


Earl Lewis

**Algae Blooms and
Nutrient Management**

Kansas Water Authority
Recommendations
Joint Energy and Environmental Policy Committee
November 13, 2012





**KWA Proposals for Nutrient & Sediment
Reduction**
FY 2014 Budget Recommendations

- Restoration of the \$6 Million SGF Demand Transfer
 - \$4.5 of \$6 million recommended for targeted Nutrient and Sediment Reduction Projects
 - Administered by KDA-DOC
- Creation of Nutrient/Sediment Conservation Reserve Enhancement Program (CREP)
 - Targeted cost-share assistance to high priority areas
 - Administered by KDA-DOC
 - \$500,000 recommended
- Enhanced funding for WRAPS implementation
 - Administered by KDHE-NPS Section
 - Increase of \$175,000 recommended

**New Approach for Funding Nutrient &
Sediment Projects**

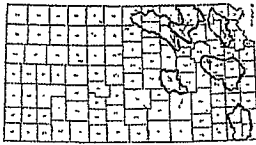
- Link WRAPS plans to conservation district implementation
 - WRAPS plans have identified over \$7 million in funding needs
- Funding model would allocate to targeted projects rather than targeted areas
 - Project funding based on greatest nutrient reduction per dollar expended

Cost	Benefit
	

The 33 water treatment plant cost reduction plans has an estimated cost of \$9.03 million and is expected to generate \$27.2 million in net benefits, a 3.04x return over the lifetime across the entire life of the project.

Nutrient & Sediment CREP

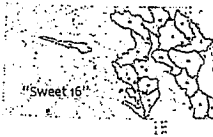
Proposed Target Areas



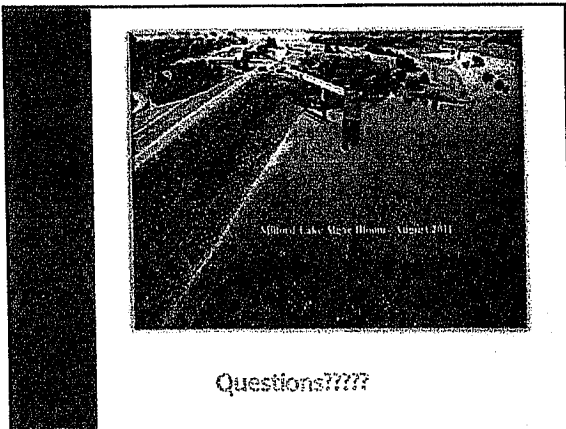
- Establishment of buffer practices
 - Waterways, filter strips, riparian forest, wetlands (restored & constructed)
 - Streambank stabilization
- 10,000 Acre Enrollment
- \$21.6 million cost
 - \$17.3M USDA
 - \$4.3M non-fed (direct and in-kind)

WRAPS Funding Enhancement

Over 50% of KS under WRAPS Plans




- \$175,000 in additional funding recommended by KWA
- \$625,000 current funding level
- Over \$7 million in expressed funding needs
- WRAPS plans exist in all priority nutrient watersheds




2012 Drought & Current Conditions

Joint Energy and Environmental Policy Committee
November 13, 2012

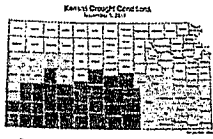


Drought declarations 2011 and 2012

Kansas Drought Declarations
August 22, 2012



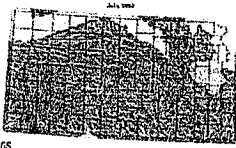
Kansas Drought Conditions
November 1, 2012



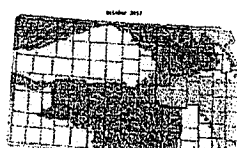
Some improvement since July

• Still not good.....

