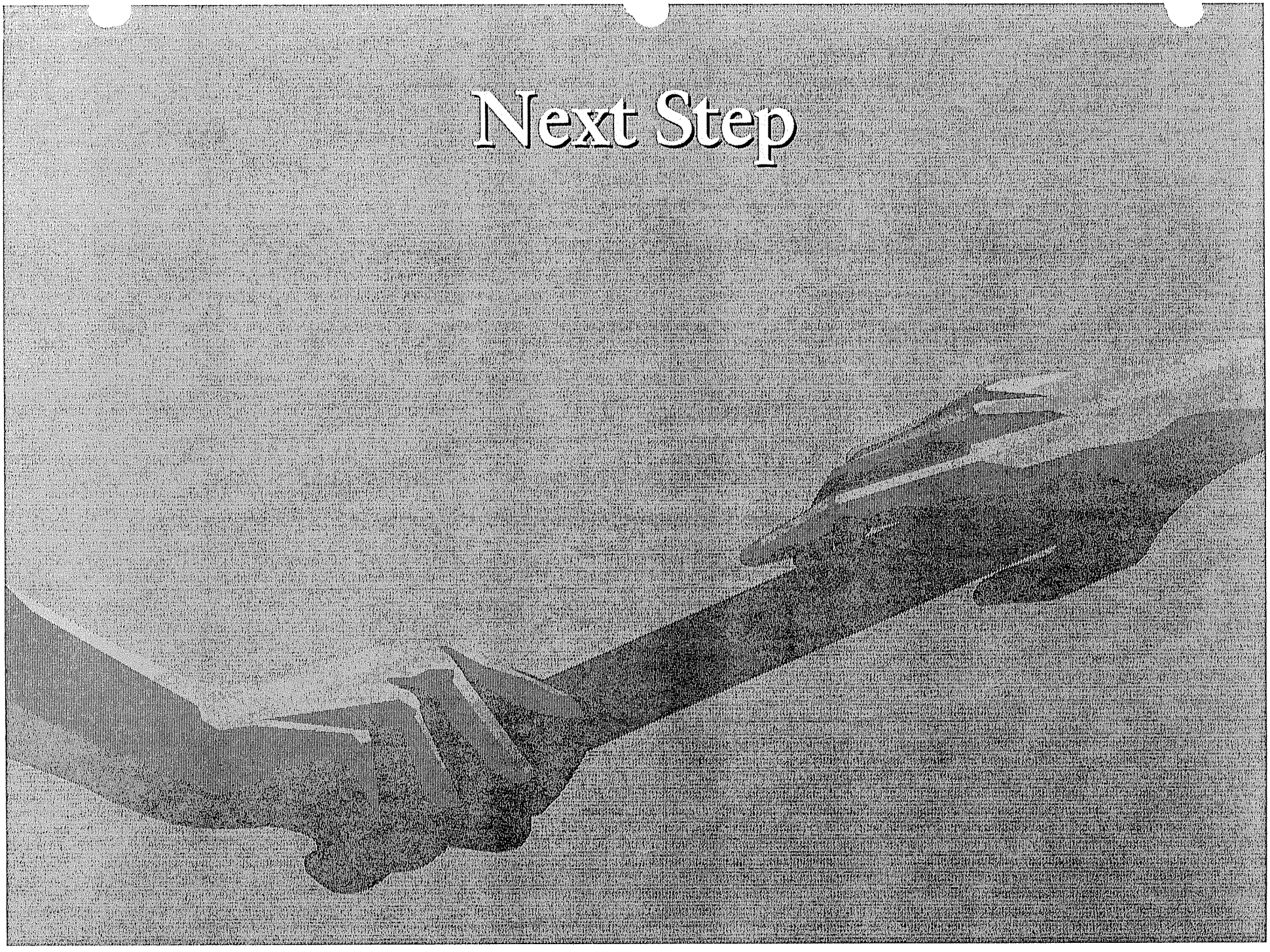
Click to see the Flow Chart

Microsoft
WetPoint Presentation

Questions Need to be Answered

- On which regional demographic report should the water demand projections be based? What is the implication of using different water demand projections?
- How current should the demographic forecast data and water demand projection be?
- How do we coordinate various methods employed to projection water conservation savings?
- How important is it for all three planning levels (Met, MWDOC, and retail agencies) to be consistent on water demand projections and supply portfolios? Can we be in agreement in methodologies but not necessary in numbers?
- What is the timetable for completion of Metropolitan, MWDOC, and retail agency drafts and final UWMP reports?

Next Step



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MEMBER AGENCIES

City of Brea
City of Buena Park
East Orange County Water District
El Toro Water District
Emerald Bay Service District
City of Fountain Valley
City of Garden Grove
City of Huntington Beach
Irvine Ranch Water District
Laguna Beach County Water District
City of La Habra
City of La Palma
Mesa Consolidated Water District
Moulton Niguel Water District
City of Newport Beach
City of Orange
Orange County Water District
Orange Park Acres Mutual Water Co.
City of San Clemente
City of San Juan Capistrano
Santa Margarita Water District
Santiago County Water District
City of Seal Beach
Serrano Water District
South Coast Water District
Southern California Water Co.
Trabuco Canyon Water District
City of Tustin
City of Westminster
Yorba Linda Water District

July 15, 2004

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Santa Margarita Water District
P.O. Box 7005
Mission Viejo, CA 92690

Dear Debra, Virginia, Paul and John,

Subject: Coordination Meeting for 2005 Urban Water Management Plan

MWDOC invites you to a meeting to strategize on the best approach for preparing the 2005 Urban Water Management Plan (UWMP).

As a service to our member agencies, Municipal Water District of Orange County (MWDOC) will prepare its fifth Regional Urban Water Management Plan, under the discretion granted in Water Code 10620 (d) (1). In the past, the regional plans prepared by MWDOC were used as general information documents that summarized water supplies and demands and proposed water management activities unique to MWDOC's service area. However, the passage of Senate Bill 610 and Senate Bill 221 which became effective on January 1, 2002 has further enhanced the significance of this document. SB 610 and SB 221 are companion measures that seek to promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to the city and county decision-makers prior to approval of specified large development projects. Both SB 610 and SB 221 repeatedly identify that the Urban Water Management Plan (UWMP), **if properly prepared**, can be used to facilitate timely compliance with these two laws.

The key words are "if properly prepared." What steps should we, the water suppliers, take to produce UWMPs that are capable of meeting the standards set forth by these two statutes, including the substantial evidence required by SB221?

To list a few of challenges confronting us when preparing the upcoming UWMPs:

1. On which regional demographic report should the water demand projections be based? What is the implication of using different water demand projections due to different methodologies utilized in various levels of planning? The last UWMPs filed included projections with various demographic bases ranging from Southern California Association of Government (SCAG) to local General Plan land use information.
2. How current should the demographic forecast data and water demand projection be? Our current understanding is that Metropolitan would like to incorporate data from the 2004 SCAG Regional Transportation Plan (RTP), which was based on 2000 Census, to project the water demand for its 2005 UWMP. However, we also understand that this report may not be available to Met in a useful form in time for its preparation of 2005 RWMP. If that is the case, Met will use the 2001 SCAG RTP, which was based on 1990 Census, for water demand projections.

3. Various methods are employed at different planning levels to project water conservation savings. Our initial understanding is that Metropolitan may either use the combination of historical data and a placeholder conservation plan (from the IRP) or apply newly derived water saving factors, developed by Met's Conservation Group, to project its conservation saving. At the wholesale level, MWDOC is considering a model developed by its consultant that projects water saving under planned BMP measures. Finally, at the retail level, a majority of the agencies do not specifically consider and break out the effect of conservation in their water demand projections.

4. How important is it for all three planning levels to be consistent on water demand projections and supply portfolios? Given that total consistency is not likely due to different forecasting methods and demand projection approaches, how close can be considered close enough?

5. What is the timetable for completion of Met, MWDOC and Retail Agency drafts and final UWMP reports so that coordination can effectively occur?

We believe that the best approach to preparing the UWMP lies in well managed coordination between the retail, wholesale and Metropolitan levels. I recommend that we form a team to include key players from the retail to regional level in the management, technical, and (if necessary) legal areas. Together, we can be more effective in formulating strategies that meet the challenges of producing comprehensive management plans.

MWDOC proposes a meeting to discuss the aforementioned challenges. These are suggested key players, which you may, of course, decide to change or expand on the list:

Metropolitan – Debra Man, Dirk Reed, Steve Arakawa, Brandon Goshi, Jaime Roberts, Jeff Kielly
Irvine Ranch Water District – Paul Jones, Greg Heiertz, Dick Diamond
Santa Margarita Water District – John Schatz, Dan Ferons
Orange County Water District – Virginia Grebbien, John Kennedy
MWDOC – Kevin Hunt, Matt Stone, I-Wen Yang, Janet Morningstar

Pat Meszaros of MWDOC will contact you to coordinate a meeting date. Meanwhile, you are also welcome to call me at 714-593-5026 or I-Wen Yang (MWDOC's 2005 UWMP Project Manager) at 714-593-5027 for any questions and suggestions you may have on this matter. I appreciate your cooperation and look forward to working with you.

Sincerely,

Kevin P. Hunt

Kevin P. Hunt, P.E.
General Manager

cc: I-Wen Yang
Matt Stone
Janet Morningstar

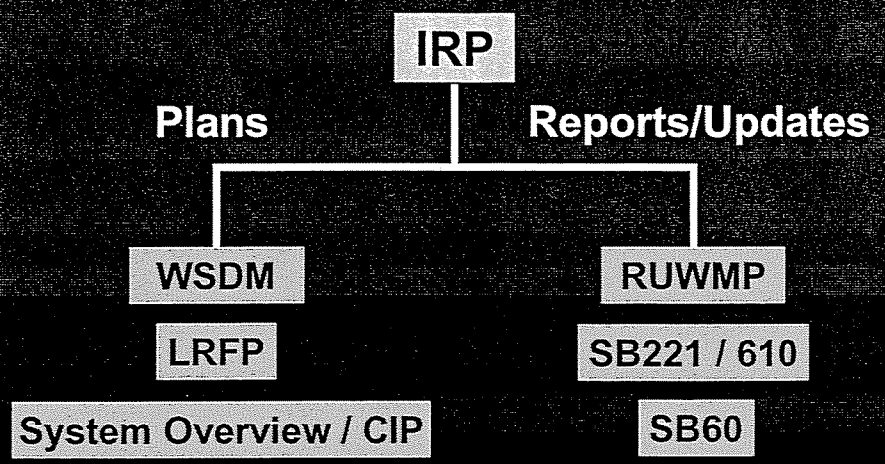
2005 Update of the Regional Urban Water Management Plan

Member Agency Kickoff Meeting
September 9, 2004

Kick-off Meeting Objectives

- Review Schedule and Approach
- Initiate Data Exchange
- Highlight New Requirements
- Coordinate w/Member Agencies

