

# **Using a BMP Auction for Targeting in Kansas**

***Heartland Regional Water Resources  
Workshop***

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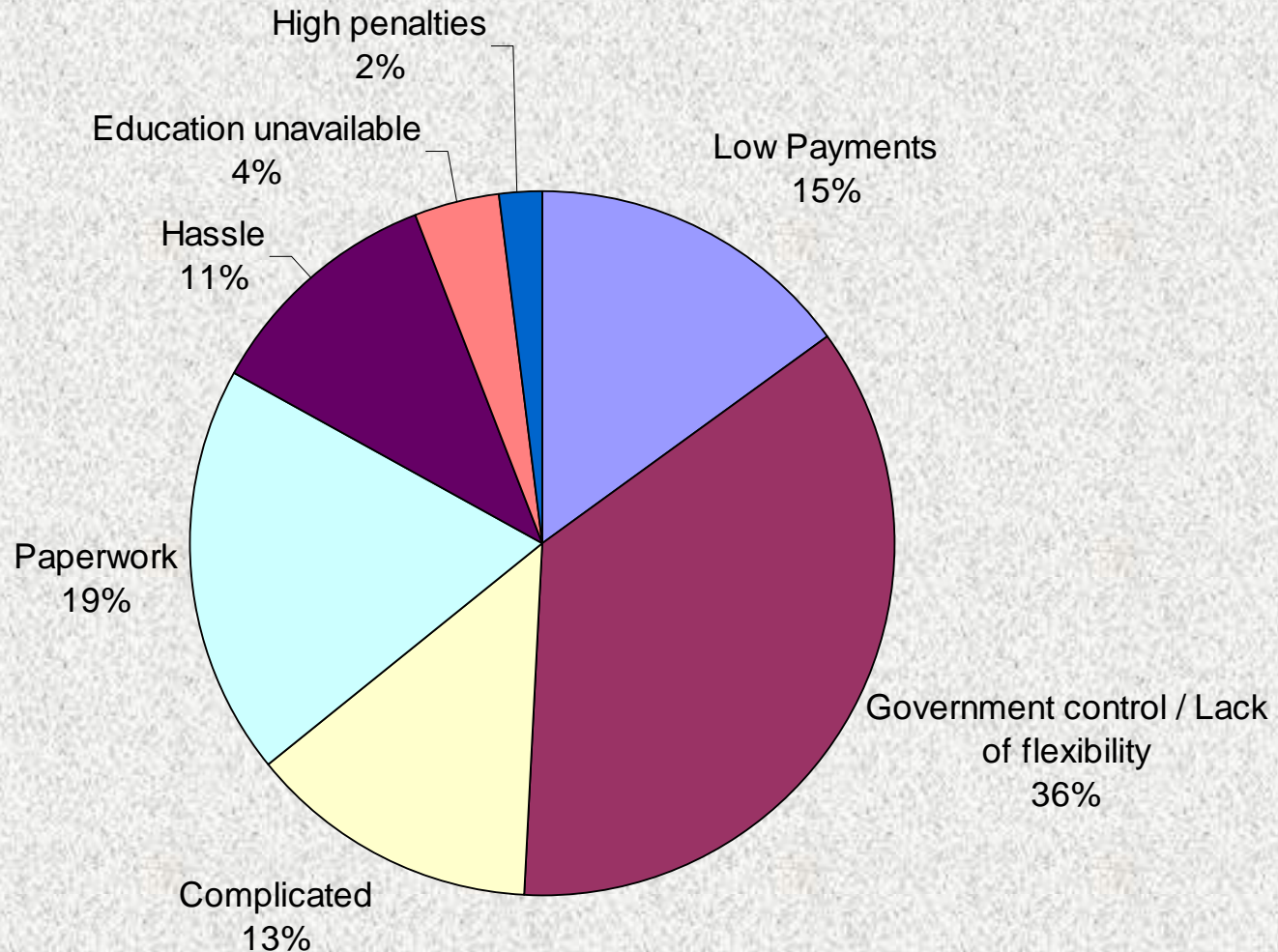
# Issue

- Since 1972 Clean Water Act – increased attention to nonpoint source pollution (sediment, nutrients, pesticides).
- Many years of effort and \$\$ spent on BMPs aimed at reducing NPS pollution.
- Challenges remain
  - In Kansas (KDHE 2002), 76% of stream miles and 77% of lake acres were impaired for one or more uses.
  - Traditional technical assistance/incentive-based programs unlikely to meet TMDL goals.