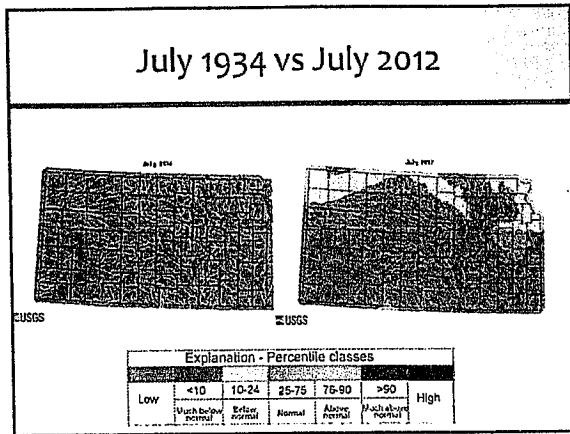
July 2012

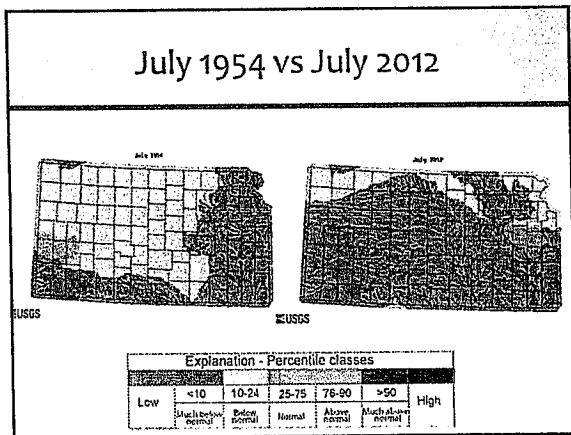


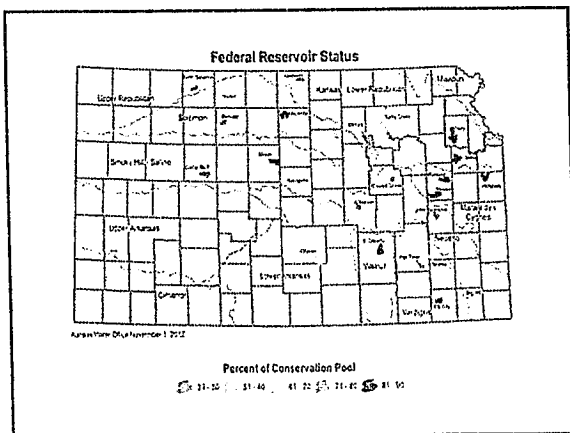
October 2012



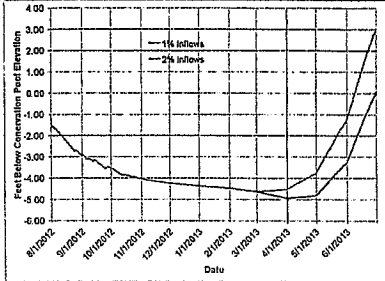
USGS		USGS				
Explanation		Percentile classes				
Low	<10	10-24	25-75	76-90	>90	High
Very Low	Low	Normal	Above Normal	Much Above Normal	Very High	



