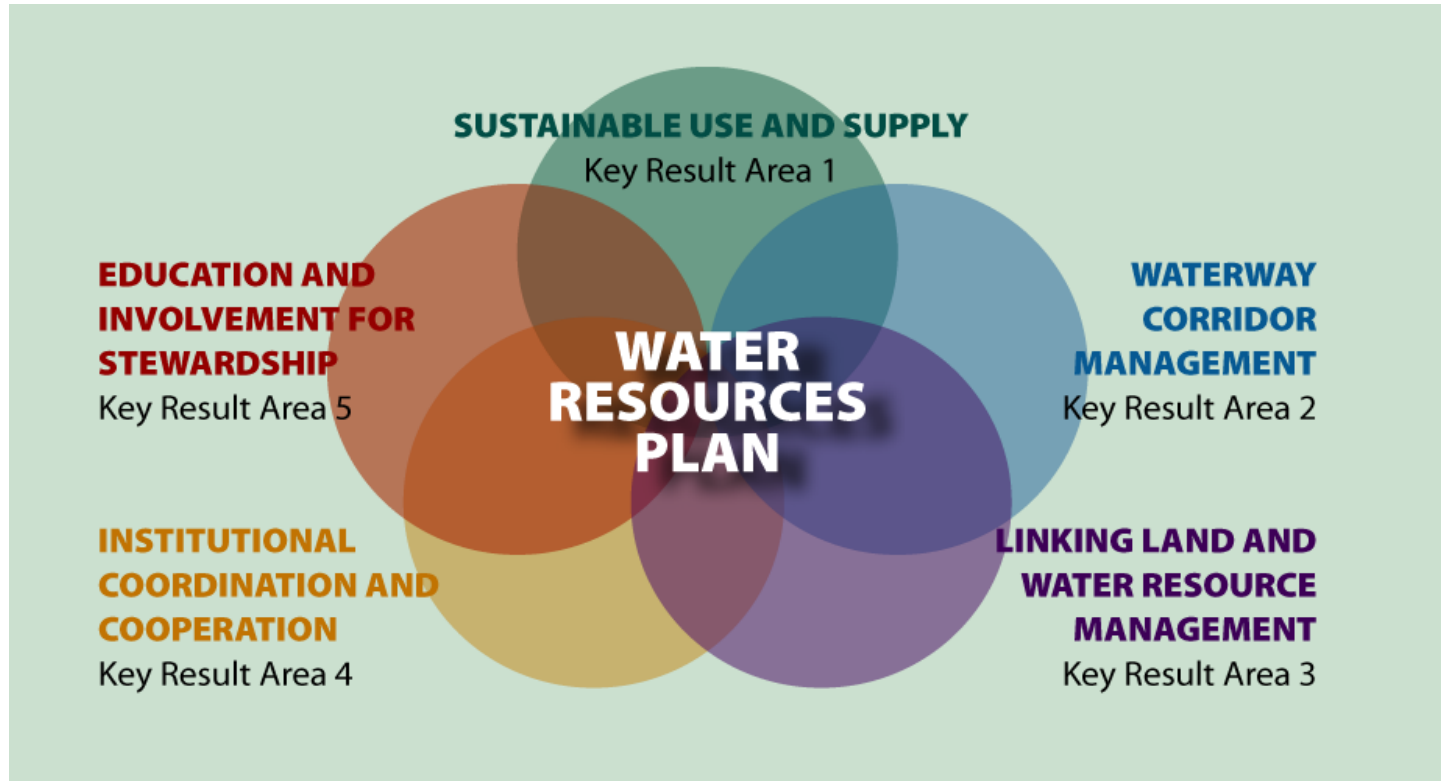


# WMAC and Basin Plan Objectives



A Ten Year Review of Progress

October 16, 2014

## Goal 1.1 Equitably balance multiple demands while preserving or enhancing conditions in watersheds to maintain or achieve ecological integrity

	OBJECTIVE	MILESTONE	ACTIONS
1.1.A	Develop an integrated resource management strategy for water allocation considering: <ul style="list-style-type: none"> <li>• Water budget</li> <li>• Instream flow needs</li> <li>• Groundwater availability</li> <li>• Assessment tools</li> <li>• Degree of hydrologic/biologic disruption</li> </ul>	2005: GW availability & water budget pilot studies completed	GW Availability completed – Used for assessment purposes only. Budgets done for 5 select w’sheds
		2006: Assmt tools developed	Water budget methodology developed; DRBC 2060 strategy link to USGS Water Census underway. Pilot of OASIS PST (planned)
		2007: Water Budgets completed	Water budgets not expanded due to limited added value. M-J study provided alternate assessment protocol

**SIGNIFICANT PROGRESS with WMAC input. WMAC will continue advising DRBC with 2060 planning**

Goal 1.1 Equitably balance multiple demands while preserving or enhancing conditions in watersheds to maintain or achieve ecological integrity

	OBJECTIVE	MILESTONE	ACTIONS
1.1.B	Assess the ecological integrity of watersheds and integrate the criteria into water allocation strategies	2007: In-stream flow needs established, criteria developed	SEF work in Upper River; TNC report completed. Recommendations under review
		2007: Natural hydrograph established at appropriate scale	USGS StreamStats and Baseline Streamflow Estimator (BaSE) valuable tools for establishing nat. hydrograph and will likely be used in future assessments.
		2008: Ecological needs incorporated into reservoir operations and allocation decisions	