# Issue

- Many cost-share & incentive programs in place.
- Many producers still choose not to participate and/or adopt BMPs.
- Why is this the case?
- How can we increase BMP adoption rates?

# Why do some producers choose not to participate in conservation programs?



# Summary of Findings

- No simple answer to ↑BMP adoption & participation in conservation programs.
- Many producers say that participation is limited because of:
  - Excessive paperwork, program complexity, “hassle” of living up to program obligations.
  - Any innovations to simplify or reduce producers’ time commitment would be a worthwhile investment.



# Summary of Findings

- Many producers uncomfortable with govt. control over their land-use decisions.
  - Conservation Programs should limit the amount of restrictions placed upon enrollees.
  - More flexibility
- Increasing payment levels could increase participation, but was not a major factor.

# Market-based Approaches

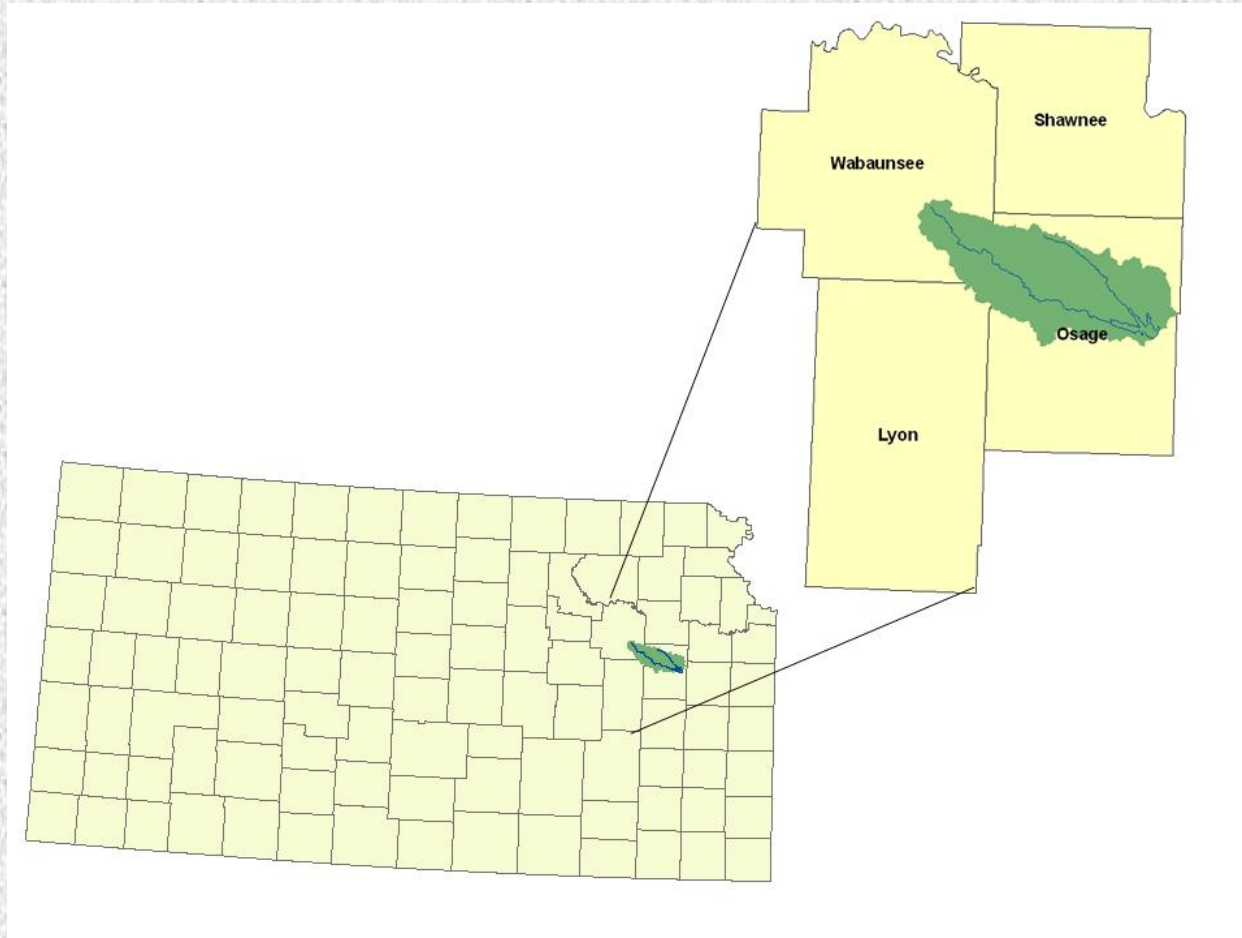
- Much interest in market-based approach.
- NRCS Strategic Plan (2005-2010) lists “Market-Based Approaches” as one of three overarching strategies.
- Success in air quality trading.
- Concepts now being applied to water quality trading.
- One hybrid-type approach to be used in Kansas: BMP Auction.

