

Handouts

Table 1. Plan Objectives, Targets, and Assumptions			
Objective	Planning Target	Analysis Assumptions	Rationale
Improve Water Quality			
To comply with water quality standards by improving the quality of urban runoff, stormwater and wastewater	<u>Dry Weather</u> : Reduce, capture, infiltrate and/or treat the 40 th to 90 th percentile dry weather urban runoff flow, approximately 210 to 450 cubic feet per second (cfs), or 150,000 to 320,000 acre feet per year (AFY).	Reduce, capture, infiltrate and/or treat the 90th percentile dry weather urban runoff flow, approximately 320,000 AFY.	Reduces, recycles and/or treats 90 percent of dry and wet weather runoff to implement TMDLs.
	<u>Wet Weather</u> : Reduce, infiltrate or recycle 40 percent to 90 percent of the annual stormwater runoff from developed areas, approximately 218,000 to 490,000 AFY.	Reduce, infiltrate or recycle approximately 40 percent of the total stormwater runoff, or 100 percent of annual stormwater runoff from single-family residences, which is approximately 190,000 AFY.	
	<u>Wet Weather</u> : Capture and treat 40 percent to 90 percent of the annual stormwater runoff from developed areas, approximately 218,000 to 490,000 AFY.	Capture and treat approximately 50 percent of the annual stormwater runoff from developed areas, approximately 300,000 AFY.	
To protect and improve groundwater and drinking water quality	None		
Improve Water Supply			
To optimize local water resources to reduce the region's reliance on imported water	Increase water supply reliability and quality by providing between 580,000 and 1,870,000 AFY of additional water supply or demand reduction through conservation.	Increase water supply and/or reduce demand by 800,000 AFY	Based on Metropolitan Water Districts IRP targets with buffer against supply loss.
	Reuse or infiltrate between 120,000 and 250,000 AFY of reclaimed water.	Reuse or infiltrate 250,000 AFY of reclaimed water (130,000 increase).	Doubles current utilization to enhance water supply reliability.
Enhance Open Space, Recreation, and Habitat			
To increase watershed friendly recreation and open space for all communities	Develop and protect 30,000 acres of multiuse parkland and open space, focusing in under-served communities.	Develop 30,000 acres of multiuse parkland and open space.	Based on estimated population growth and 6.25 acres per 1,000 residents.
To protect, restore, and enhance natural processes and habitats	Restore 100 linear miles of riparian habitat and associated buffer habitat.	Restore 100 linear miles of riparian habitat and associated buffer habitat.	Would target restoration across entire region.
	Restore 1,400 acres of wetland habitat.	Restore 1,400 acres of wetland habitat.	Based on Coastal Conservancy estimate.
Sustain Local Communities and the Greater Los Angeles County Region			
To maintain and enhance flood protection	Repair and replace 40 percent of the aging infrastructure for flood protection.	Repair and replace 40 percent of flood protection infrastructure.	Repair or replace approximately 2 percent per year, or 40 percent over 20 years.
To maintain and enhance public infrastructure related to water resources and water quality	Repair and replace 40 percent of the aging infrastructure for water supply.	Repair and replace 40 percent of water supply infrastructure.	
	Repair and replace 40 percent of the aging infrastructure for wastewater.	Repair and replace 40 percent of wastewater infrastructure.	