**SIGNIFICANT PROGRESS with WMAC input. WMAC will continue advising DRBC with 2060 planning**

Goal 1.1 Equitably balance multiple demands while preserving or enhancing conditions in watersheds to maintain or achieve ecological integrity

	OBJECTIVE	MILESTONE	ACTIONS
1.1.C 1.1.D	INTERBASIN TRANSFERS Future & Existing	2006: Criteria developed for evaluation	WMAC position paper on water transfers. [Conditions A-H in DRBC Water Code]
1.1.E 1.1.F	INTRA-BASIN TRANSFERS (W'SHED) Future & Existing	2010: Develop Guidelines for balancing FUTURE needs among watersheds	WMAC position paper advocates one standard incorporating multiple objectives: instream flow, consumptive use, return flows. Next challenge: incorporate within DRBC planning and review criteria

**WMAC has had significant input. Will continue advising DRBC with 2060 planning**

Goal 1.1 Equitably balance multiple demands while preserving or enhancing conditions in watersheds to maintain or achieve ecological integrity

	OBJECTIVE	MILESTONE	ACTIONS
1.1.G	For future droughts, ensure equitable allocation while maintaining ecological integrity of aquatic ecosystems	2006: Agreement on principles for water use curtailment during droughts	Part of 2030 Supply planning

**WMAC will continue advising DRBC with 2060 planning**

Goal 1.2 Ensure an adequate supply of suitable quality water to restore, protect and enhance aquatic systems and wildlife.

	OBJECTIVE	MILESTONE	ACTIONS
1.2.A	Integrate in-stream flow and estuary freshwater inflow requirements for healthy aquatic ecosystems into regulations & decision-making	2005-2010: Develop and adopt criteria into allocation and operation strategies	FFMP and Actions under 1.1.B

**Instream flow needs development ongoing.**

Goal 1.3 Ensure an adequate supply of suitable quality water to satisfy public, self-supplied domestic, commercial, industrial, agricultural and power generation water needs.

	OBJECTIVE	MILESTONE	ACTIONS
1.3.A	Normal conditions: ensure supplies thru 2030	2006: Water use projections completed	DRBC demand projection methodologies for PA Act 220. DRB supply/demand assessment completed.
		2008: Agreement on strategies to meet future needs	ACOE/DRBC Long-term sufficiency of water supply completed.
			Key sector (PWS, Power, Industry) trend analysis completed.

**Work to be used in scenario development for 2060 planning. WMAC will continue to advise DRBC with 2060 planning.**

Goal 1.3 Ensure an adequate supply of suitable quality water to satisfy public, self-supplied domestic, commercial, industrial, agricultural and power generation water needs.

	OBJECTIVE	MILESTONE	ACTIONS
1.3.B	Plan under drought of record conditions for adequate supplies through 2030	2006: Water use projections completed	Disaggregated water use projections to 2030 included in M-J study.
		2008: Agreement on strategies to meet future needs	

**SIGNIFICANT PROGRESS**

Work to be used in scenario development for 2060 planning. WMAC will continue to advise DRBC with 2060 planning.



Goal 1.3 Ensure an adequate supply of suitable quality water to satisfy public, self-supplied domestic, commercial, industrial, agricultural and power generation water needs.

	OBJECTIVE	MILESTONE	ACTIONS
1.3.C	Ensure maximum feasible efficiency across all sectors	2008: Set efficiency metrics by sector	<p>DRBC water conservation program implemented via Project review process.</p> <ul style="list-style-type: none"> <li>• AWWA water accountability methods vetted with WMAC</li> <li>• WMAC Position Paper developed advocating AWWA methods.</li> <li>• Commissioners adopt Rule change in Resolution 2009-01</li> <li>• Water Audit program started 2012; 2nd report developed.</li> </ul>

**SIGNIFICANT PROGRESS.**

How can the results of this program be used to further improve supply system integrity?

Goal 1.3 Ensure an adequate supply of suitable quality water to satisfy public, self-supplied domestic, commercial, industrial, agricultural and power generation water needs.

	OBJECTIVE	MILESTONE	ACTIONS
1.3.D	Increase the beneficial reuse and recycling of reclaimed water	2020: 250MGD (or need TBD based on projected demand)	Has not been a DRBC priority

**Is there a compelling need to address this?**

Goal 1.3 Ensure an adequate supply of suitable quality water to satisfy public, self-supplied domestic, commercial, industrial, agricultural and power generation water needs.

	OBJECTIVE	MILESTONE	ACTIONS
1.3.G	Maintain 180ppm isochlor at RM 98 to protect public & industrial supplies	Ongoing maintenance	DRBC Water Quality Regs – stream quality objective Zone 2.  1D/3D Salinity models; part of 2060 planning
1.3.H	Flow & transport models & tools to track spills and direct emergency response	2006: Initial tool development 2008: Refinement/ disaster drills	<ul style="list-style-type: none"> <li>EWSs developed for Schuylkill &amp; Delaware; expansion of system/uses ongoing.</li> <li>DRBC Spill model for Estuary runs daily.</li> </ul>

**SIGNIFICANT PROGRESS**

Goal 1.3 Ensure an adequate supply of suitable quality water to satisfy public, self-supplied domestic, commercial, industrial, agricultural and power generation water needs.

	OBJECTIVE	MILESTONE	ACTIONS
1.3.1	Develop water supply contingency plans to address critical water needs in event of source water loss or other disruption	2006: Contingency plans for high-priority systems  2008: Plans for next highest priority systems	

**Is there a compelling need to address this beyond current State initiatives?**