

PGDP Future Vision Project



www.uky.edu/krcee/project23.html

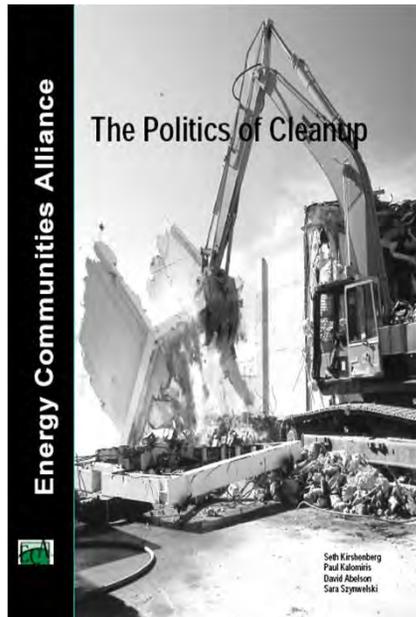
Project Objectives

1. Provide scoping/facilitation/document support for activities related to developing a publicly acceptable PGDP End State Vision for the PGDP based on "Politics of Cleanup" approaches.
2. Solicit, measure and characterize a reliable understanding of public and stakeholder values and preferences regarding a "PGDP End-State Vision Document."
3. Provide insight, development, and deployment of process methods to accomplish "2".

Project Team

- DOE Technical Liaison
 - Rich Bonczek (DOE)
- UK Technical Liaison
 - Steve Hampson (University of Kentucky)
- Project Manager
 - Dr. Lindell Ormsbee (University of Kentucky)
- Community-Based Participatory Communication
 - Dr. Chike Anyaegbunam (University of Kentucky)
- Structured Public Involvement
 - Dr. Ted Grossardt (University of Kentucky)
- Casewise Evaluation
 - Dr. Keiron Bailey (University of Arizona)
- Scenario Visualization
 - John Ripy, Ben Blandford (University of Kentucky)
- Facilitation/Logistics/Technical Support
 - Anna Hoover, Mitchael Schwartz, Jason Martin, Chas Hartman

Process Components



Guiding Principles

Qualitative Tools

- Listening Tour
- Community-Based Participatory Communication

Quantitative Tools

- Structured Public Participation
- Casewise Visual Evaluation

Tool Box



Evaluation Metric

STEP ONE: Background Research and Listening Tour

April 13, 2009 – August 5, 2009

Goals

- Identify Critical Issues
- Discover Previously-Identified Scenarios
- Distinguish Stakeholder Clusters

Background Resources

- 1995 Oak Ridge Study
- DOE RBES
- KRCEE Land Study
- ATSDR Study
- CAB Minutes
- Newspaper Archives
- 2008, 2009 DOE Public Meetings

Listening Tour

- KRCEE-Identified Stakeholders
- *Snowball Sampling*
- Stakeholder-Identified Stakeholders

STEP TWO: Community-Based Participatory Communication Focus Groups

August 5, 2009 – May 5, 2010



Goals

- Solicit community values
- Discuss perceptions about the plant's future
- Identify information gaps and credible sources