Metropolitan's Integrated Planning

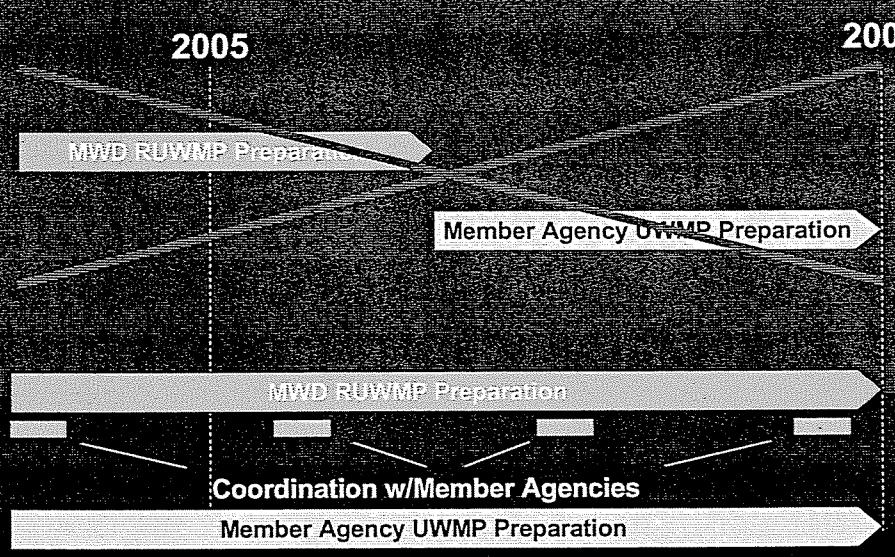


Schedule and Approach

2005 Update Schedule

Sept. – Oct. 2004	Data Coordination Meetings
Fall 2004	DWR Information Workshops
March 2005	Member Agency Data Review
July – Aug. 2005	Member Agency Workshops
September 2005	Information Letter to MWD Board
October 2005	Public Hearing
November 2005	MWD Board Adoption
Dec. 31. 2005	Completed RUWMP to DWR

Data Coordination



Approach

- Regional Plan
- No Allocation of Projected Projects

Demographics & Retail Water Demands

Overview

- Demographics
- Retail M&I Demands
- Conservation Savings

Demographics

- SCAG:
  2004 Regional Transportation Plan
- SANDAG:
  2030 Forecast
- Period: 2005 to 2030

Demographics

Demographics (1)	2005	2010
Population	18,135,200	19,097,000
Occupied Housing Units	5,805,100	6,119,800
Single Family	3,472,100	3,630,700
Multi-Family	2,333,100	2,489,100
Persons Per Household	3.06	3.06
Urban Employment	8,364,600	8,960,400

- Census Definitions
- Member Agency Service Area Boundaries

M&I Demands

- MWD-MAIN
- Econometric Models
- Demographic projections

M&I Demands

Retail Water Demands	2005	2010
Retail Demand	**4,126,000**	**4,237,500**
Retail Agricultural	338,600	313,000
Retail Municipal and Industrial	3,787,400	3,924,500

- MWD: Includes IRP savings target
- Agencies: do not include savings targets

Conservation

- 42 Programs and Fixtures
- CUWCC Savings Factors
- Active Programs through 2003
- Includes plumbing code savings

Conservation – Package

Retail Water Demands	2005	2010
Conservation (2)	485,900	636,300
Installed Active Devices Through 2003	84,100	79,900
Remaining IRP Conservation Target	7,500	63,800
Passive Savings and Price Elasticity	394,300	492,600

- MWD: Includes IRP savings target
- Agencies: do not include savings targets

Summary

- Preliminary Data
- SCAG 2004 RTP / SANDAG 2030
- New Approach to IRP Conservation Target Allocation

Local Supplies & Demands on MWD

Local Data Collection

- **Local Supply Surveys**
  - Help To Show Actual Production/Use
- **LRP Coordination**
  - Recycling, GW Recovery & Desal.
- **Member Agency Coordination**
  - Understand Local System Issues

How Is Local Data Used?

- Estimate MWD Sales
  - IRP - Future Resource Needs
  - Long-range Finance Plan - Budget
  - System Overview - Facility Planning
- Regional Reporting
  - SB 221 & SB 610
  - IRP Updates

Local Supply Data

- Data Reflects Use, Not Production
- Water transfers between agencies appear where it is used

Local Data – MWD Total

Local Supplies	2005	2010
Total Local Supplies	**2,102,300**	**2,463,200**
Groundwater	1,393,700	1,488,800
Surface Water	96,600	140,600
Los Angeles Aqueduct	274,000	274,400
Remaining IRP Local Resource Target	0	33,000
Groundwater Recovery	68,100	81,800
Total Recycling	229,100	286,100
M&I and Agricultural	*153,200*	*201,000*
Groundwater Replenishment	*56,100*	*56,100*
Sea Water Barrier	*19,800*	*28,900*
Other Imported Supplies	40,900	158,600

Local Data – MWD Total

Local Supplies	2005	2010
Total Local Supplies	**2,102,300**	**2,463,200**
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- **No Allocation Of Target To Individual Agencies**

Local Data – MWD Total

Local Supplies	2005	2010
Total Local Supplies	**2,102,300**	**2,463,200**
Groundwater	1,393,700	1,488,800
Surface Water	96,600	140,600
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Other Imported Supplies	40,900	158,600

- **Only Existing & Contracted Projects**

Local Data – MWD Total

Local Supplies	2005	2010
Total Local Supplies	**2,102,300**	**2,463,200**
Groundwater	1,393,700	1,488,800
Surface Water	96,600	140,600
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Other Imported Supplies	40,900	158,600

- **Includes SDCWA/IID/MWD Transfer**

Sales Data – MWD Total

Demands on Metropolitan	2005	2010
Total Metropolitan Demands	2,254,300	2,064,400
Firm	1,935,800	1,747,000
Replenishment	205,500	215,900
Agricultural	113,100	101,500

- Demands On Metropolitan Include Replenishment And Seawater Barrier Deliveries

2005 RUWMP Data

- Data Is Preliminary
- Feedback & Input Requested
- Future Meetings With Individual Agencies

Member Agency Coordination

- Information Coordination
- Member Agency Workshops

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2005 Urban Water Management Coordination Meeting #1

October 21, 2004

Name	Agency	Contact # & email
B. Redcay	EOCWD	714 538 5815
C Kowalski	City Buena Park	(714) 562-3701
Konya Vivanti	City of Garden Grove	714-741-5398 konyav@ci.garden-grove.ca.us
Tim Serlet	Tustin	(714) 573-3150 tserlet@tustin.ca.org
Andrew J. Howard	City of San Clemente	949-361-8253 howarda@sanclemente.org
John Williams	Moulton Niguel Water	949-425-3525 jwilliams@mnwd.com
Mike Robinson	Yorba Linda WD	714-777-3018 mrobinson@ylwd.com
Coleen Monteleone	Mesa Consol WD	949/631-1205 coleenm@mesawater.org
Mike King	ETWD	(949) 837-7050 mking@etwd.com
Greg Woodside	OCWD	gwoodside@ocwd.com
Jamie Herben	City of Orange	714) 744-5563
Renae Hinckley	Laguna Beach	(949) 494-1041
Christopher Regan	Laguna Beach	949 494-1041
Ken Dills	Huntington Beach	714-375-5055 kdills@surfcity-hb.org
Ace Malisos	MWDOC	AMALISOS@MWDOC.com
Mike Green	Fountain Valley	Mike.Green@FountainValley.org
Jeannie Heimberger	Fountain Valley	593-4608
Elizabeth Clatfelter	San Clemente	949 361-8354 clatfelterE@san-clemente.org

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2005 Urban Water Management Coordination Meeting #1

October 21, 2004

Name	Agency	Contact # & email
Tim Deutsch	City of Newport Beach	(949) 644-3010 tdeutsch@city.newportbeach.ca.us
Jay Kleinheinz	Hunt Bch	714 374 1512 KLEINHEIZ@SURFCITY-HB.ORG
Kellie Welch	IRWD	949-453-5604 welch@irwd.com
Warren Coleman	Brea	
Stan Yarbrough	SCWC	SYARBROUGH@SCWATER.COM 714-535-8010 x320
Jeff Lazenby	City of La Habra	JeffL@Lahabracity.com

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

2005 Regional Urban Water Management Plan

Member Agency Coordination Meeting #1

October 21, 2004

10/21/04

Agenda

- Highlight of Changes to Urban Water Management Plan Act from 1999 legislative session to 2004 session
- New Planning Approach
  - Coordination for the preparation of the plan
  - Metropolitan's demand and supply projection
- Coordination
  - Local Supply Data Verification
  - Possible extension of planning horizon
  - Coordination on notifying cities and county on the update
  - Coordination on filing the final plan
- Schedule
- Next Step
  - Local Supply data follow up
  - Retail demand projection
  - DWR Workshop

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Highlight of Changes to Urban Water Management Act

from 1999 Legislative Session to 2004 Session

10/21/04

New Identified Usage of the Urban Water Management Plan

- A complete plan will serve as a foundational document for compliance with both SB610 and SB221 (both statutes require water supply assessment or verification for project or subdivision over 500 units)
- Both Statutes repeatedly identify the UWMP as a document that, if properly prepared, can be used by a water supplier to help meet the standards set forth in the statutes

Highlight of Changes to the Act (1)

- An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

Highlight of Changes to the Act (2)

- Every urban water supplier required to prepare a plan
  - shall notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan
  - Shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies.
  - Shall file with any city or county within which the supplier provides water supplies a copy of its plan or copies of amendments or changes to the plan

Highlight of Changes to the Act (3)

- If groundwater is identified as one of the supply sources, the following should be included:
  - A copy of groundwater management plan
  - Description of the groundwater basin(s); Has the basin been identified as overdrafted? If yes, describe efforts and plan to eliminate the long-term overdraft condition.
  - Description and analysis of location, amount, and sufficiency of groundwater pumped for the past five years
  - Description and analysis of location, amount, and sufficiency of groundwater pumped for the projected years

Highlight of Changes to the Act (4)

- Project Details
  - Provide description, include implementation timeline, of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected demand.

Highlight of Changes to the Act (5)

- Coordination effort stated in Section 10631(j)
  - Urban water suppliers that rely upon a wholesale agency for a source of water, shall provide the wholesale agency with water use projection from that agency for that source of water in five-year increments to 20 years or as far as data is available.
  - The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c).
  - An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

Highlight of Changes to the Act (6)

- Grants and Loans for Conservation Programs
  - The department shall take into consideration whether the urban water supplier is implementing or scheduled for implementation, the water demand management activities that the urban water supplier identified in its urban water management plan, pursuant to Section 10631, in evaluating applications for grants and loans made available pursuant to Section 79163.