# Possible Alternative – BMP Auctions

- Producers submit bids to supply the watershed with WQ improvements.
- Bids are ranked by amount of WQ improvements generated per dollar.
- Producer who offers WQ improvements at lowest price is contracted with first.
- Process repeated until a predetermined point is reached.
- BMP auctions identify and purchase the most cost-effective WQ improvements for a specified budget.

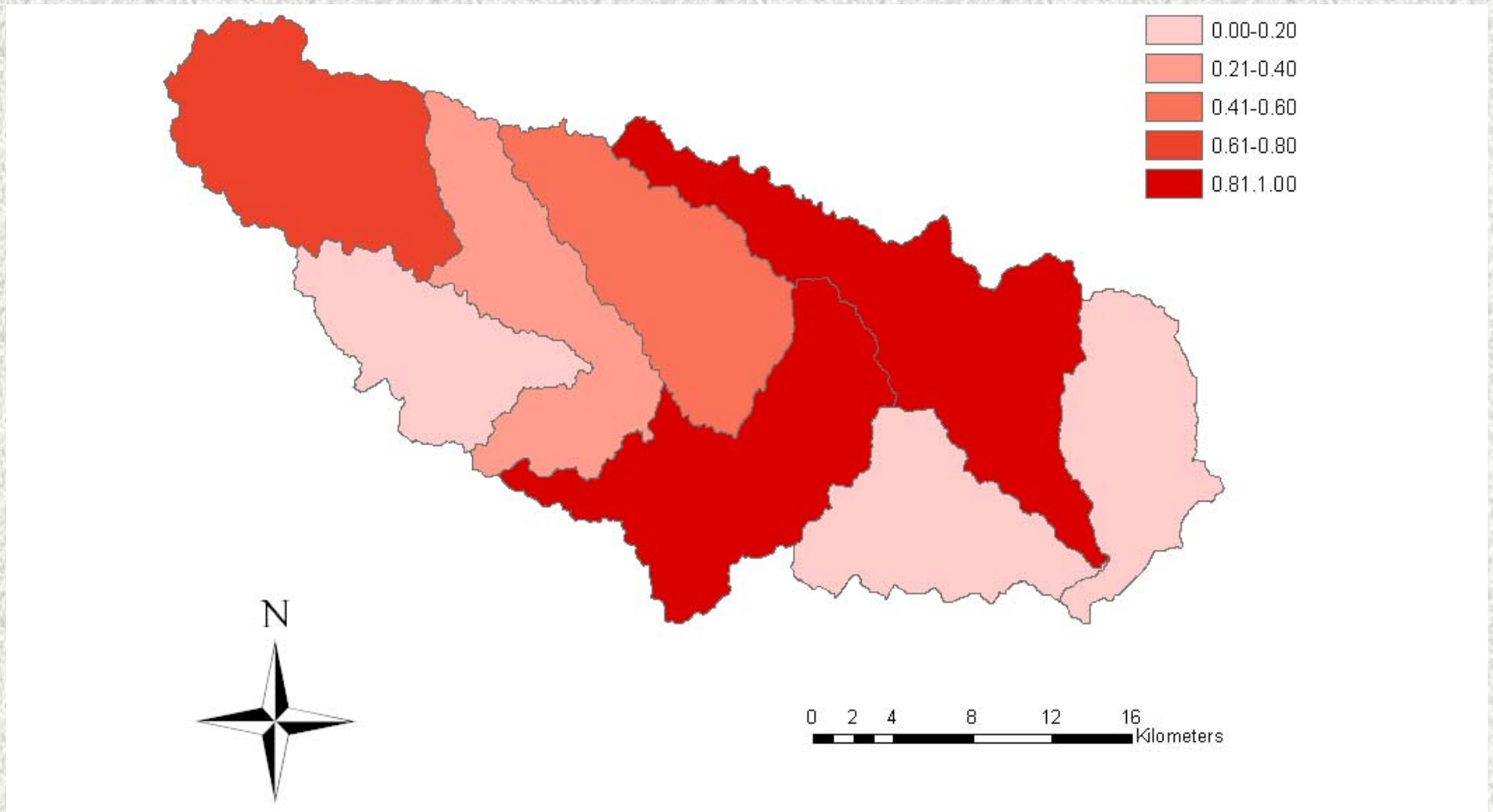


# Pomona Lake BMP Auction



**TMDLs for: Eutrophication, Silt, Dissolved Oxygen**

# Targeted Areas in Pomona

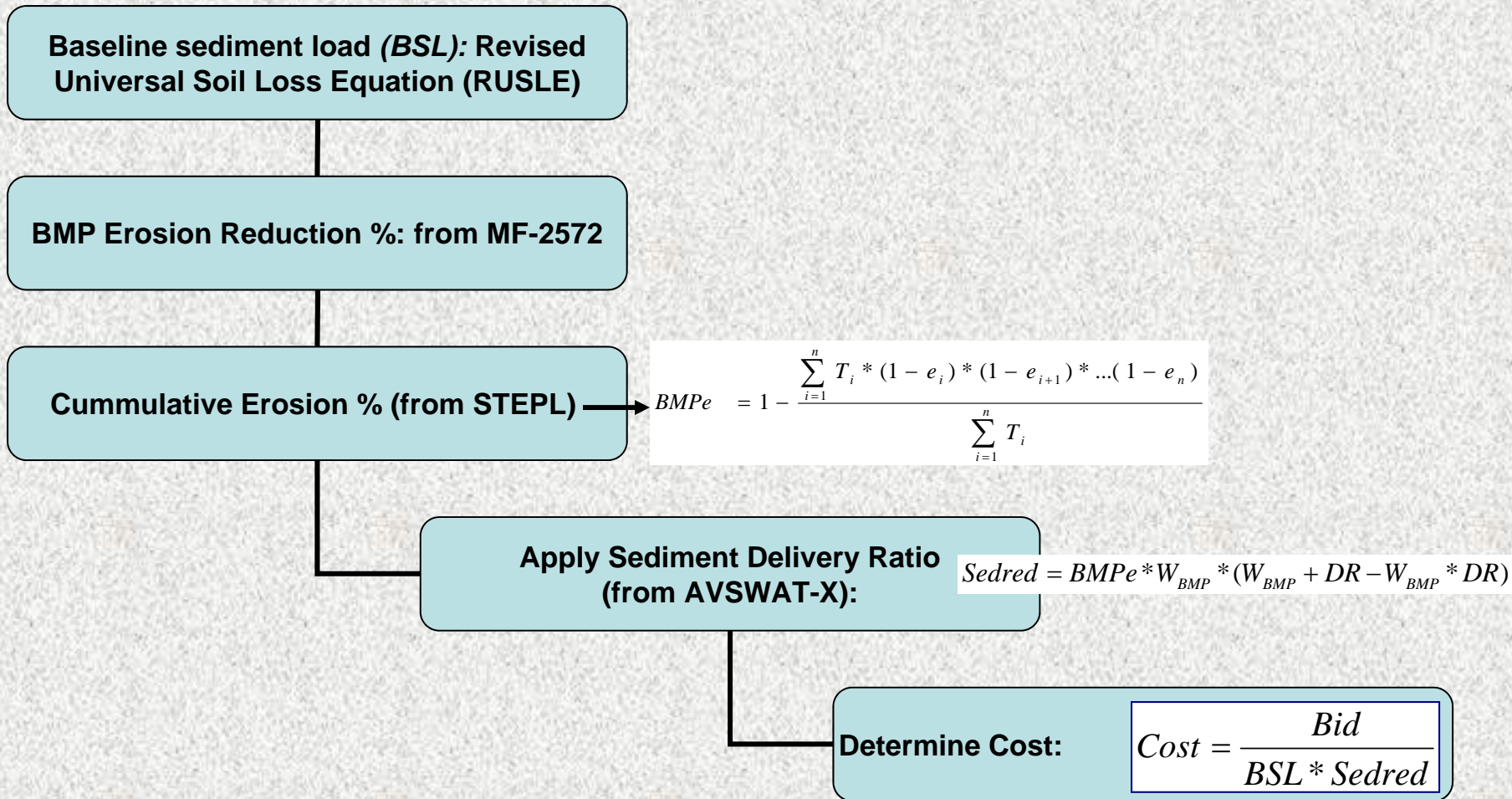


# BMP Auction - *mechanics*

**Stakeholder's Goal: reduce sedimentation in Pomona Lake**

<input checked="" type="checkbox"/>	<b>Best Management Practices</b> — <i>see back for definitions</i>	<b>Erosion Reduction Efficiency</b>	<b>Treated Field Acres</b>	<b>Total Bid Price (dollars)</b>
<input type="checkbox"/>	Establish riparian vegetative buffer (check width): <input type="checkbox"/> less than 30' wide <input type="checkbox"/> 30' to 60' wide <input type="checkbox"/> greater than 60' wide	25% 50% 75%	_____	_____
<input type="checkbox"/>	No-tillage (check option): <input type="checkbox"/> Option #1 <input type="checkbox"/> Option #2	40% 75%	_____	_____
<input type="checkbox"/>	Farm on the contour	35%	_____	_____
<input type="checkbox"/>	Establish contour grass strips	50%	_____	_____
<input type="checkbox"/>	Re-shape existing terraces	25%	_____	_____
<input type="checkbox"/>	Establish terraces	30%	_____	_____
<input type="checkbox"/>	Establish permanent vegetation on entire field	95%	_____	_____
<input type="checkbox"/>	Establish grassed waterways	50%	_____	_____
<input type="checkbox"/>	Alter crop rotation away from continuous soybeans	25%	_____	_____
<input type="checkbox"/>	Other (explain):	TBD	_____	_____