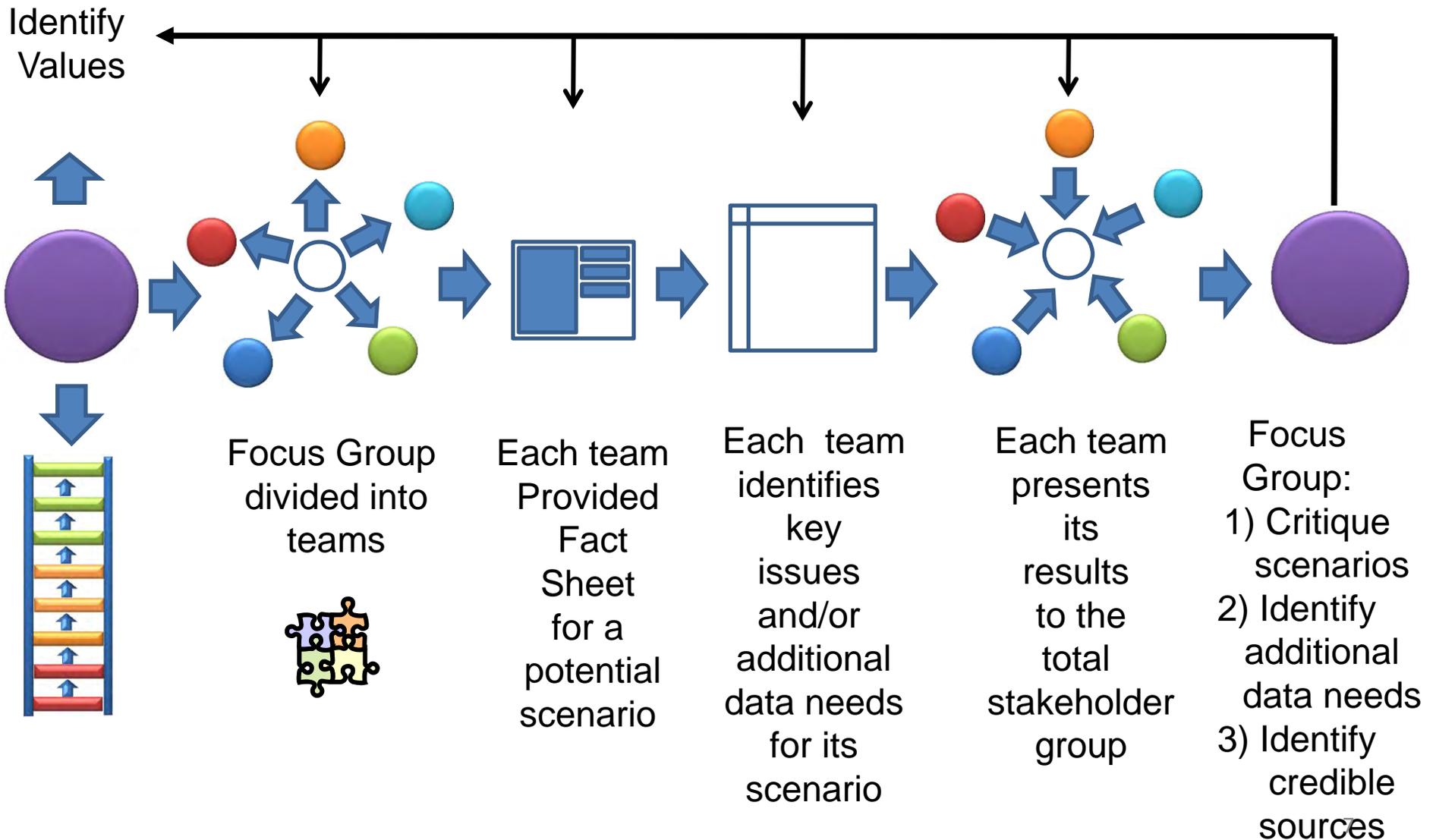
Small Group Discussions

- Blind scenario selection
- Identify scenario-related key issues/data needs
- Present scenario/discussion results to re-assembled group