Handouts

Table 8. Regional Planning Tool Management Strategy Elements

	Analytical Target	Planning Tool 1 Site Scale	Planning Tool 2 Neighborhood Scale	Planning Tool 3 Regional Scale
Water Supply¹	800,000	<i>Acre Feet/Year</i>		
Water Conservation / Demand Reduction		110,000	110,000	110,000
Expanded Local Water Production		100,000	100,000	100,000
Other Projects (desalination & groundwater recovery)		90,000	90,000	90,000
Additional Recycled Water		130,000	130,000	130,000
Additional Imported Water		370,000	240,000	120,000
Urban (Dry Weather) Runoff		0	130,000	130,000
Stormwater Runoff (from Urban Areas)		0	0	120,000
<i>Total Water Supply</i>		800,000	800,000	800,000
Surface Water Quality				
Urban (Dry Weather) Runoff	320,000			
<i>Reduction of Runoff Volumes</i>				
On-Site Residential BMPs ²		124,000	0	0
<i>Treatment³</i>				
Traditional (Mechanical/Chemical)		196,000		
Natural (Treatment Wetlands)			320,000	320,000
<i>Use of Treated Water</i>				
Non-Potable Reuse ⁴		0	130,000	130,000
Discharge to Creeks and Rivers		196,000	190,000	190,000
<i>Total Urban (Dry Weather) Runoff Treated</i>		320,000	320,000	320,000
Stormwater Runoff (from Urban Areas)	490,000			
<i>Reduction of Runoff Volumes</i>				
On-Site Residential BMPs ²		190,000	0	0
<i>Short-Term Detention</i>				
		300,125	490,000	490,000
<i>Treatment</i>				
Traditional (Tertiary)		300,125	0	0
Natural (Treatment Wetlands)				
<u>Secondary Treatment⁵</u>				120,000
<u>Tertiary Treatment</u>			490,000	370,000
<i>Total Urban Stormwater Runoff Treated</i>		490,000	490,000	490,000
<i>Use of Treated Water</i>				
Recharge via Groundwater Basins		0	0	120,000
Discharge to Creeks and Rivers		300,125	490,000	370,000
Open Space & Habitat				
Wetland restoration/creation (from water quality facilities) (acres)	1,400		4500 acres	8000 acres
Riparian habitat restoration (from water quality facilities) (miles)	100			100 miles
Parks and Open Space creation (from water quality facilities) (acres)	30,000	1550 acres	3500 acres	
Parks and Open Space creation (additional) (acres)		6450 acres		
<i>Total Open Space and Habitat</i>		8,000 acres	8,000 acres	8,000 acres
Infrastructure Repair & Replacement				
Flood Management	40%	40%	40%	40%
Water Supply	40%	40%	40%	40%
Wastewater	40%	40%	40%	40%

1: Estimated increase in water supply and/or demand reduction above current supplies/conservation

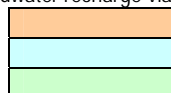
2: Equals approximately 39% of runoff, as that portion of urbanized area is single family homes

3: Assumes tertiary treatment, unless otherwise noted

4: Local distribution of treated urban runoff for irrigation and other uses (similar to reclaimed water)

5: Assumes secondary treatment for subsequent groundwater recharge via spreading basins

Water Supply Relationships



Residential BMPs would reduce water demand (amount TBD)

Non-potable reuse of treated Urban Runoff

Recharge of treated stormwater runoff

Handouts

Table 3. Major Needs, Opportunities, and Constraints in Upper San Gabriel and Rio Hondo River				
	Water Supply	Surface Water Quality	Open Space and Habitat	Infrastructure
Needs	<ul style="list-style-type: none"> • Reliance on imported water • Water reliability in drought years • Optimize storage capacity 	<ul style="list-style-type: none"> • Impaired water quality • TMDLs • 303(d) listed waterways • Runoff quantity and quality • Volume of stormwater and dry-weather flows • Wastewater effluent • Abandoned and active gravel pits 	<ul style="list-style-type: none"> • Stream modification • Equestrian uses • Protection of uplands 	<ul style="list-style-type: none"> • Not available at this time
Opportunities	<ul style="list-style-type: none"> • Capture, treatment and reuse of stormwater runoff • Reclaimed water surplus • Conservation • Desalination • Water distribution system improvements • Safe Drinking Water Act Compliance projects • System interconnections for increased reliability • Expanded conjunctive use • Groundwater treatment facilities • Increase replenishment capacity • Gravel pits for storage 	<ul style="list-style-type: none"> • Implementing TMDL, NPDES and AB 885 requirements • Natural treatment systems • Open Space • Habitat • Enhanced flood management • U.S. Army Corps of Engineers participation 	<ul style="list-style-type: none"> • Promote/increase ecosystem restoration in Santa Fe dam • Preserve pristine waters of upper San Gabriel • Equestrian use • Integrate recreation into wetlands and watershed projects. • Provide for maintenance of parks, open space, and trails • Creation of habitat linkages and corridors 	<ul style="list-style-type: none"> • Not available at this time
Constraints	<ul style="list-style-type: none"> • Funding • Pervasive groundwater contamination (VOC, nitrate and perchlorate) • Limited spreading capacity • No opportunities for ocean desalination • Institutional hurdles to water transfers 	<ul style="list-style-type: none"> • Lack of Funding • Pervasive nature of impairments • Lack and expense of undeveloped land • Public safety • Liability • Impediments to cross-jurisdictional efforts 	<ul style="list-style-type: none"> • Stream Modification • Equestrian Uses • Lack of Data • Protection of Uplands 	<ul style="list-style-type: none"> • Integration with existing infrastructure systems