# Evaluation Process





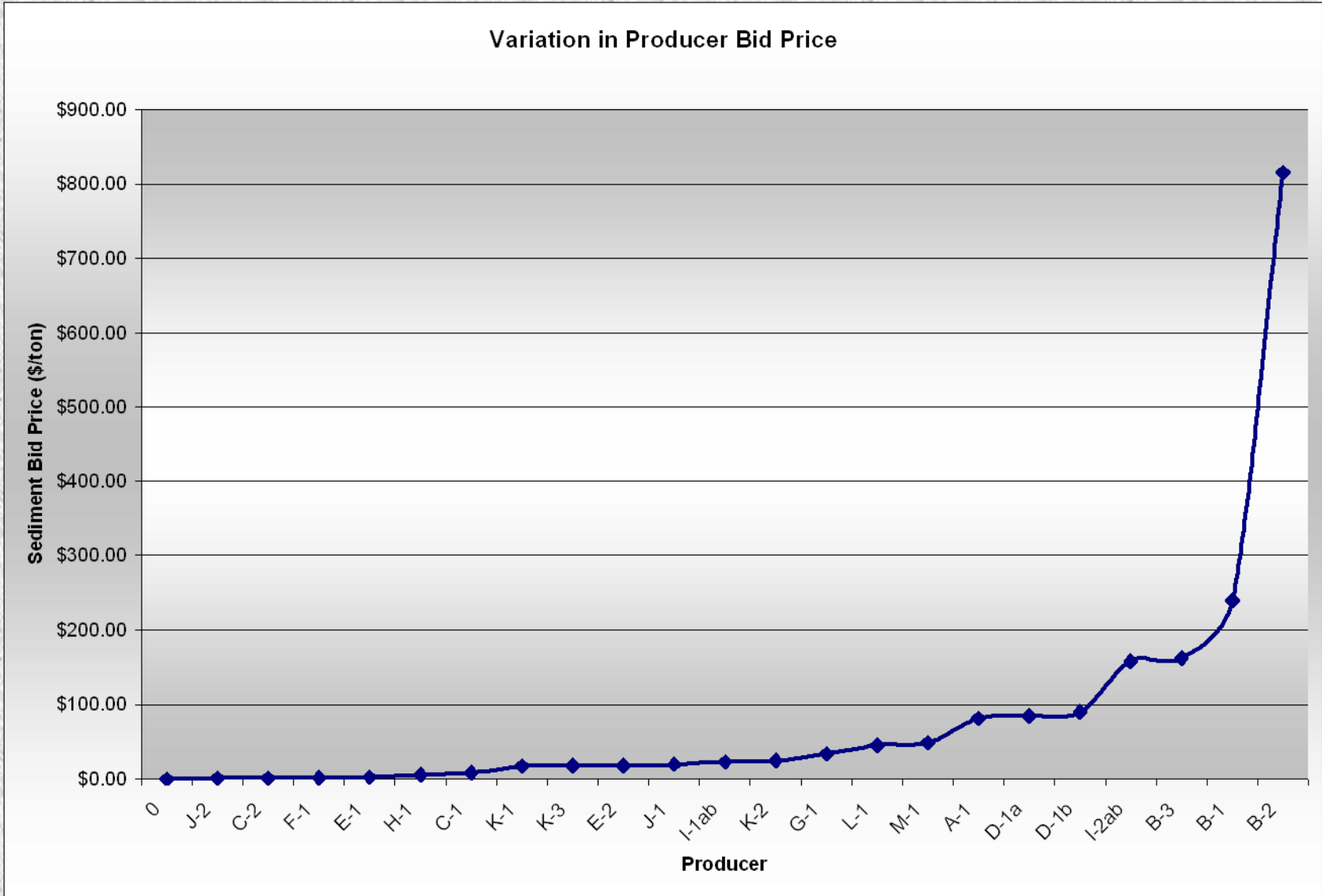
# Auction Summary

Auction Round	Bids	Total Dollars	Funded Dollars
1 (2007)	24	\$19,062	\$19,062
2 (Fall 2008)	22	\$39,000	\$17,250
3 (Late 2008)	17	\$41,954	\$26,254