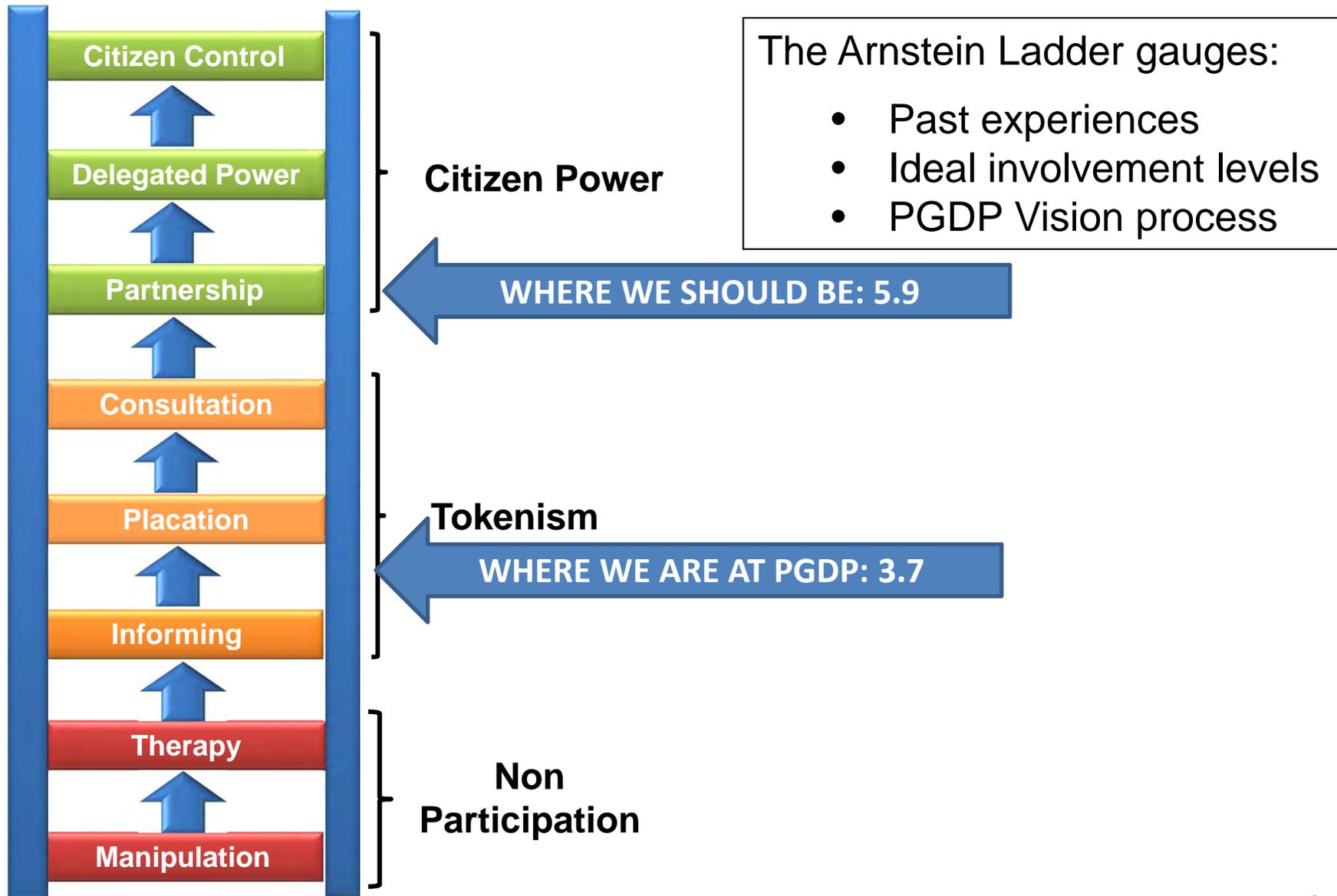
Assembled Group

- Community values discussion
- Scenario critiques
- Information gap identification
- Credible sources

Community Based Participatory Communication (CBPC)



Arnstein Ladder of Citizen Participation

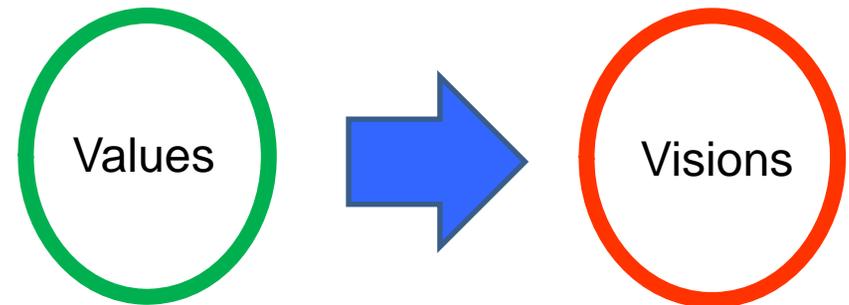


(Arnstein 1969)