Highlight of Changes to the Act (7)

- Information on recycled water
  - A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.
  - A plan to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

Highlight of Changes to the Act (8)

- Water Quality
  - The plan shall include information relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

Highlight of Changes to the Act (9)

- Funding or Assistance Eligibility
  - An urban water supplier has not prepared, adopted, and submitted an updated urban water management plan that is consistent with Section 10631,
    - is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from state
    - is ineligible for funds made available pursuant to any program administered by the department

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

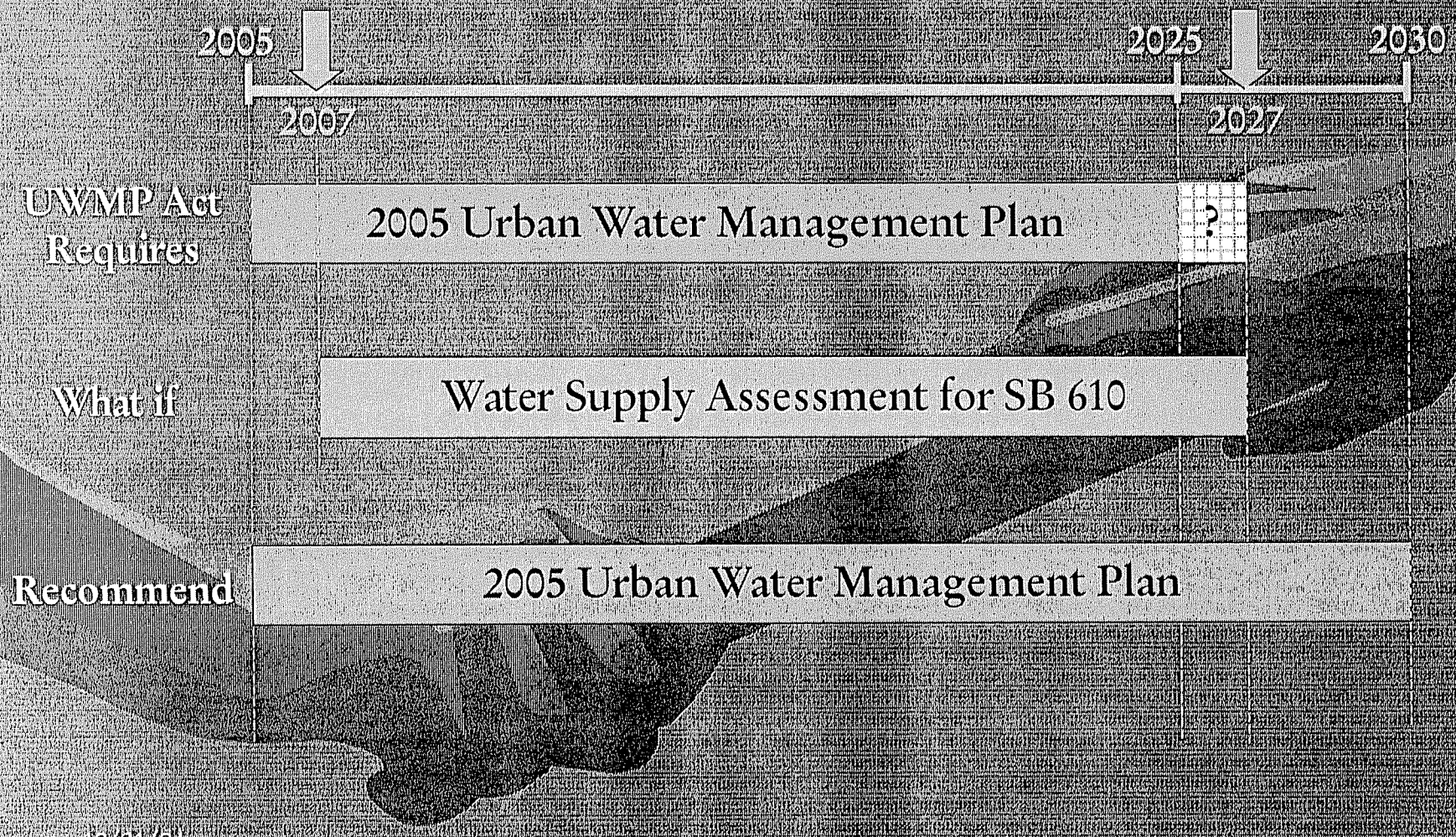
New Planning Approach

10/21/04

MWDOC Plan

- MWDOC will prepare its Regional Urban Water Management Plan out to 2030 and suggests member agencies to do the same.
- MWDOC requests member agencies to provide the local supply and retail demand data to 2030-31.
- MWDOC is requesting that Metropolitan extend the planning horizon to 2030 for its Regional Urban Water Management Plan.

Reason for Extending UWMP Planning Horizon from 2025 to 2030



How is Local Data Used?

- Estimate Imported Demand on Metropolitan
- Data reflects use, not production
- Water transfers between agencies appear where it is used

Local Supply Data – Detail Sheet
(Use City of San Juan Capistrano as example)

Name of Project	Status	2004-05	2029-30
San Juan Capistrano Potable Groundwater from San Juan Basin	Existing	730	1000
San Juan Capistrano Valley Non-Domestic Water System Existing	Existing	420	300
San Juan Capistrano Valley Non-Domestic Water System Expansion (From GW) -LRP-98	LRP	0	1200
San Juan Capistrano Valley Non-Domestic Water System Expansion (From Recycle) -LRP-98	LRP	0	2500
San Juan Capistrano San Juan Desalter	Local Target (High Certainty)	3390	4800

Summary:

Groundwater from Non-OCWD Basin

Existing	730	1,000
LRP	-	-
Local Target (High Certainty)	-	-
Local Target (Low Certainty)	-	-

Groundwater Recovery from Non-OCWD Basin

Existing	-	-
LRP	-	-
Local Target (High Certainty)	3,390	4,800
Local Target (Low Certainty)	-	-

Reclamation

Existing	420	300
LRP	-	3,700
Local Target (High Certainty)	-	-
Local Target (Low Certainty)	-	-

Preliminary Data – MWDOC Total

Forecast Fiscal Year	2005	2010	2015	2020	2025
Hydrology Year	normal/normal	normal/normal	normal/normal	normal/normal	normal/normal
I. Consumptive					
Demand	**511,670**	**529,995**	**548,303**	**579,456**	**603,253**
M&I Demand	495,466	520,137	541,557	575,864	600,649
Ag Demand	16,204	9,858	6,746	3,592	2,604
Supplies	**511,670**	**529,995**	**548,303**	**579,456**	**603,253**
Local	**295,435**	**329,825**	**347,662**	**356,901**	**366,530**
Calculated BPP	66%	73%	78%	78%	78%
OCWD Devliered for M&I	216,868	243,971	259,600	267,513	276,169
OCWD Delivered for Ag	-	-	-	-	-
Reclamation M&I	31,931	47,166	49,603	56,556	58,513
Reclamation Ag	-	-	-	-	-
Surface M&I	13,928	7,123	9,806	7,183	7,087
Surface Ag	12,963	8,780	5,868	2,864	1,976
Others M&I	19,745	22,785	22,785	22,785	22,785
Others Ag	-	-	-	-	-
Met	**216,235**	**200,171**	**200,641**	**222,555**	**236,723**
Firm	213,013	199,093	199,763	221,827	236,095
Ag	3,222	1,078	878	728	628

What We Can Provide You

- After collecting all data from you and completing water retail demand projection, we should be able to provide you:
  - OCWD Basin Production (those derive from BPP) based on replenishment assumptions and analysis provided by OCWD and MET
  - Imported demand on MET

10/21/04

What We Need From You (2)

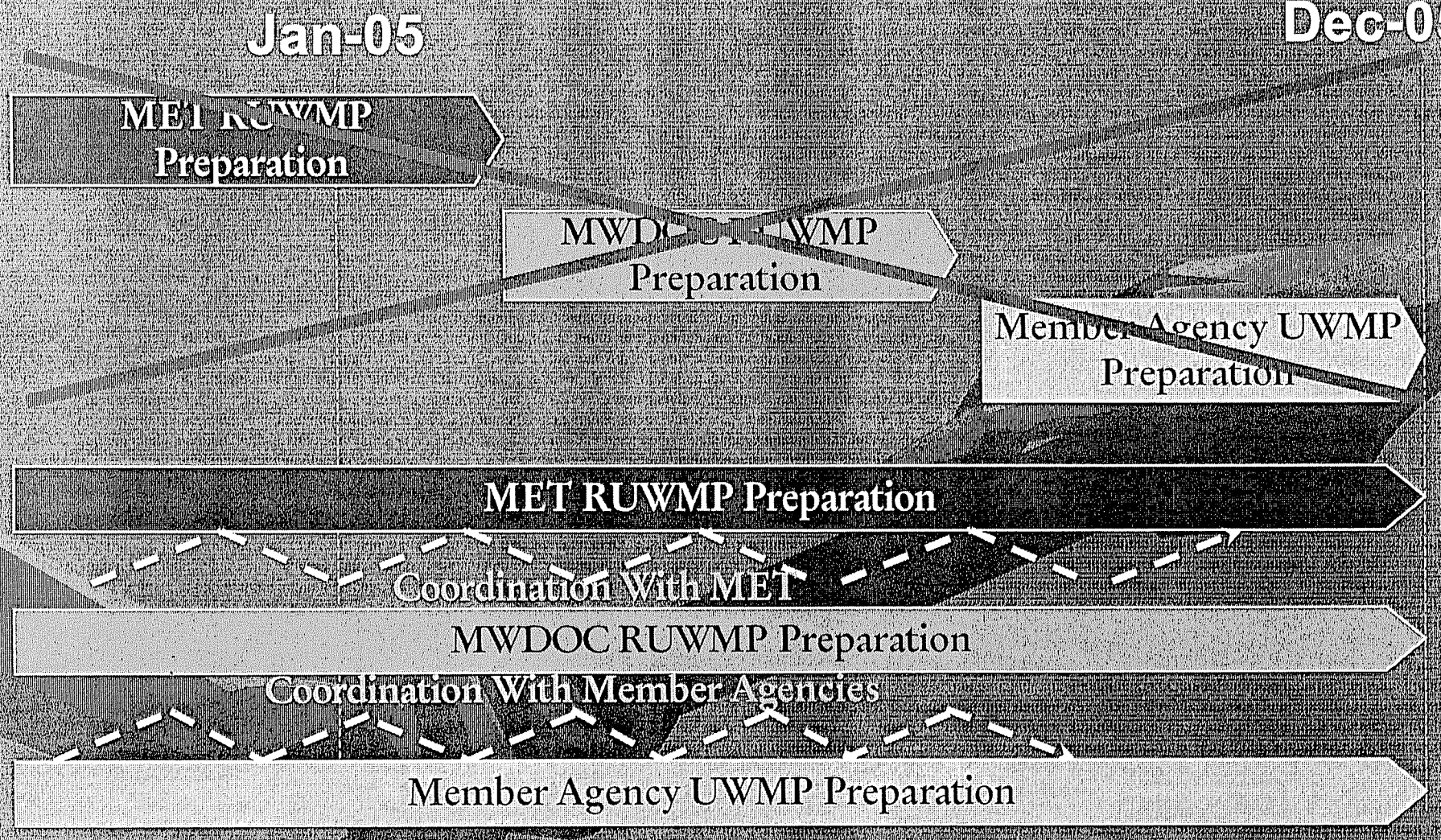
- Provide all data by projects with status as defined in the previous slide
- Please indicate which local target projects will be included in your Urban Water Management Plan
  - Question: Which local target projects should be included in the plan? High Certainty only or all?