<b>Total</b>	<b>63</b>	<b>\$100,016</b>	<b>\$62,566</b>

# Auction Summary, Cont.

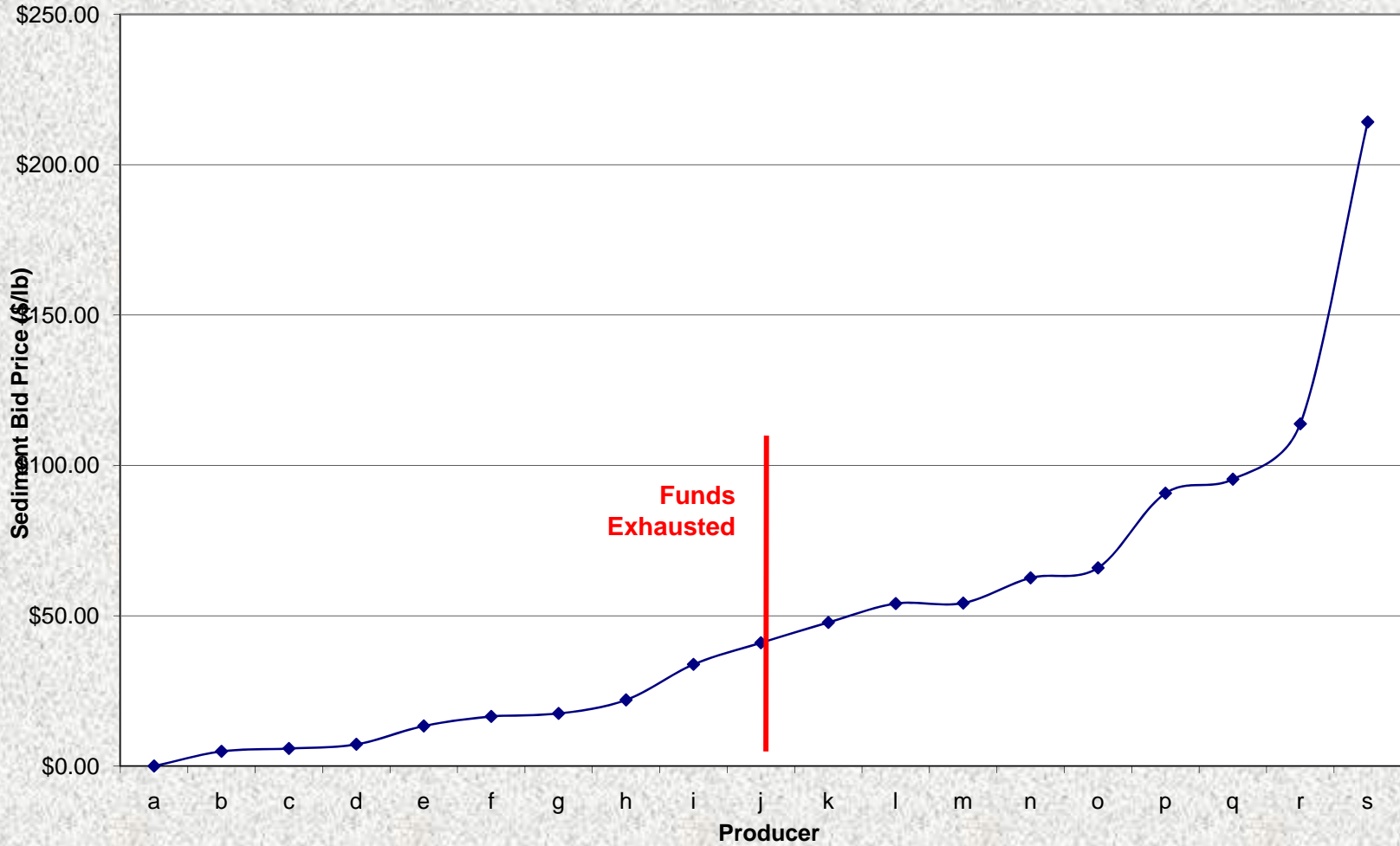
Auction Round	Total Tons Reduced	Efficiency	Average \$/Ton
1	938	75%	\$20.32
2	1,439	34%	\$18.02
3	911	61%	\$28.82
<b>Total</b>	<b>3,288</b>		