Value Exercises

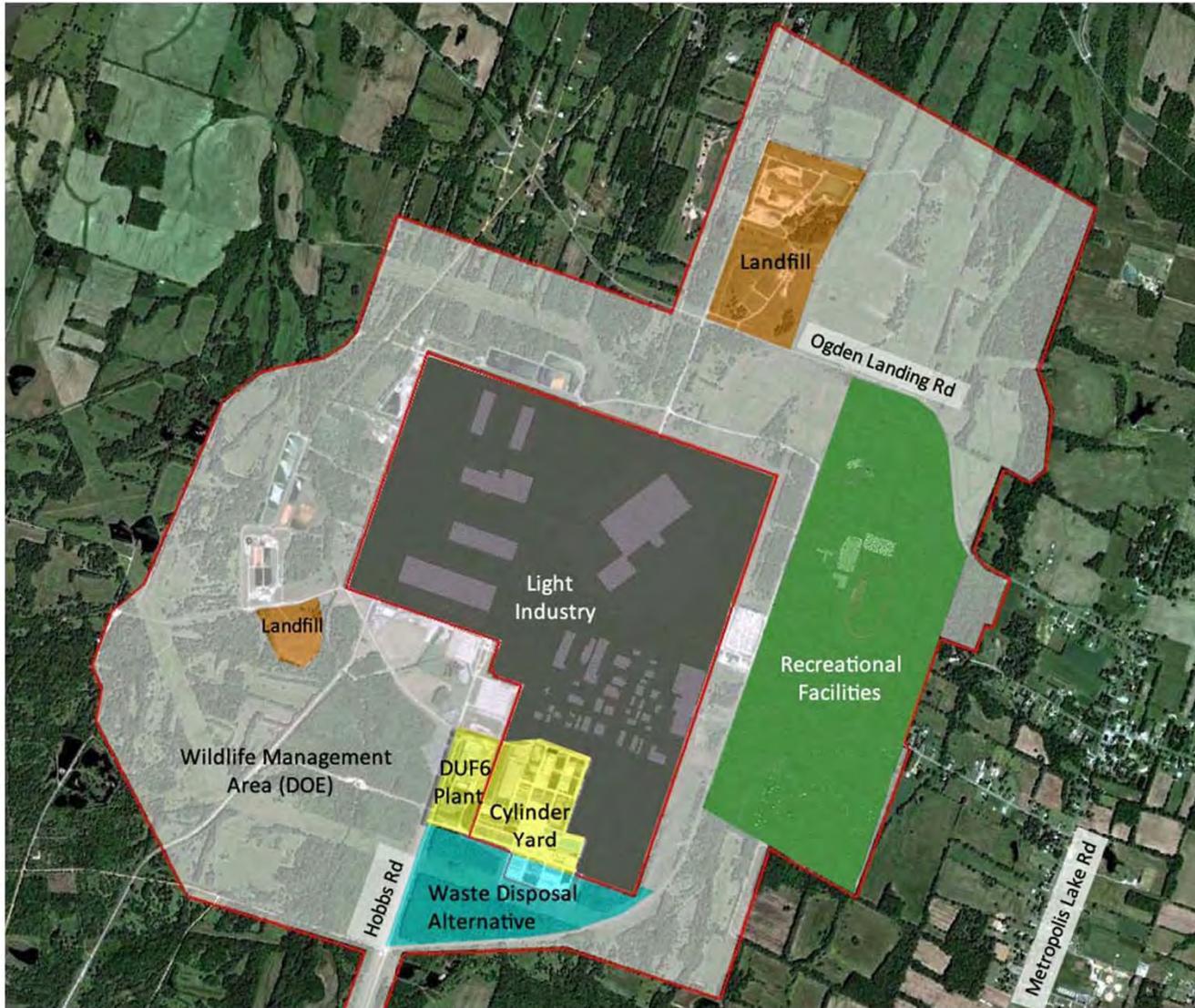
- Appealing characteristics of the local community
 - Sense of community/community spirit
 - Heritage/tradition/family/“roots”
 - Friendliness
 - Outdoor recreation
 - Rural lifestyle with proximity to urban areas
 - Scenic Beauty
 - Safety
 - Cultural/arts opportunities
- Characteristics of the ideal city
 - Jobs and economic opportunities
 - Clean environment
 - Safety
 - Kid-friendly
 - Scenic beauty
 - Education
 - Affordability