Handouts

Table 1-4. Suggested Planning Scales					
Water Management Strategy	Site or Parcel	Within Jurisdictional Boundary	Watershed	IRWMP Subregion	IRWMP Region
Asset Management		●		●	●
Desalination		●			●
Environmental & Habitat Protection / Improvement	●	●	●		●
Groundwater Management / Conjunctive Use		●	●		●
Import water		●			●
Improve and protect water quality	●	●	●	●	●
Integrated Planning	●	●	●	●	●
Land Use Planning		●			●
NPS Pollution Control	●	●	●	●	●
Recreation and Public Access		●			●
Restore Ecosystems		●	●		●
Stormwater Capture and Management	●	●		●	●
Surface Storage		●			●
Water and Wastewater Treatment		●		●	●
Water Conservation	●	●		●	●
Water Recycling		●		●	●
Water Supply Reliability		●			●
Water Transfers		●			●
Watershed Planning			●		●
Wetlands Creation and Enhancement	●	●	●		●

Handouts

ANNOTATED Planning Scales					
Water Management Strategy	Projects on Site or Parcel	Programs & Plans Within Jurisdictional Boundary	Watershed Plans	IRWMP Subregional Plans	IRWMP Regional Plans
Asset Management		●		◐ Water and Wastewater	◑ Flood Protection
Desalination		●			●
Environmental & Habitat Protection / Improvement	●	●	●		●
Groundwater Management / Conjunctive Use		●	●		●
Import water		●			●
Improve and protect (surface) water quality	●	●	●	●	●
Integrated Planning	●	●	●	●	●
Land Use Planning		◐ General Plans			◑ Model Ordinances
NPS Pollution Control	●	●	●	●	●
Recreation and Public Access		●			●
Restore Ecosystems		●	●		●
Stormwater Capture and Management	●	●		◐ Quality	◑ Quantity
Surface Storage		●			●
Water and Wastewater Treatment		●		●	●
Water Conservation	●	●		●	●
Water Recycling		●		●	●
Water Supply Reliability		●			●
Water Transfers		●			●
Watershed Planning			●		●
Wetlands Creation and Enhancement	●	●	●		●

Handouts

What is the Appropriate Scale for Subsequent Planning?				
Water Management Strategy	Jurisdiction	Watershed	IRWMP Subregion	IRWMP Region
Asset Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Desalination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental & Habitat Protection / Improvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Groundwater Management / Conjunctive Use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Import water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improve and protect water quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrated Planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Land Use Planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NPS Pollution Control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreation and Public Access	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restore Ecosystems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stormwater Capture and Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surface Storage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water and Wastewater Treatment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water Conservation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water Recycling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water Supply Reliability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water Transfers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Watershed Planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wetlands Creation and Enhancement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Handouts

Table 1-5. Suggested Planning Activities		
Water Management Strategy	Scale	Activities
Asset Management	Jurisdiction	Implement asset management programs
	Subregion	Promote comprehensive assessment of infrastructure maintenance
	Region	Promote consistent regional approach to asset management
Desalination	Jurisdiction	Implement desalination projects where appropriate
	Region	Promote desalination as a component of a diversified water portfolio to enhance water supply reliability
Environmental & Habitat Protection / Improvement	Site	Inclusion of native habitat in all public sector projects
	Jurisdiction	Implement projects and programs to protect habitat and encourage native vegetation in public and private projects
	Watershed	Promote consistent watershed approach to habitat protection
	Region	Promote consistent regional approach to habitat protection
Groundwater Management / Conjunctive Use	Jurisdiction	Implementation of incentives by Cities and counties to protect and enhance groundwater recharge Water agencies projects and programs to protect and enhance groundwater recharge and utilization of groundwater as a water supply
	Watershed	Promote consistent watershed approach to protection and enhancement of groundwater recharge
	Region	Promote consistent regional approach to protection and enhancement of groundwater recharge
Import Water	Jurisdiction	Imported water as component of water agency's supply portfolio
	Regional	Promote imported water as a component of a diversified water portfolio that enhances water supply reliability
Improve and Protect Water Quality	Site	Implement multi-purpose projects that improve and protect water quality
	Jurisdiction	Implement integrated approaches to water quality programs and projects
	Watershed	Promote consistent watershed approach to water quality
	Region	Promote consistent regional approach to water quality
Integrated Planning	Site	Implement multi-purpose projects
	Jurisdiction	Implement integrated projects and programs for water quality, water supply and habitat
	Watershed	Promote integrated approach to water quality, water supply and habitat
	Subregion	Promote integrated approach to water quality, water supply and habitat
	Region	Promote integrated approach to water quality, water supply and habitat
Land Use Planning	Jurisdiction	Implement programs and incentives to increase water supply, improve water quality and conserve, expand public open space and restore habitat
	Region	Promote consistent land use programs and incentives across region
NPS Pollution Control	Site	Include onsite BMPs in projects were feasible
	Jurisdiction	Widespread implementation of BMPs and public education
	Watershed	Promote consistent watershed approach to NPS pollution control
	Region	Promote region-wide implementation of NPS pollution control measures
Recreation and Public Access	Jurisdiction	Implement projects and programs to expand recreation and public open space