# Round One Bids



# Round Two Bids

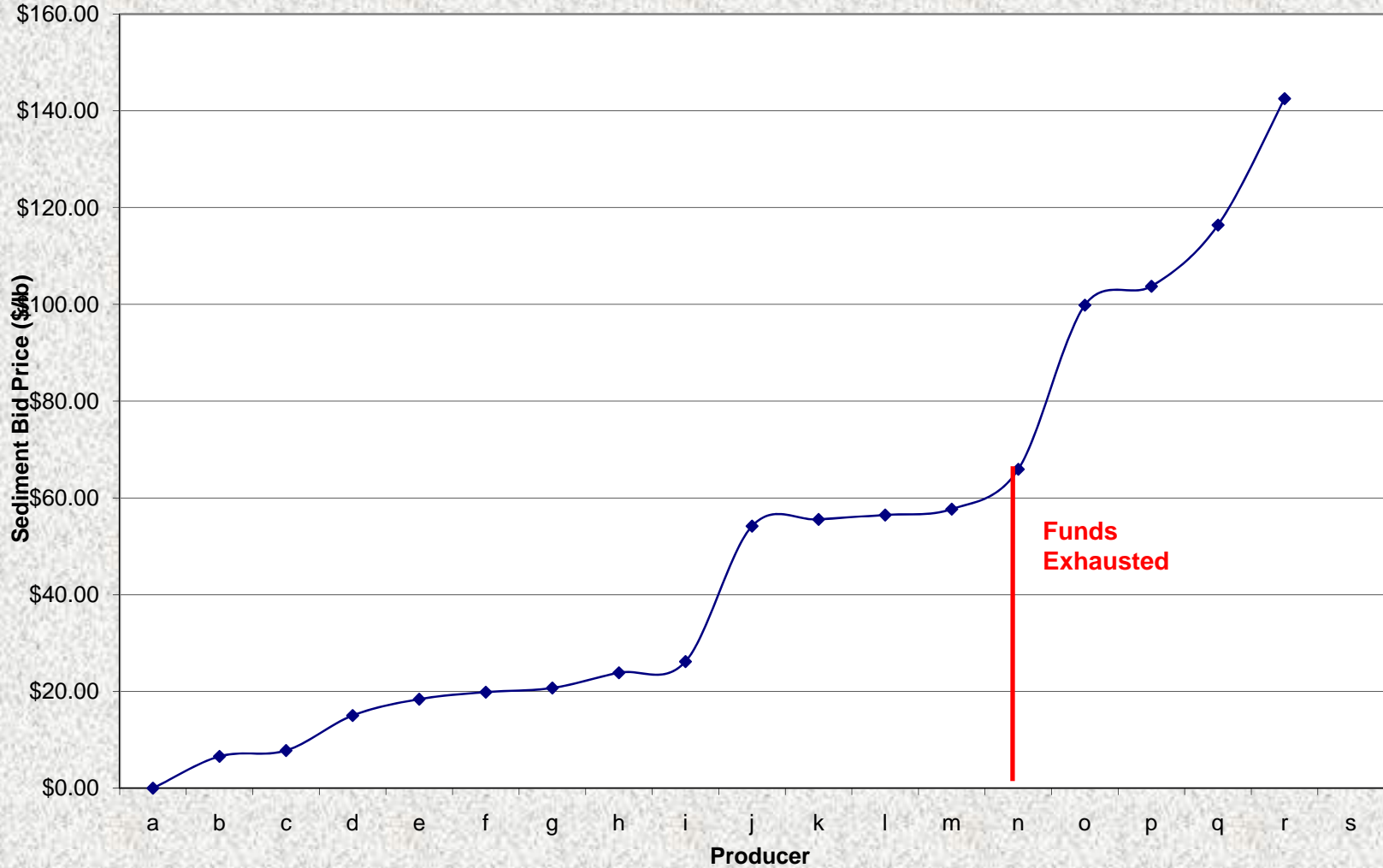
Variation in Producer Bid Price





# Round Three Bids

Variation in Producer Bid Price



# BMP Auction - *benefits*

- Several benefits to coupling a BMP Auction with flexible implementation funding:
  - Funds can be targeted to highest impact investments and exceed limits of existing programs.
  - Producers offered flexibility of choosing alternative BMPs that work best for their operation and name their price.
  - Provides valuable insights into the incentive levels required to adopt BMPs.
    - Guide future policies and investments.

# Pomona BMP Auction - Challenges

- Keeping it simple enough to be easily understood, but complex enough to be effective, we are all learning!!
  - Many meetings with stakeholder group, NRCS, CD, Watershed Specialist, Extension Agent discussing details.
- Marketing
  - Multiple producer meetings, mailings, farm visits, phone calls, and radio interviews to spread the word.

# Marais des Cygnes Auction

- Currently taking place!
- Bi-State Targeted Watershed Grant
- Simultaneous auctions in Kansas in Missouri.
- \$70,000 split evenly between states.

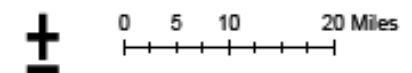


# Marais des Cygnes Basin

## 303(d) Listed Streams and Lakes with TMDLs



- River or Stream
- 303(d) Listed River or Stream
- Lake
- Lake with TMDL
- Upper Marais des Cygnes
- Lower Marais des Cygnes
- Little Osage
- Marmaton
- Missouri County Boundaries
- Kansas County Boundaries
- Major City



Section 303(d) of the Clean Water Act requires states to identify all water bodies where state water quality standards are not being met. Total Maximum Daily Loads (TMDLs) are often developed to address impairments that appear on the 303(d) list. TMDLs are limits on the amount of pollutants entering a stream or lake while still allowing it to attain water quality standards.

303(d) listed rivers and streams that appear on this map are taken from 2006 data available from the Kansas Department of Health & Environment and 2002 data available from the Missouri Spatial Data Information Service. The TMDL lakes that appear on this map are taken from 2006 data available from the Kansas Department of Health & Environment.



# Livestock Auction Challenges

- Focus on phosphorus and nitrogen.
- Wide variation between locations and operators.
- Little research on overall effectiveness of livestock BMPs...trust the modelers!
- Potentially larger bids (previously capped at \$5,000/producer).
- Still confident in conducting a “hybrid” auction in the future.

# Upcoming BMP Auctions

- Pomona Auctions:  
Received grant for 6-9 additional auctions in 2010-2012.
- Upper Arkansas, Toronto, Tuttle Creek

# Questions??

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