What We Need From You (1)

- Update all the following supplies that are currently available or are under development to be available to your agency:
  - Groundwater production from any non-OCWD Basin
  - Groundwater recovery production (including those from OCWD Basin)
  - Reclamation Production
  - Surface Water
- Do NOT need to include regular (within BPP) OCWD Basin pumping because the projection of such supply requires further coordination of analysis among MWDOC, OCWD, and MET

See flow chart

Data Coordination



10/21/04

General Planning Approach

Demand

Passive Conservation

Active Conservation

Water Retail Demand After Conservation

Supply

Imported Supply from MET

Local Supplies In Planning

Existing Local Supplies

Change in Demand Projection

Water Demand Based on Demographic Data

Old Approach	New Approach: Metropolitan Region	New Approach: MWDOC
Passive Savings & Price Elasticity	Passive Savings & Price Elasticity	Passive Savings & Price Elasticity
Known Active Conservation Plus Projected Active Conservation based On Historical Trend	Installed Active Conservation Through 2003	Installed Active Conservation Through 2003
	Remaining IRP Conservation Target	Agencies Identified Conservation Target
Retail Den After Conserva	Demand After ervation	Retail Demand After Conservation

Annual IRP Report Card monitors and verifies the progress of local projects in meeting IRP target

10/21/04

Change in Supply Projection

Old Approach

Existing projects In production

Projects with LRP contract

Projects in planning (wish list)

Imported De On ME

New Approach

Metropolitan Region

Existing projects In production

Projects with LRP contract

Remaining IRP Local Resource Target

ted Demand n MET

MWDOC

Existing projects In production

Projects with LRP contract

Agencies Identified Local Development Target

Imported Demand On MET

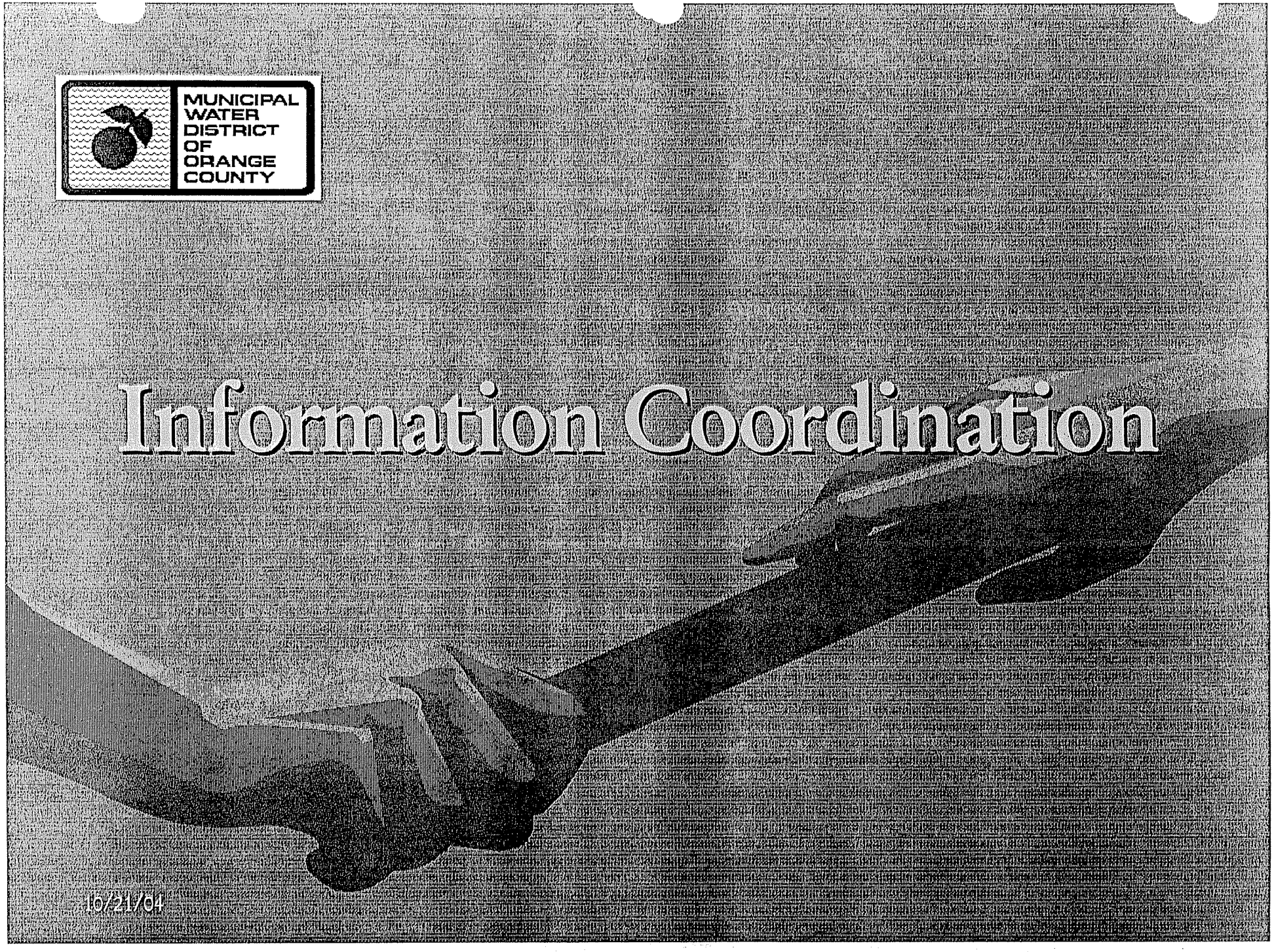
Retail Demand After Conservation

Annual IRP Report Card monitors and verifies the progress of local projects in meeting IRP target

10/21/04

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Information Coordination



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Local Supply Data Verification

- Data Provided is preliminary (taken from survey done in Spring 2004)
- Feedback & input requested
- Project Status Definition:
  - Existing = projects currently produce water
  - LRP = projects has "Local Resource Project" contract with Metropolitan
  - Local Target (High Certainty) = projects in design/construction or in planning with secured funding source and has environmental clearance
  - Local Target (Low Certainty) = Projects in planning without secured funding or environmental clearance

Other Coordination

- A joint letter from MWDOC and member agency that notifying cities and county for the updates
- Jointly file the final plans to cities and county
- <u>One suggestion:</u> For those that are considering using consultants to assist on the 2005 update, would you be interest in achieve some economies of scale by jointly retaining a consultant that can provide a similar service to the member agencies that are interested?

2005 RUWMP Schedule

	9/04	10/04	11/04	12/04	01/05	02/05	03/05	04/05	05/05	06/05	07/05	08/05	09/05	10/05	11/05	12/05
Notification of Update																
Local Supply Data Coordination		10/21 Met MWDOC Member Agency														
Retail Demand Projection Coordination					Jan-05 Met MWDOC Member Agency											
DWR Information Workshop (Worksheets)						Feb-05 MWDOC Member Agency										
Reliability Analysis							Met MWDOC Member Agency									
Report Production																
Letter to Board																
Public Hearing																
Board Adopts the Plan																
File 2005 RUWMP to DWR, Cities, and County																

10/21/04

Next Step

- Request feedback and input on the local supply data by November 4
- Second coordination meeting in January 2004 for
  - MWDOC will share the result of projected supply under OCWD Basin Percentage Production
  - MWDOC will share the result of retail demand projection using Metropolitan retail demand and conservation models
  - Member agencies provide MWDOC with their water retail demand projections
- DWR Workshop in West/Central Basin Water District (LA) on January 27, 2005
- MWDOC will review the information from the workshop with member agencies in February 2005

Urban Water Management Plan Coordination Meeting #2

Sign-In Sheet

	Name	Company	Contact #/e-mail
1	Michael Gomez	City of Tustin	714-573-3145 / mgomez@tustinca.org
2	Konya Vivanti	City of Garden Grove	714-7415398 / konyaV@ci.garden-grove.ca.u
3	Elizabeth Clatfelter	City San Clemente	9494819055 clatfelterE@san-clemente.org
4	Jeannie Heemburg	City of Fountain Valley	593-4608
5	Ron Krause	City of Brea	714-990-7642
6	Wil Davis	City of Westminster	714-895-2876 x6206
7	MIKE KING	ETWD	949 837-7050 MKING@ETWD.COM
8	TOM STEPHENSON	MNWD	949-425-3553 / tstephenson@mnwd.ca
9	Ken Dills	City of HB	714-375-5055 / kdills@surfcity-hb.c
10	Kelly Welch	IRWD	949-453-5604 / welch@irwd.ca
11	Mike Robinson	YLWD	714-777-3018
12	Lee Jacobi	MWDOC	714 593 5011 LJacobi@mwdoc.c
13	CHUCK FOWLER	BUENA PARK	(714) 562-3701
14	DAN FERANS	SMWD	danf@smwd.com
15	Lisa Mattert	City of Orange	lmattert@cityoforange.
16	Joe Berg	MWDOC	
17	Barry Corson	MSD	(949) 631-1205
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			

Urban Water Management Plan Coordination Meeting #2 – Water Demand Projection

Municipal Water District of Orange County

January 24, 2005

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Outline

- Objective
- Introduction of Metropolitan's water retail demand projections (MWD-MAIN)
- Methodology to allocate Metropolitan's projections to MWDOC member agencies
- Compare allocated MWD-MAIN projections to those projected by agencies
- Comments and inputs
- Steps to finalize the projections for the 2005 Regional Urban Water Management Plan

Why Coordinate Retail Demand Projections?

- To be consistent in planning element
  - Section 10620 (c) – (paraphrase) a wholesale water agency must obtain the consent from its retail agency(s) for the inclusion of any information relating to the retail agency(s)
- To be in agreement for a regional-wide supply reliability planning
  - Section 10631 (k) – (paraphrase) if an water supplier receives, or project receiving, wholesale water it must provide the wholesale agency with the amount of water that the water supplier projects to purchase from the wholesaler; The wholesaler must provide written information on the reliability of the wholesale supplies and amount expected to be delivered, during normal, single-dry and multiple-dry years to the water supplier.