Handouts

Table 1-5. Suggested Planning Activities		
Water Management Strategy	Scale	Activities
	Subregion	Promote consistent Subregional approach to expansion of recreation and public access
	Region	Promote consistent regional approach expansion of recreation and public access
Restore Ecosystems	Jurisdiction	Implement projects and programs to restore ecosystems
	Watershed	Promote consistent watershed approach to restoration of ecosystems
	Region	Promote consistent regional approach to restoration of ecosystems
Stormwater Capture & Management	Site	Implement projects that retain and cleanse stormwater
	Jurisdiction	Implement projects and programs that capture and manage stormwater
	Subregion	Promote Subregional solutions for capture and management of stormwater
	Region	Promote consistent regional approach to stormwater capture and management
Surface Storage	Jurisdiction	Implement projects and programs to enhance surface storage
	Region	Promote expanded utilization of surface storage
Water and Wastewater Treatment	Jurisdiction	Implement projects and programs to treat water and wastewater
	Subregion	Promote regional solutions to water and wastewater treatment
	Region	Promote regional projects and programs for water and wastewater treatment
Water Conservation	Site	Implement projects and programs that conserve water
	Jurisdiction	Implement water conservation programs
	Subregion	Promote Subregional projects and programs that conserve water
	Region	Promote water conservation projects and programs to enhance water supply reliability
Water Recycling	Jurisdiction	Implement projects and programs to expand water recycling
	Subregion	Promote Subregional projects and programs to expand water recycling
	Region	Promote expansion of water recycling to enhance water supply reliability
Water Supply Reliability	Jurisdiction	Implement projects and programs that enhance water supply reliability
	Region	Promote expansion of projects/programs to enhance water supply reliability
Water Transfers	Jurisdiction	Implement water transfers
	Region	Promote water transfers as a component of a diversified water portfolio that enhances water supply reliability
Watershed Planning	Watershed	Develop watershed plans for all major rivers and tributaries and update on a regular basis
	Region	Promote consistent content and approach for all watershed plans in region
Wetlands Creation and Enhancement	Site	Implement projects and programs to restore and create wetlands where appropriate
	Jurisdiction	Implement projects and programs to restore and create wetlands where appropriate
	Watershed	Promote restoration of native wetlands and creation of new wetlands where appropriate
	Subregion	Promote consistent Subregional approach to restoration and creation of wetlands
	Region	Promote consistent regional approach to restoration and creation of wetlands

Handouts

Table 4-2. Potential Sources of Funding to Implement IRWMP Projects			
	Sources	Expected Contribution	Targeted Beneficiaries
Local	<ul style="list-style-type: none"> • Local sales tax • Bond and associated property tax • Utility fee or benefit assessment based on use of the property • Utility fee or benefit assessment based on total area and impervious area • Gasoline tax • Water sales • Parcel tax 	High (>50%)	Region's residents, environment, and economy
State	<ul style="list-style-type: none"> • Competitive grants • Appropriations • State-wide Assessments 	Moderate (10-50%)	Statewide environment and economy
Federal	<ul style="list-style-type: none"> • Appropriations • Competitive Grants 	Moderate (10-50%)	Areas of national environmental or economic significance
Others	<ul style="list-style-type: none"> • Individual and corporate donors • Foundations and other non-profit organizations 	Low (<10%)	Particular communities or targeted interests in the Region