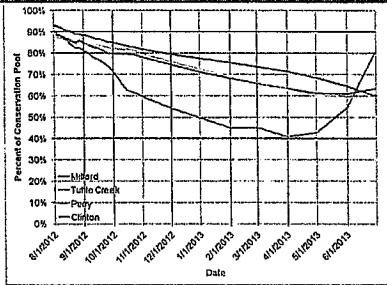




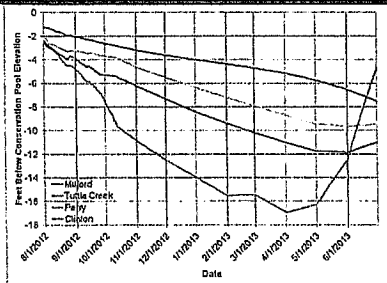
John Redmond Feet Below CP



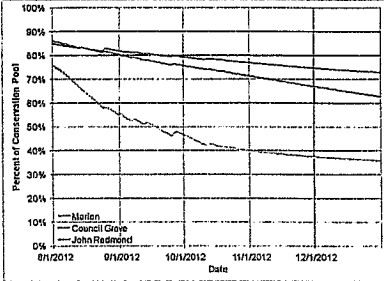
Kansas Reservoirs % Remaining



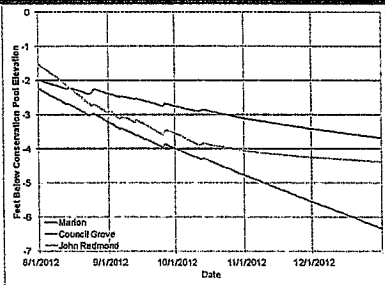
Kansas Reservoirs Feet Below CP



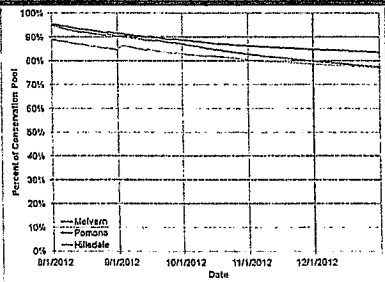
Neosho Reservoirs % Remaining



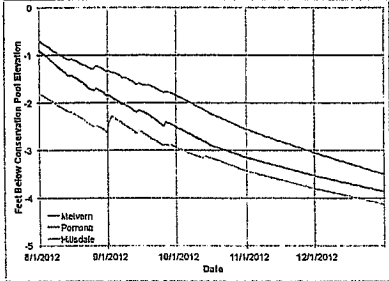
Neosho Reservoirs Feet Below CP



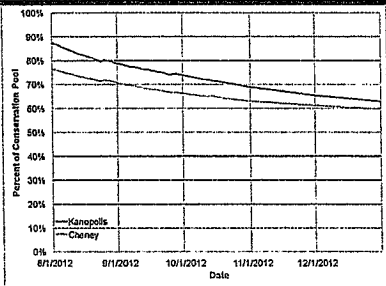
Marais des Cygnes Reservoirs % Remaining



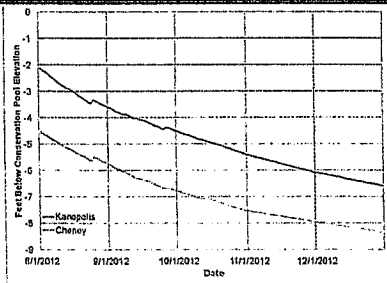
Marais des Cygnes Reservoirs Feet Below CP