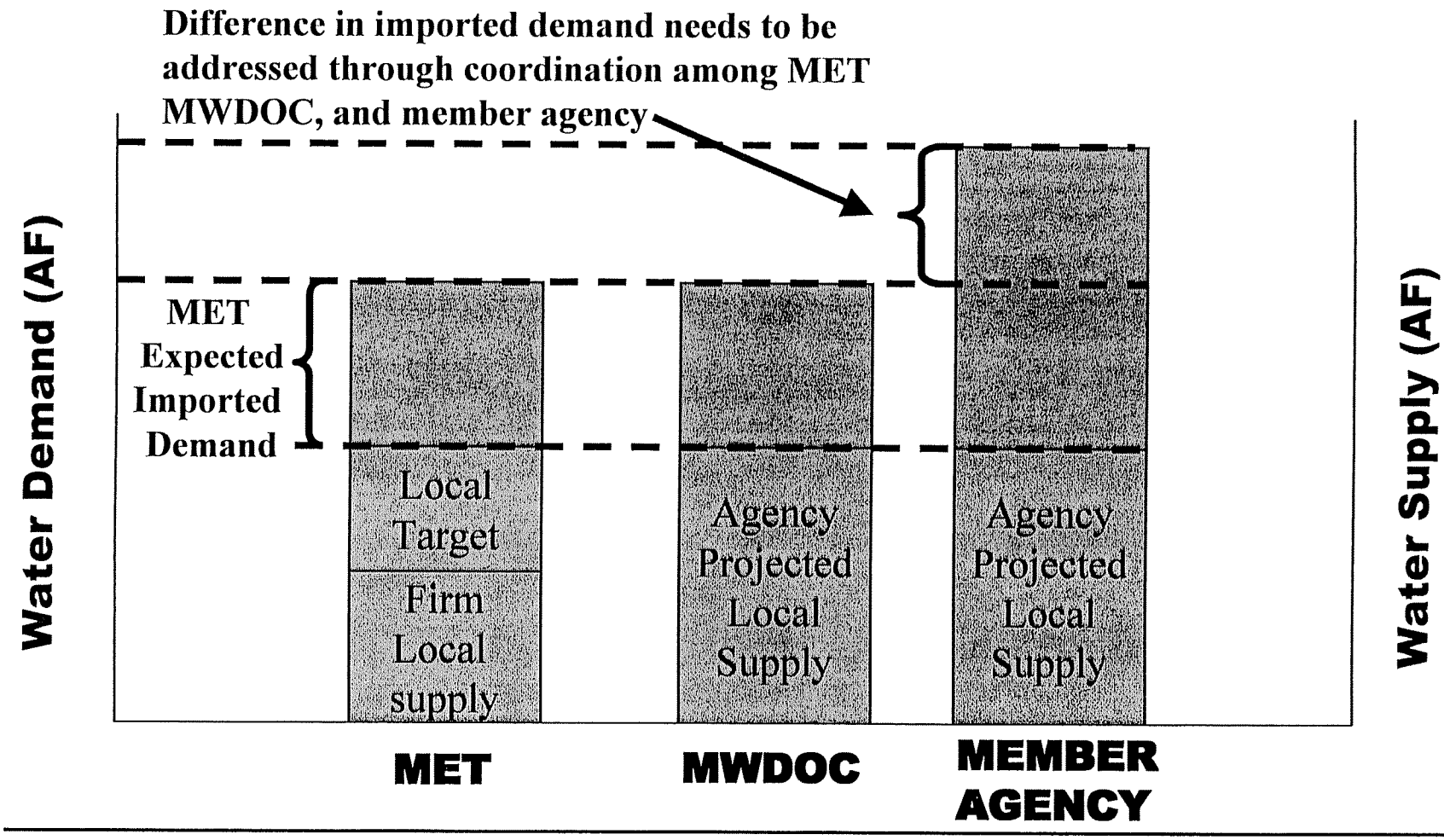
Goal for MWDOC 2005 Regional Urban Water Management Plan

- MWDOC plans to have its projected retail water demand to be consistent with Metropolitan's projection (using MWD-MAIN and 2004 SCAG forecast data) for MWDOC
- MWDOC plans to work closely with its retail agencies to reach agreement on the retail water demand projections; however, if an agreement is not possible, MWDOC plans to be able to address the difference

What We Try to Accomplish?

- Not to determine whose planning projection is "right" or "better"
- But to coordinate among Metropolitan, MWDOC, and retail agencies on how and what planning elements are projected at each level
- Learn the differences of the projections and find plans to address the differences

MWDOC's Role in Addressing the Difference in Planning Elements



Introduction of Metropolitan's Water Retail Demand Projection : MWD-MAIN

- Presentation by Metropolitan Staff - Warren Teitz

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Inserts of Presentation for Metropolitan Retail Projection

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Conservation (3)

- Process:
  - Step 1: Aggregate projections of 42 conservation programs into seven sub-categories:
    - Active Residential
    - Active Non-residential
    - Active Landscape
    - Passive Residential – natural replacement
    - Passive Residential – new growth
    - Passive Non-residential – natural replacement
    - Passive Non-residential – new growth

Conservation (4)

- Process:
  - Step 2: Allocate the conservation savings by categories
    - Active: allocated based on the percent share of MWDOC-reported active programs for each retail agency. The following proxies are used to calculate the share percentages:
      - Residential: ULFTs
      - Non-Residential: Total fixtures distributed
      - Landscape: Total landscape interventions
    - Passive: allocated based on demographics and constructed indexes
      - Natural replacement
      - New Growth is based on post-1992 housing growth and employment growth

Conservation (5)

- Process:
  - Step 2: Allocate the conservation savings by categories (Continued)
    - Increase saving by 7.8 % due to decrease of system losses
  - Step 3: Aggregate the seven sub-categories of projected conservation saving for each agency to determine the conservation specific for the agency

Retail Agency Diagnostics and Calibration (1)

- Inputs:
  - Retail agency sector water use history
  - Retail agency retail M&I history
  - Retail agency population estimate

Retail Agency Diagnostics and Calibration (2)

- Process:
  - Projected sector water use for each agency is compared to agency-reported average sector water use
  - Projected demands are compared to agency-reported actual and projected retail M&I demands. The overall Mean Average Percent Error (MAPE) for 2000, 2001, 2002, and 2003 is used as a guiding performance measure. Professional judgment and MWDOC-provided local knowledge is also used.
  - The MWD-MAIN generated water use factors are adjusted up or down to reflect agency-specific data
- Output:
  - Agency retail demands adjusted to reflect local demand patterns. The resulting total is now +/- 3 % compare to the MWD-MAIN Projection

Microsoft
werPoint Presentati

MWD-MAIN Control

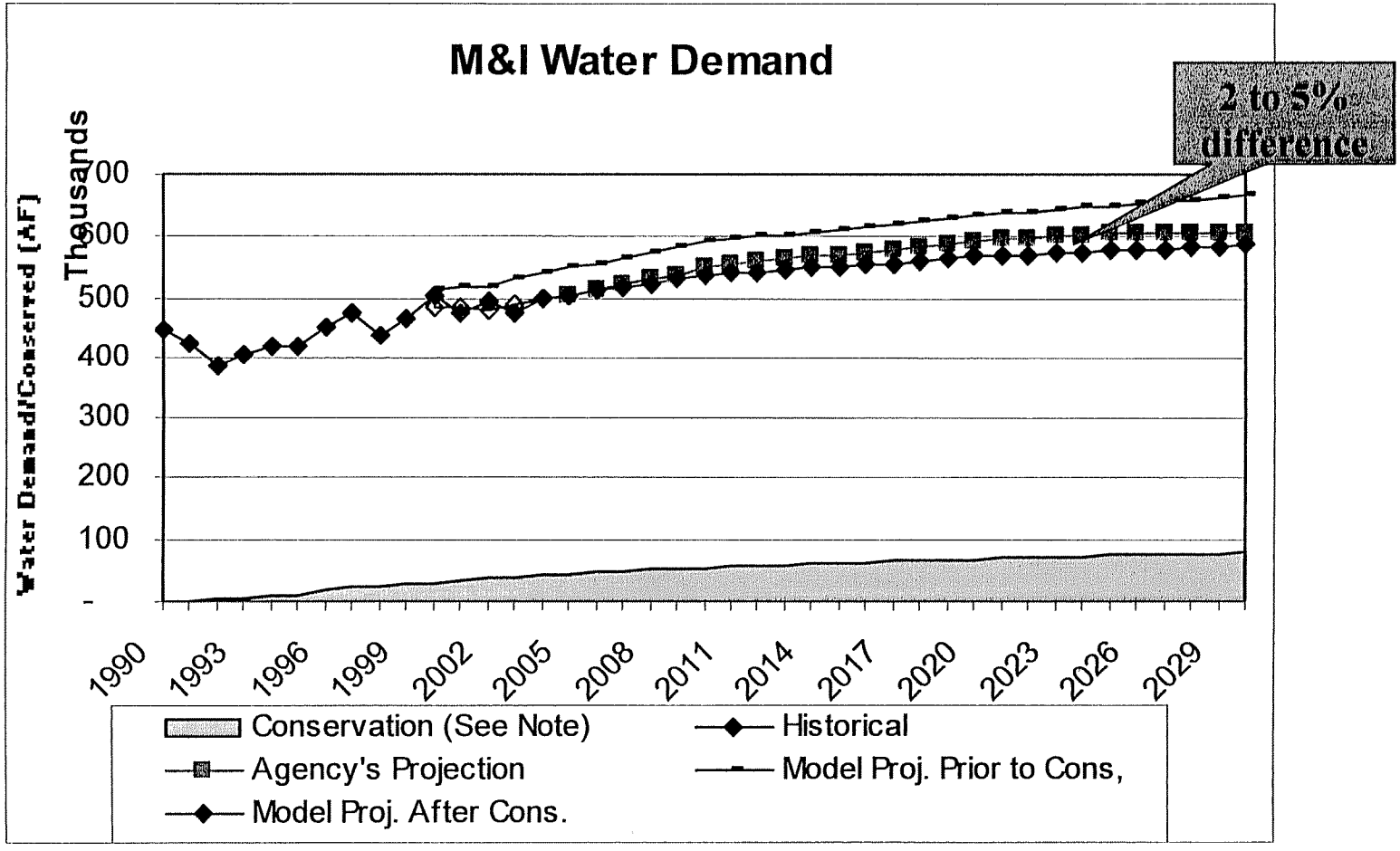
- Inputs:
  - The adjusted agency retail demand from STEP 4
  - MWD-MAIN projection for MWDOC
- Process: the modified water use factors for all agencies are adjusted either up or down by a single percent factor to bring the average annual percent to be within 0.5% of MWDOC retail demand projected by MWD-MAIN
- Output:
  - A set of agency projections that add up to the MWD-MAIN generated projection for MWDOC, but reflecting local water use.

Comparison of Agency's Projections

Click Here to see result for each agency

Microsoft Excel Worksheet

Conclusion – MWDOC Total



Note: Conservation includes present and future passive conservation and existing active conservation program as of FY 03

What is next?

- MWDOC Receives inputs and comments
- Member agencies to provide MWDOC with the demand projection that will be used for the agency's 2005 UWMP
- MWDOC will follow up with individual agency to discuss the differences and a plan to address the differences.

2005 Urban Water Management Plan Workshop

NAME	AGENCY	Contact Info 7/7/05
DAN FERONS	SMWD	
Jeff Lazenby	City of La Habra	(562) 905-9792
Kristin Swinart	RMP/La Habra	949-282-0123 x222
NEHA GAJJAR	CAROLLO ENG FOR CITY OF BUENA PARK	714-593-5100
Ken Dills	Huntington Beach	714-375-5055 kdills@surfcity-hb.org
Harvey Gobas	Psomas	714-751-7373 hgobas@psomas.com
Liping Liu	Civiltec for City of Brea	(626) 357-0588
JOE MANKASEWICH	CITY OF SAN JUAN CAPISTRANO	949 487-9313 jmankasewich@sanjuancapistrano.org
SAM NABBOUT	SA ASSOCIATES CITY OF LA PALMA	626-821-3456 phone SNABBOUT@SAASSOCIATES.NET
Elizabeth Gatfeller	city San Clemente	949 361-8354
Hector Ruiz and Sharon Smith	Tribuco Canyon WD	949-858-0277
Lisa Spresney	Brown Caldwell	714-689-4857
BARRY CARLSON	MWDOC	949 621-1205
TIM DEUTSCH	City of Newport Beach	949 644 3010 tdeutsch@city.newport-beach.ca
Christopher Regan	Laguna Beach CWD	cregan@LBCWD.org
Wil Dawe	City of Westminster	714 895 2876

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS
AMPAD

Run – weather fluctuation for surface San Juan
↳ footnote (→ difference)
→ Buffer.