Values were used to evaluate hypothetical future visions (i.e. scenarios)



Future Vision Scenarios

S#	PGDP Landuse						WMA Land Use		Future Waste Ship Off Site:			Legacy Waste Excavate:	
	NE	HI	LI	AR	PR	IC	Addl Rec	Exist	None	Part	All	All	Part
1	x							x	x			x	
2	x			Industrial Land uses				x		x			x
3		x		Industrial Land uses			x				x	x	
4		x						x	x				x
5			x				x			x		x	
6			x					x			x		x
7				x				x		x			x
8				x			x		x			x	
9					x		x				x		x
10	Non Industrial Land uses				x			x		x		x	
11	Non Industrial Land uses					x		x			x	x	
12						x	x		x				x



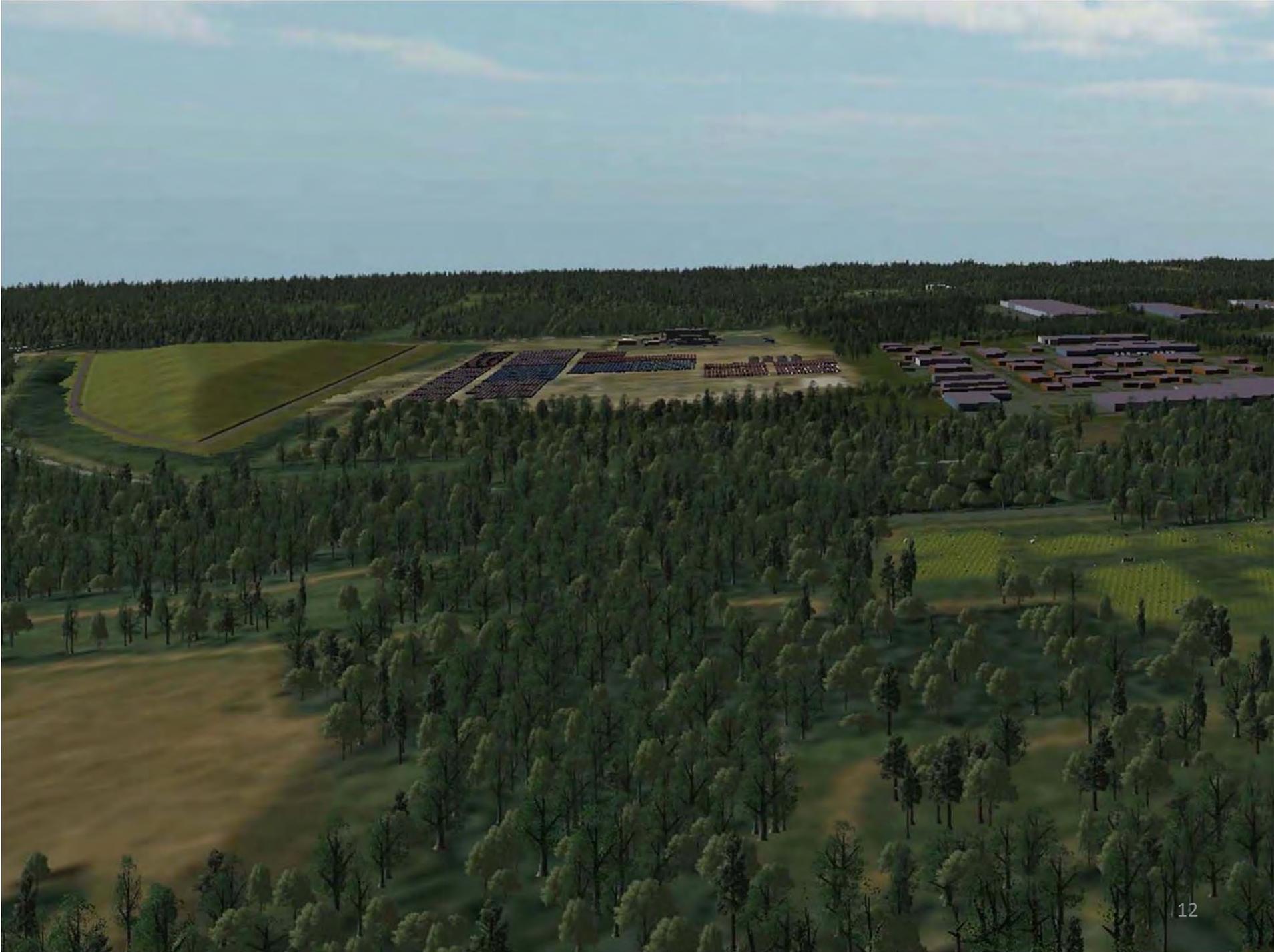
Scenario 5

*Light Industry
on Plant Site

* Active
Recreational
Facilities added
to PGDP WMA

* Part of Plant
Decommissioning
Waste kept
onsite in WDA
and part placed
in managed
Landfill

* All Existing
Burial Grounds
excavated, some
placed in the
WDA and the rest
shipped off-site.



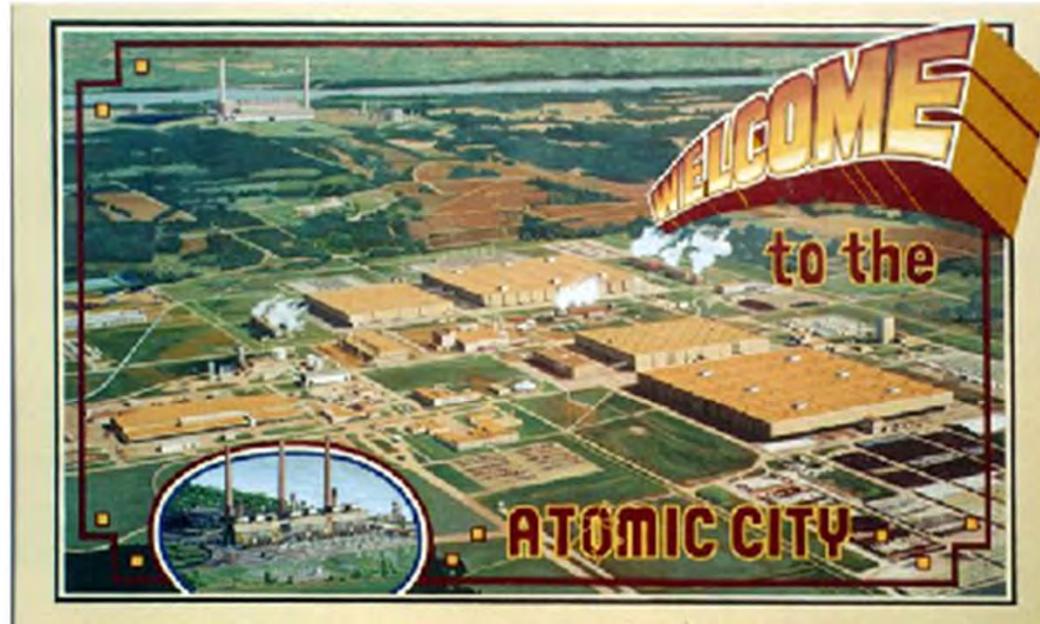


[Welcome](#)[The Project](#)[The Past](#)[The Present](#)[The Future](#)[Science](#)[Cleanup](#)[FAQ](#)