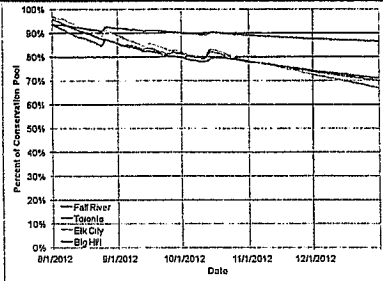
Kanopolis & Cheney % Remaining



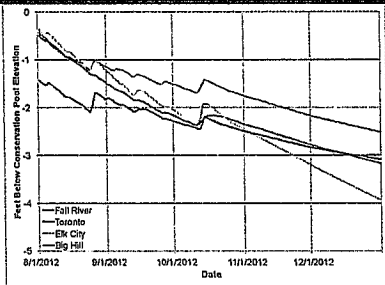
Kanopolis & Cheney Feet Below CP



Verdigris Reservoirs % Remaining

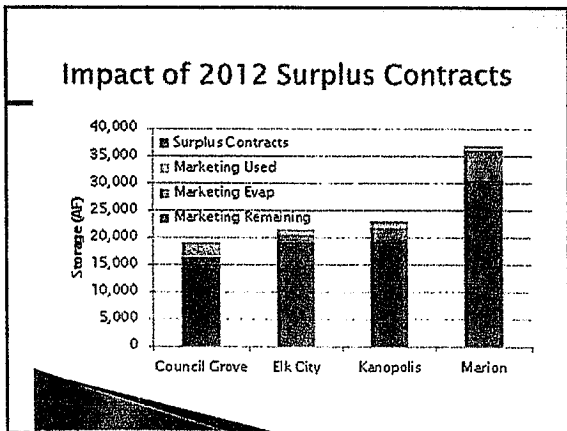


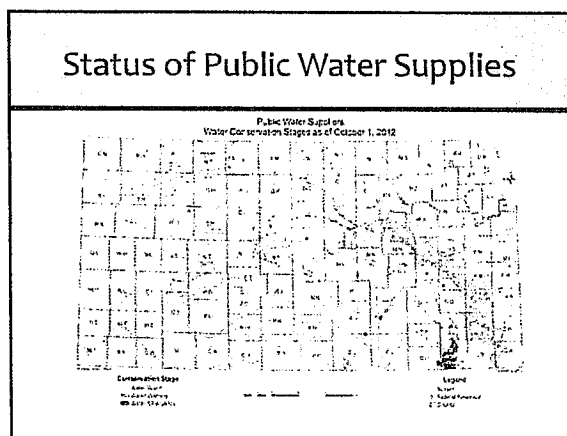
Verdigris Reservoirs Feet Below CP



Emergency & Surplus Water

- Emergency
 - State Fishing Lakes
 - MI, LY, SN, CR, OS, CS, WL
 - Fed Reservoirs
 - Pomona, Perry, Melvern
 - 10 livestock
 - 1 domestic
- Surplus Contracts
 - Council Grove (3)
 - Irrigation
 - Marion (4)
 - 3 irrigation
 - 1 industrial
 - Kanopolis (1)
 - Irrigation/municipal
 - Elk City
 - 2 Irrigation
 - 1 stockwater






Water Conservation Plan Status

<p>197 PWS in Conservation</p> <ul style="list-style-type: none"> Drought Conservation Stages <ul style="list-style-type: none"> Stage 1 - 132 Stage 2 - 56 Stage 3 - 9 	<p>103 KWO Customers in Conservation</p> <ul style="list-style-type: none"> Cottonwood/Neosho - 22 Kansas River - 9 Marais Des Cygnes - 8 Water Marketing - 64
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Drought Links


Governor Brownback's Web Page
www.governor.ks.gov
Kansas Water Office Web Page
www.kwo.org
USGS Web Page
www.usgs.gov



**Recommendations to
Address Water Supply
Needs**

Kansas Water Office and Water
Authority

Joint Energy and Environmental Policy Committee
November 13, 2012



**Complete pool level increase at John
Redmond**

- 2' Pool Raise to be implemented in 2013
 - Official approval in fall of '13
 - KWO has requested implementation begin ASAP if adequate inflows are received
 - Resulting in approximately 20,000 AF of additional storage

Develop plan to dredge John Redmond

- Meeting with Corps held in Sept
 - Corps is supportive!
- EIS being developed by KWO
- Application to modify federal project under development
- Meet with Coffey Co. Commission in December
- Public scoping meeting in January
- KWA recommends funding in FY 2014 to contract for detailed engineering work

Year	Surface Area (Acres)	Water Storage Capacity (AF)
1964	92,001	82,200
2007	79,200	70,200

Continue sediment reduction activities

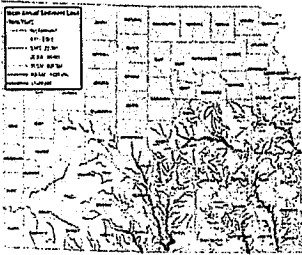
Projects currently underway

- John Redmond
 - Streambank Restoration
 - 8.3 miles complete
 - Additional 11,000' ready for bid this fall
 - Estimated 21,550 tons of sediment reduced annually
- Perry
 - Similar projects completed and underway by Glacial Hills RC&D

Complete Reservoir Roadmap For All Basins

- Neosho, Verdigris, Marais Des Cygnes and Lower Ark Completed
- KS – Lower Republican underway

Sediment assessments completed →



Basin	1990-1995	1996-2000	2001-2005	2006-2010	2011-2015
Neosho	100%	100%	100%	100%	100%
Verdigris	100%	100%	100%	100%	100%
Marais Des Cygnes	100%	100%	100%	100%	100%
Lower Ark	100%	100%	100%	100%	100%
Lower Republican	0%	0%	0%	0%	0%

Continue search for funding

- State Water Plan Funds limited
- SRF loans w/ principal forgiveness no longer available
- NRCS completes evaluation of streambank practice and funding
 - NRCS seeking more detailed assessments & implementation of stream reach approach
 - State encourages continuation of funding

Continue activities at Kanopolis

- Implementation of 2011 legislation
 - Lower Smoky Hill River Access District
 - Kanopolis storage sought for downstream district
 - Irrigators with Smoky Hill River surface rights
 - City of Salina
- KWO request Corps to evaluate reallocation of storage for additional water supply
 - 7,500 acre-feet available