2005 Urban Water Management Plan

Workshop on Information Packages to Member Agencies

Municipal Water District of Orange County

July 7, 2005

Agenda

- Format of the Information Package
- Types of Data Provided in Information Package
  - Sources of Supply in Various Water Years
  - Total Demand
  - Wholesale Supplies (Demand on MET via MWDOC)
  - List of Future Local Projects
  - Comparison of Supply and Demand in Various Water Years
- How Data was Developed
- Determination of Types of Water Years
- Updates to the Package
- What's Next – Draft Plan
- Questions

Format of Information Package

- MWDOC adopted the format of 2005 UWMP "Review for Completeness" developed by Department of Water Resources (DWR)
- Of 60 tables required by DWR, MWDOC completed 33 using information specific for your agency
- You will need to complete the remaining 27 tables for your plan

Types of Data Provided

- Sources of Supplies (Table 4)
  - Groundwater – OCWD Basin, La Habra Basin, San Juan Basin
  - Surface Water –Runoff from Santiago Creek, Recovery from Local Streams
  - Recycled Water
  - Purchased from Others – Metropolitan Water District of Southern California, California Domestic Water Co.
- Groundwater Information (Table 6 to 7)
  - Historical Production from 2000 to 2004
  - Projected Production for 2010 to 2030

Types of Data Provided

- Reliability of Supplies (Table 8)
  - Normal Water Year
  - Single Dry Water Year
  - Multiple Dry Water Years

Types of Data Provided *(cont'd)*

- Determination of Types of Water Years (Table 9)
  - Normal Water Year (Average of 83 Historical Hydrologic Condition from 1922 to 2004)
  - Single Dry Water Year (1961)
  - Multiple Dry Water Years (1959, 1960, and 1961)

Types of Data Provided *(cont'd)*

- Total Demand (1+2+3+4) (Table 12 to 15)
  1. Municipal & Industrial and Agricultural Demand
  2. Groundwater Replenishment Demand
  3. Seawater Barrier Demand
  4. Water Loss Demand

Types of Data Provided *(cont'd)*

- Projects that provide planned supplies to meet demand (Table 17)
- MWDOC member agencies are requested to provide estimated starting construction dates for projects on your list

Types of Data Provided *(cont'd)*

- Demand of Wholesale Supplies from Metropolitan Water District of Southern California (MET) via MWDOC (Table 19 to 22)
  - MET Demand = Total Retail Demand – Local Supplies
  - MET Supply = MET Demand (MET is planning on meeting 100% of demand according to its draft plan)

Types of Data Provided *(cont'd)*

- Estimate Minimum Water Supply for Next Three Years "Water Shortage Contingency Plan" (Table 24)

Types of Data Provided *(cont'd)*

- Supply and Demand Comparison (Table 40 to Table 60)
  - Normal Water Year
  - Single Dry Water Year
  - Multiple Dry Water Years

How Data was Developed

- Information from Member Agencies
  - Retail Demand
  - Local Supplies
    - Groundwater from La Habra Basin and San Juan Basin
    - Purchased from California Domestic Water Co.
    - Surface Water
    - Recycled Water
  - List of Future Local Projects

Retail M&I Demand Projection for MWDOC
(Draft UWMP-05)

Orange County Retail Agency Forecast

January 24, 2005

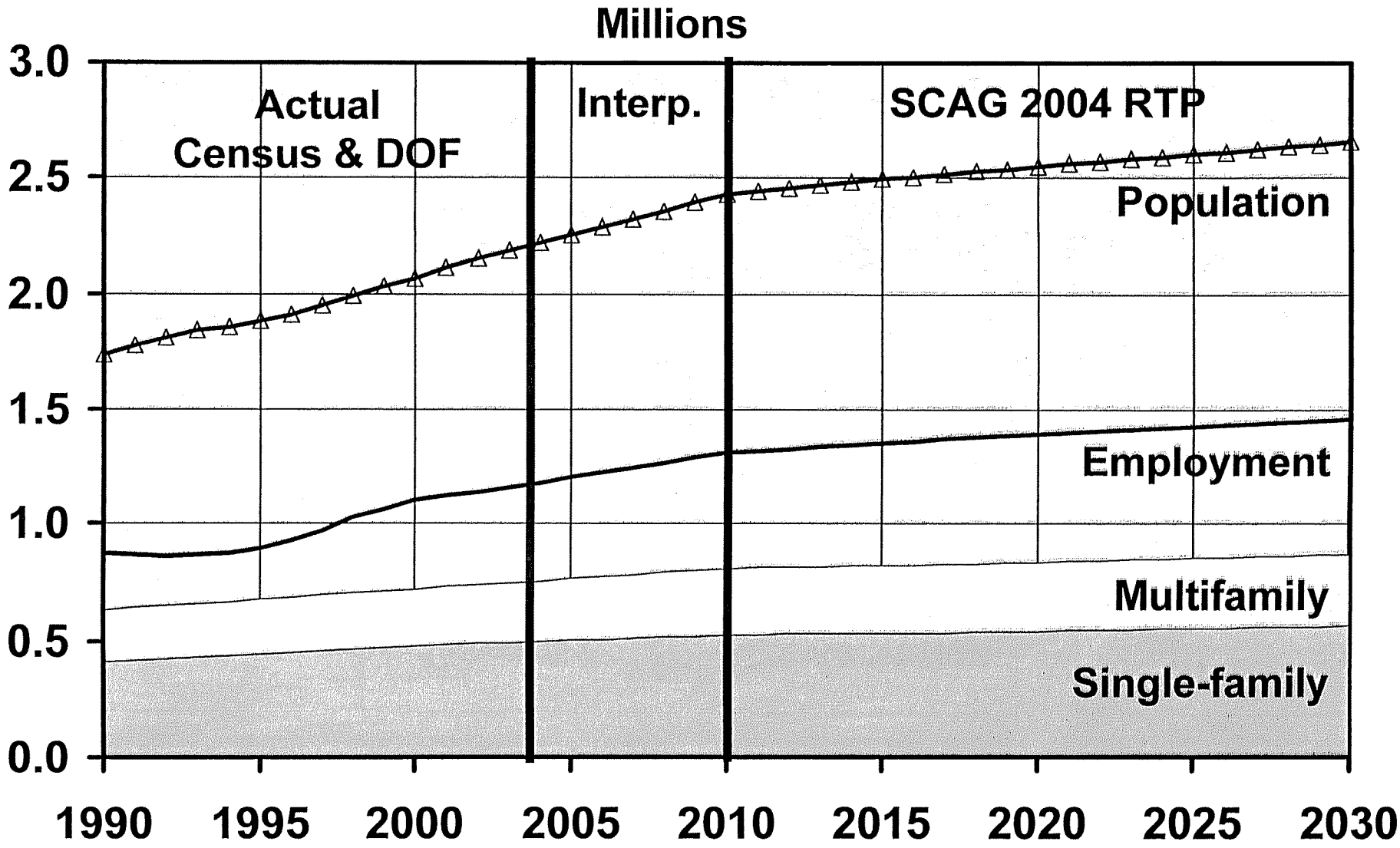
Outline

- Methodology
- Demographics
- Conservation
- Retail M&I Projection

MWD-MAIN and Sectors

Demographic		Projected Use		Conservation		Demand
Single Family Units	X	Gallons / SF Unit / Day	-	Conservation Savings (AF)	=	Single Family Demand
Multi-family Units	X	Gallons / MF Unit / Day	-	Conservation Savings (AF)	=	Multifamily Demand
Employment	X	Gallons / Emp. / Day	-	Conservation Savings (AF)	=	CII Demand
MWD-MAIN Model (Adds sys. losses / unmetered)				Conservation Model		Total Retail Demand

Driver Variables



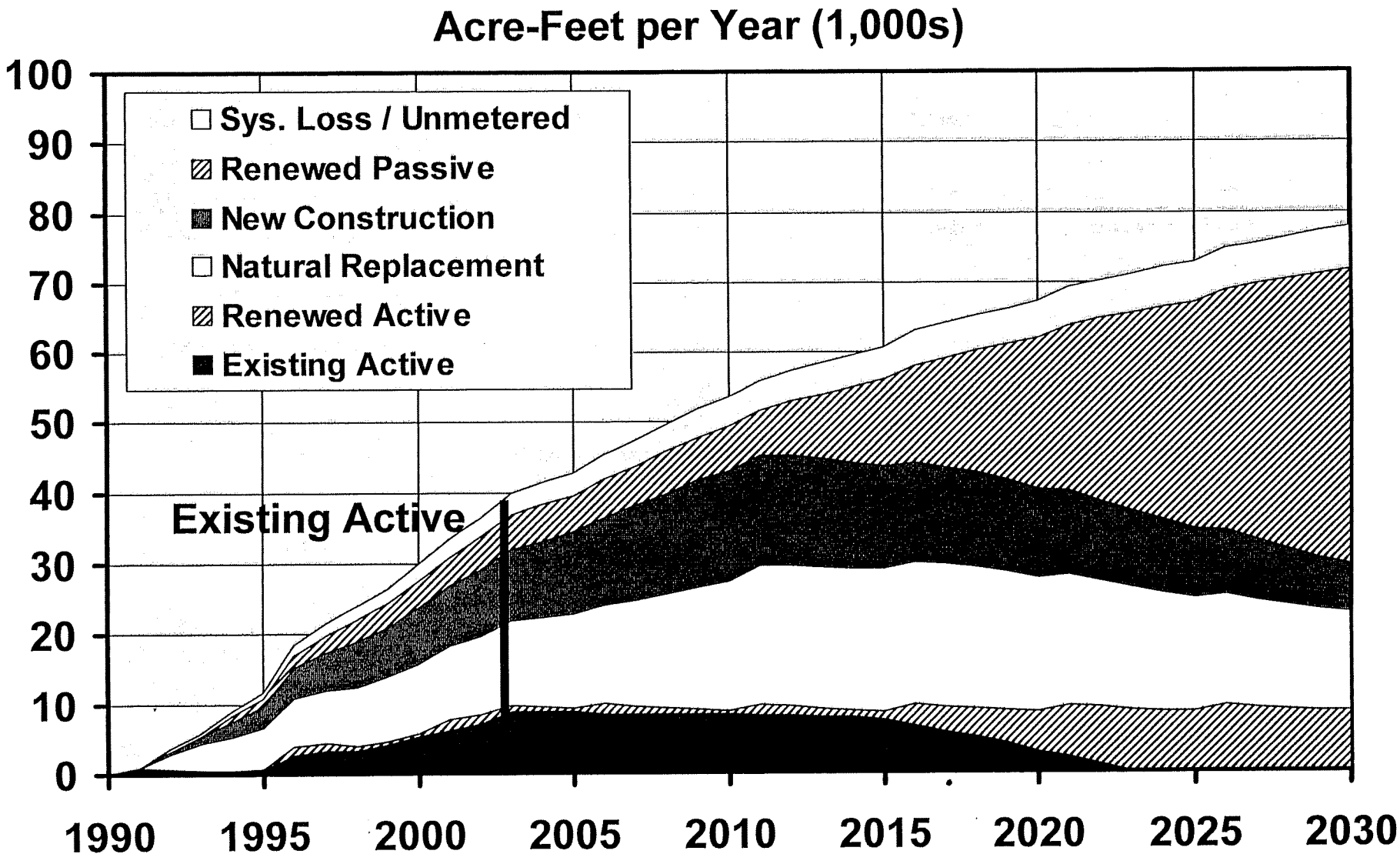
Explanatory Variables

Variable	2000	2030	Change
Household Size	2.8	3.0	+7%
Med HH Inc. ('00$s)	$73.8	$87.1	+13%
Rates ('00$s /CCF)	$1.38	$2.06	+49%
Housing Density	1990: Held Constant		
Industrial Share	14.6%	13.5%	-6.8%
Climate	Temperature, Rain, Rainy Days, Cooling Degree Days		

Improved Conservation Model

- Active Programs
  - 40+ Programs and devices
  - Existing Programs as of FY03
- Passive Conservation
- Savings Factors
- Demographic Consistency

Projected Savings

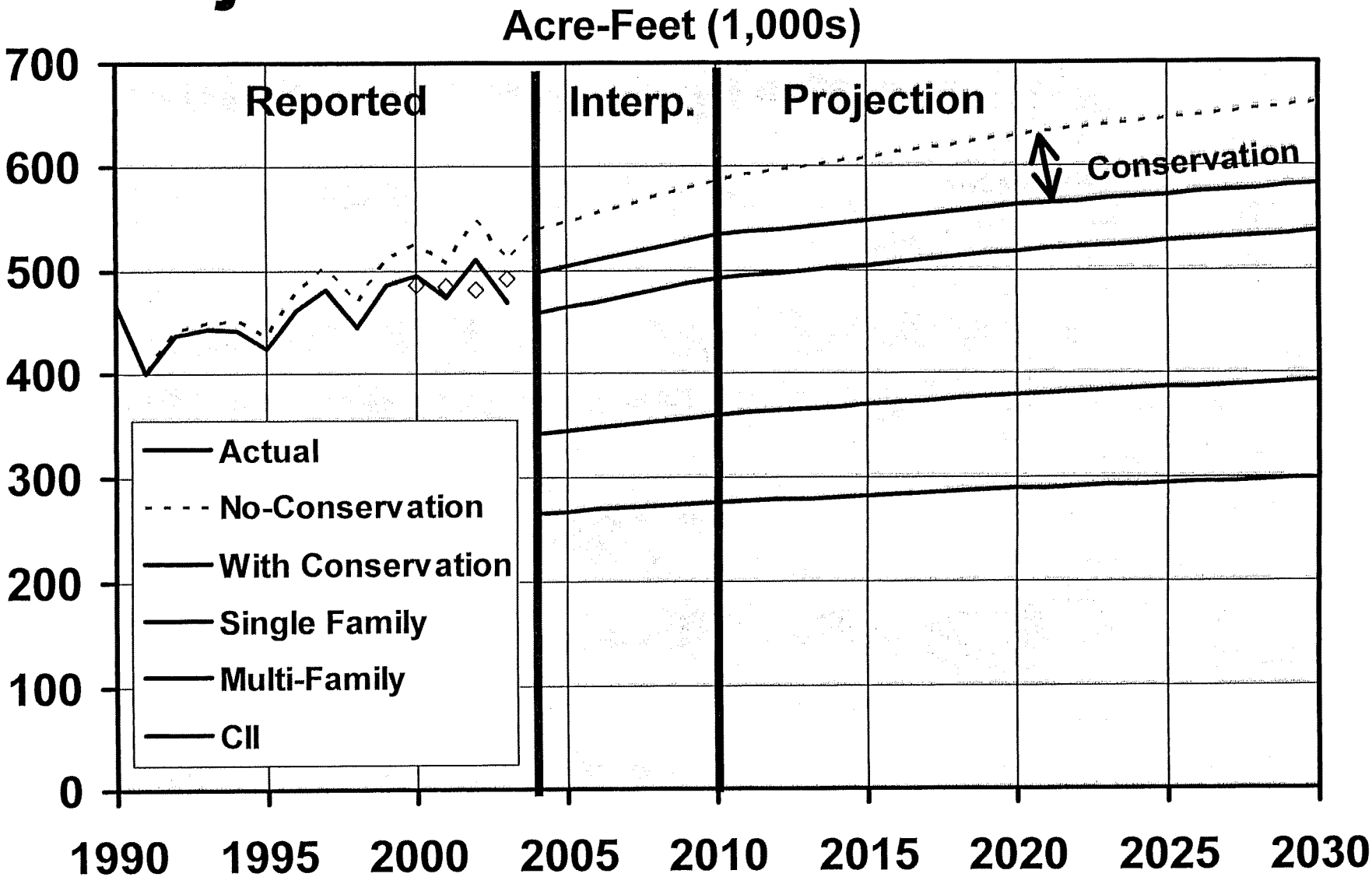


Projected Use Factors

Gallons per Day

Use Factor	00-04 Avg.	2030	Change
Single Family (GUD)	468	472	+4
Multifamily (GUD)	272	278	+6
CII (GED)	92	88	-4
Sys. Loss (GPCD)	16	15	-1
GPCD	204	196	-8

Projected Retail M&I Demands



Note: Projection assumes normal weather

Summary

MWDOC projection:

- **Accounts for demographic and economic trends**
- **Includes comprehensive conservation savings analysis**
- **Provides the control for "top-down" Orange County retail projection**

MWDOC Retail Demand Projection

- GOALS
  - Project MWDOC retail water demands in such way that the sum of its retail agencies should be consistent with Metropolitan's MWD-MAIN projection for MWDOC
  - Tie each retail agency projection to SCAG (Southern California Association of Governments) demographic projection
- CONSTRAINT - not enough time and resources to implement a version of MWD-MAIN model that is tailored for MWDOC service area
- DECISION - allocate MWD-MAIN MWDOC projection to its retail agencies using a top-down, allocation-based method

MWDOC Retail Demand Allocation Methodology

Metropolitan Projection

Demographic Projection for MWDOC **X** MWD-MAIN Developed Water Use Factors For MWDOC **–** Conservation Projection for MWDOC **=** Retail Water Demand for MWDOC

Step 1: Demographic Projection for each MWDOC retail agency

Demographic For Agency A

Σ agencies = MWDOC

Step 2: Take each Agency demographic Multiply by average Water use factors for MWDOC (by sectors)

X Water Use Factors

Step 3: Allocate Conservation For each MWDOC Retail agency

Demographic For Agency A

Σ agencies = MWDOC

Retail Water Demand for each MWDOC retail Agency

Retail Demand For Agency A

Σ agencies = MWDOC

Step 4: Diagnostics And calibrate Water use factors for Each agency based On historical M&I Retail Demand

Water Factors Specific for Agency A

Step5: <u>MWD-MAIN Control</u>
Modify water use factors for each Agency by a single percentage To bring the sum of average Annual percent to be within 0.5 % Of MWDOC retail demand projected by MWD-MAIN

Inserts of Presentation for MWDOC Retail Demand Allocation Methodology

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Demographic (1)

- Projections of key demographics were developed using metropolitan's GIS-based Land Use and Demographic Analysis Tool (LANDAT)
- Inputs: the query featured the following data sets
  - SCAG 2004 Regional Transportation Plan growth forecast (Transportation Analysis Zones (TAZ) geography)
  - 2000 Land Use (SCAG)
  - 1990 & 2000 Census Demographics
  - Orange County Retail Agency Map prepared by MWDOC

Demographic (2)

- Process: Base on OC Retail Agency Map, LANDAT allocates demographics at the TAZ and Census tracts using land use.
- Output: Retail Agency Demographics
  - Population
  - Single-family households
  - Multifamily households
  - Employment (Urban Total)
  - Years: 1990, 2000, 2005, 2010, 2015, 2020, 2025, 2030

Demographic (3)

- **Post-LANDAT Adjustments**
  - Interpolation to annual demographics
    - [illegible]
    - 1990-2004: Demographics are increased using California Department of Finance (DOF)'s Orange County growth pattern. Employment Development Dept.(EDD) data is used for employment
    - 2004-2010: demographics are interpolated from the DOF estimate to SCAG's 2010 projection

Demographic (4)

- **Post-LANDAT Adjustments (Continued)**
  - Irvine Ranch WD and Santa Margarita WD
    - Post-2000 growth rates are increased based on meter connection data for the cities of Irvine Ranch WD and Santa Margarita to reflect their higher growth rates comparing to rest of the county.
    - Adjusted IRWD and SMWD up means other agencies decrease
  - Control to Metropolitan's projection for MWDOC
    - The final step is controlling the agency demographics to Metropolitan's projection for MWDOC. Due to the differences in the boundaries of the MWD member cities, small adjustments, < 0.4% were required

Allocating MWD-MAIN Base Projection

- MWD-MAIN projections of average "base" water use
  - Single Family: gallons per household per day
  - Multifamily: gallons per household per day
  - Non-Residential: gallons per employee per day
  - System Losses: per person per day
- Process:
  - For each year, multiply projected water use by the projected demographic & convert to acre-feet per year
  - The four sectors are summed for each year, developing a preliminary base demand forecast (without conservation)

Conservation (1)

- General Description:
  - Conservation projections for Orange County member agencies are allocated to retail agencies based on demographics and active conservation programs. Savings due to reductions in system losses are also calculated. Savings due to price are already included in the base forecast.

Conservation (2)

- Methodology of Allocation:
  - Metropolitan's conservation projection for MWDOC is divided into three categories of active conservation and four categories of passive conservation, which are each allocated to MWDOC retail agencies. The results are agency specific conservation savings projections consistent with Metropolitan's forecast and tied to each agencies demographics.
- Inputs
  - Agency demographic history and projections
  - Agency active conservation program history up to July 2003
  - Metropolitan active and passive conservation projections

How Data was Developed *(cont'd)*

- Data Projected Using MWDOC's Water Balance Model
  - Groundwater production from OCWD Basin, using assumptions provided by OCWD and MET staff on the following variables:
    - Santa Ana River Base and Storm Flows
    - Incidental Recharge
    - GWR System Production
    - Availability of MET Replenishment Supply
    - Purchased from Others
    - Basin Spreading and Pumping Capacity (current CIP)
  - MET Demand

Determination of Types of Water Years

- California Water Code does not provide specific instruction on determining the types of water years
- According to DWR guidebook, water years are defined by the pattern and level of annual runoff for each watershed from which a supplier receives supplies
- MET defines water years based on hydrologic conditions in the California State Water Project and the Colorado River Aqueduct regions:
  - Average of hydrologic years from 1922 to 2004 – normal year
  - 1977 – the single driest hydrologic year to date for supplies in State Water Project
  - 1990-92 – the multiple driest hydrologic years for supplies in State Water Project

How Does MWDOC Determine the Types of Water Years?

- MWDOC's Sources of Supplies
  - 50% Local
  - 50% Imported
  - Imported supplies come from regions that often have very different hydrologic conditions than those in its local region

How Does MWDOC Determine the Types of Water Years? (cont'd)

- To determine its water years, MWDOC examined the sources of supplies from the two regions separately
  - Local
    - 1961 – the single driest hydrologic year to date
    - 1959-1961 – the multiple driest hydrologic years to date
  - Imported (Met)
    - 1977 – the single driest hydrologic year to date
    - 1990-92 – the multiple driest hydrologic years to date

How Does MWDOC Determine the Types of Water Years? (cont'd)

- By coordinating with Met's planning data, MWDOC verified Met's supply reliability using both sets of hydrologic conditions (local and imported)
- Conclusion:
  - Met is capable of meeting MWDOC's projected demand under the driest hydrologic conditions in both regions
  - MWDOC decided on the driest hydrologic condition derived from local region, since it yields to a more conservative projection of demand in MWDOC

MWDOC Water Years

- Normal Water Year – average of hydrologic conditions from 1922 to 2004
- Single-Dry Water Year – 1961
- Multiple-Dry Water Year – 1959 to 1961

Updates to the Package

- Define Normal Water Year
  - Previous version used MEDIAN of historic runoff levels (DWR guidebook)
  - Updated version used AVERAGE of historic runoff levels (Met Approach)
- Table 8 – changed the way the multiple dry years are reported

I. Previous version

Forecast Year	2010	2010	2010
Multiple Dry Years	1959	1960	1961

II. Updated version

Forecast Year	2008	2009	2010
Multiple Dry Years	1959	1960	1961

- Minor adjustment was made to the projection of OCWD production based on changes of IRWD reclamation within the OCWD boundary

What's Next – Draft Plan

Questions?

Orange County Local Supply Data for
1. MET System Overview Study
2. Urban Water Management Plan

Municipal Water District of Orange County

9 May, 2005

Outline

- Assumption Summary
- Recommended assumption for OC Local Supplies:
  - Use Low Range SAR Base Flow for System Overview Study
  - Use Mid Range SAR Base Flow for Urban Water Management Plan
- Output Table
- Discussion Items Relating to Groundwater Production
- Data needed by MWDOC on Reliability Analysis

Basin Operation Inputs

- Normal Year Santa Ana River Base Flow

	2005	2010	2015	2020	2025	2030
Old Model	149k	181K	184k	187k	189k	189k
Low SAR	147k	152k	155k	160k	164k	170k
Mid SAR	149k	159k	170k	180k	190k	201k
High SAR	152k	170k	189k	207k	225k	245k

- Santa Ana River Strom Flow – based on historical data
- Incidental Recharge
- Groundwater Replenishment System
- Met Replenishment Supply – map the availability of the supply to CRA and SWP hydrology and Total MET demand
- Basin Spreading Capacity
- Basin Maximum Pumping Capacity
- Basin Accumulated Overdraft (ideal operational level)

OCWD GW Production Calculation

- Current OCWD GW Production Calculation =
  - 3-Yr Avg of SAR Base +
  - 10-Yr Avg of SAR Storm +
  - 5-Yr Avg of Incidental +
  - GWRS +
  - Met Replenishment (direct & in-lieu)+
  - Met Sea Barrier

MWDOC will work with OCWD on modifying the water budget formula (propose to use a running avg) to reflect the value of MET replenishment supply

Example A (normal weather, MET Repl. = 60 KAF):

Retail Demand = 600KAF

OCWD GW
= 300 (based on water budget)
= 270 (from wells) + 30 (in-lieu)
= 230 (local) +10 (barrier) +30 (spreading) +30 (in-lieu)

MET Full Service Demand	= 300	To Consumers
MET In-lieu	= 30	To Consumers
MET Barrier	= 10	To Basin
MET Spreading	= 30	To Basin
Total MET Demand	= 370	

Example B (Drought, MET Repl. = 30 KAF):

Retail Demand = 600KAF

OCWD GW
= 270 (based on water budget)
= 255 (from wells) +15 (in-lieu)
= 230 (local) +10 (barrier) +15 (spreading) +15 (in-lieu)

MET Full Service Demand	= 330	To Consumers
MET In-lieu	= 15	To Consumers
MET Barrier	= 10	To Basin
MET Spreading	= 15	To Basin
Total MET Demand	= 370	

Output Tables

- Table 1 – MWDOC Ag Projection
- Table 2 – Fullerton Ag Projection
- Table 3 – MWDOC Groundwater Production note
- Table 4 – Anaheim Groundwater Production note
- Table 5 – Fullerton Groundwater Production note
- Table 6 – Santa Ana Groundwater Production note
- Table 7 – Surface Water Production
- Table 8 – MET Replenishment Demand for Spreading
- Table 9 – Total OC Demand for MET in-lieu
- Table 10 – Anaheim Demand for In-lieu
- Table 11 – Fullerton Demand for In-lieu
- Table 12 – Santa Ana Demand for In-lieu
- Table 13 – MWDOC Demand for In-lieu
- Table 14 – MET Replenishment Demand for Sea Barrier

Note: Groundwater production listed does not include groundwater Recovery and in-lieu

Replacing GWRS with MET Supply

- GWRS for Sea Barrier – 1 to 1 exchange with MET supply
- GWRS for Spreading –
  - 1 to 1 before basin exceeds its spreading capacity
  - Less than 1 after basin exceeds its spreading capacity (some water can be replaced with SAR flow)

Projection of In-lieu from 3 Cities

- MWDOC water balance model calculates the total amount of in-lieu demand for OC and then distribute the amount to 4 agencies in OC based on pumping demands and in-lieu capacities.

- MWDOC is currently act as the coordinator for getting the appropriate information on determining the in-lieu projection for the 4 agencies in OC.

- If MET receives other in-lieu projection from the 3 Cities, MWDOC should be notified to adjust the number accordingly.

How to Present In-lieu delivery in UWMP

- Retailers view it as a local supply
- MET views it as an imported supply
- MWDOC views it as an imported supply that supports the local (groundwater) production

Imported Demand Analysis for UWMP

	Retailer UWMP	MWDOC UWMP	MET UWMP
Retail M&I	Agency's Projection	MWD-MAIN (SCAG)	MWD-MAIN (SCAG)
Retail AG	Agency's Projection	Agency's Projection	Agency's Projection
Local Supply	OCWD GW (clear)	OCWD GW (clear)	OCWD GW (clear)
	Other Basin GW	Other Basin GW	Other Basin GW
	GW Recovery	GW Recovery	GW Recovery
	LRP Contract	*LRP Contract*	*LRP Contract*
	Existing	*Existing*	*Existing*
	Not (contract / existing)		
	Reclamation	Reclamation	Reclamation
	LRP Contract	*LRP Contract*	*LRP Contract*
	Existing	*Existing*	*Existing*
	Not (contract / existing)		
	Surface Water	Surface Water	Surface Water
Imported Demand	MET Demand per retailer (1)	MET Demand Per retailer (2)	MET Demand Per MWDOC

MWDOC needs project projection by retailers

Regional Urban Water Management Plan Workshop
City of Santa Ana

Agenda
June 6, 2005
9:00 a.m. – 12:00 p.m.

June 13

1. Welcome and Introductions

2. Goals of the Presentation

3. Metropolitan's Approach to the RUWMP

4. Changes in the UWMP Act

5. Development of the RUWMP

6. Key Sections of the RUWMP

7. Timeline for meetings and hearings

8. Open Discussion

6/7/05

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24
25

OVER

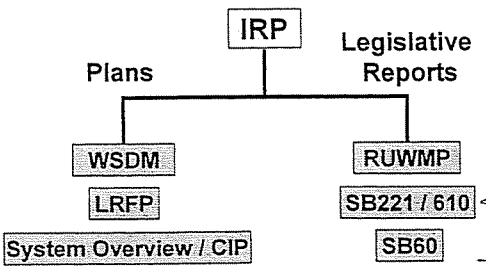
2005 Update of MWD's Regional Urban Water Management Plan

Member Agency Workshop
City of Santa Ana / MWD of Orange County
June 6, 2005

Presentation Objectives

- Review New Requirements
- Discuss Plan's Development
- Overview of Document Structure
- Highlight Key Sections
- Open Discussion

Metropolitan's Integrated Planning



Mid-90 / 2000 -> IRP
WSDM - operating Framework
LRFP - Long-term Rate projection
System Overview -
Report on Metropolitan Water Supply
Report on achievement of Water Conservation Recycling.
IRP - Implementation Report.

Approach

- Regional Plan - not reporting agencies level - to be consistent w/ on IRP
- Regional Approach
- Planning Horizon - 2025 - 2030

New Requirements Urban Water Management Plan Act

Changes Since 2000

- SB 610 - Water Supply Assessments
- SB 221 - Water Supply Verifications
- AB 901 - Water Quality

direct requirement - Information on GW
- Document supplier availability
- allow retailer to rely on UWMP

Growth legislation
- documents availability of water supply

New to come
- show water quality on each section of supply

Action → Check-in on the notification letter → Oct - public

Additional Changes

- Notification and Filing with Cities & Counties → Met's public Hearing ~~Oct~~ - adequate notice. → information Meeting.
- Data Sharing → Retailer & Wholesaler

August - Met public workshop - invite Environmental group.

Plan Development

Development Timeline

September 2004	Member Agency Kickoff
Sept. - Dec. 2004	Meetings w/ Member Agencies
December 2004	Draft One Completed
April 2005	Draft Two Completed
May - June	Member Agency Workshops

Major Elements of Plan

- Demands
- Local Supplies
- Metropolitan Supplies

Demands On MWD

Retail M&I Demands

- Conservation Savings

- Local Supplies

Demands on MWD

Retail Demands

- Urban Demands
  - *MWD-MAIN*
  - *Demographic Projections*
- Agricultural Demands

Conservation

- Active and Code Based
  - *42 Programs and Fixtures*
  - *CUWCC Savings Factors*
- Price Savings
- Pre-1990

Local Supplies

- 2000 UWMPs
- Local Supply Surveys — historical supply - look for trend.
- LRP Coordination — guessing about Recycle
  GW Recovery
  Desal.

Metropolitan Supplies

- State Water Project
- Colorado River
- Storage and Transfers → out basin / in-basin

Document Structure

- MWD/Regional Background
- MWD Planning Efforts
- Implementation of the Plan
- Supporting Documentation

Key Sections

Rationale for Supply

- Source
- Expected Capability
- Contracts/Proof
- Rationale
- Financing
- Approvals

Reliability Measurements

- Average Year - up to 2004
- Single-year Drought - 1977 - lowest
- Three-year Drought - 1990 - 92

Define

WSDM Plan

- Policy Guidance for Managing Supplies
- Links Surpluses & Shortages
- Provides Policy Principles for Allocations

→ even to 2030?

Water Quality

- Salinity
- Perchlorate
- Other Issues of Concern

Needs significant work on Met - on each supply

→ what is it? expanding on 2ndary? other constituent.

- identify

Met is going to address the issue

Schedule

2005 Update Schedule

May - June	Member Agency Workshops
July	Finalize Draft
August	Oral Report to MWD Board
August	Public Workshops
September	Info. Letter to MWD Board
October	Public Hearing
November	MWD Board Adoption
Dec. 31, 2005	Completed RUWMP to DWR