Welcome

Project History

In 2003, the [Kentucky Research Consortium for Energy and Environment \(KRCEE\)](#) was created at the [University of Kentucky](#). The Consortium's mission is to provide technical support to the [US Department of Energy \(US DOE\)](#), the [US Environmental Protection Agency \(US EPA\)](#), and the [Kentucky Division of Waste Management](#) regarding non-consensus issues associated with clean-up efforts at the Paducah Gaseous Diffusion Plant (PGDP), a National Priority List (NPL) Superfund site.



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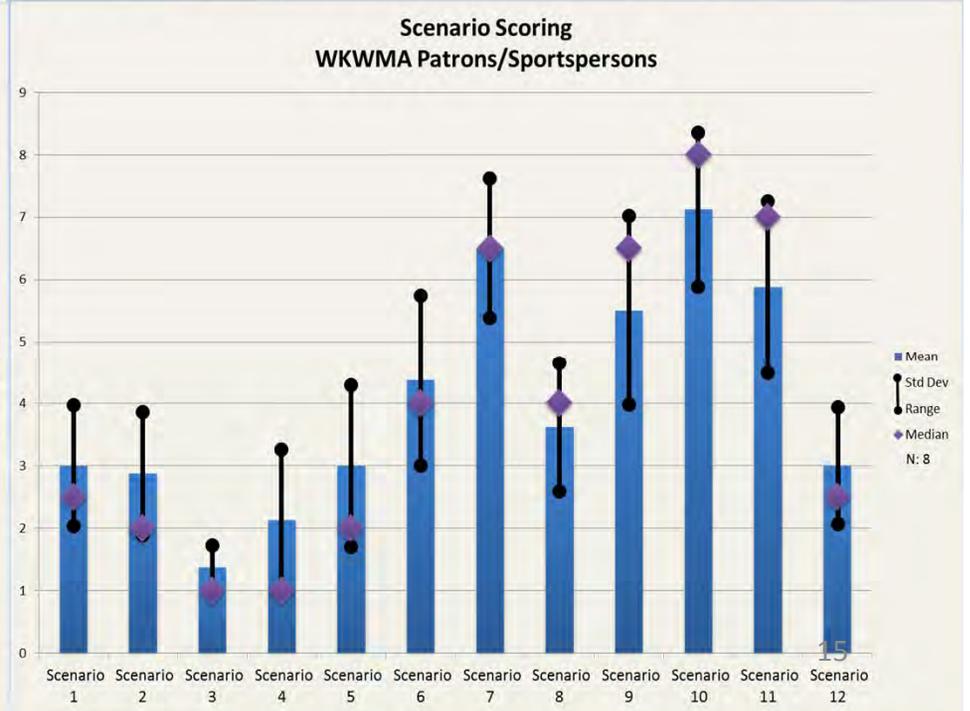
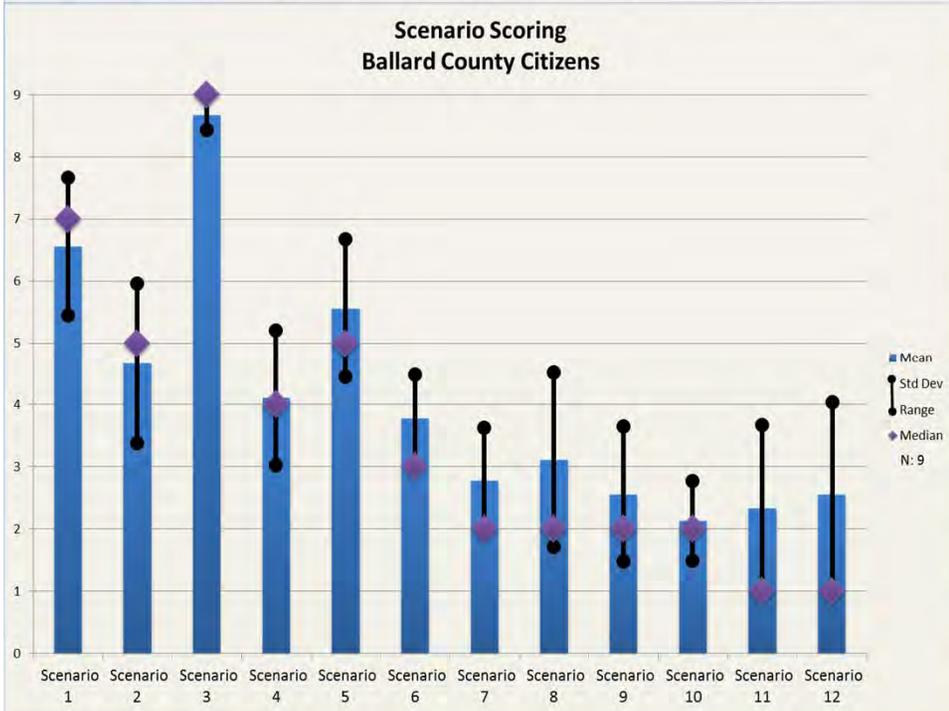
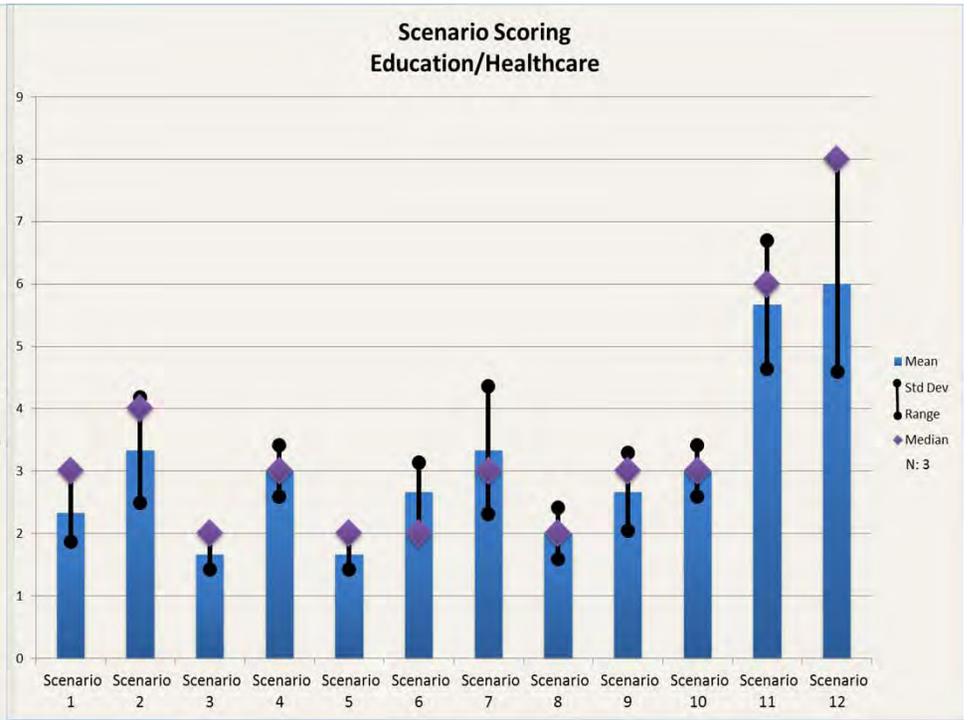
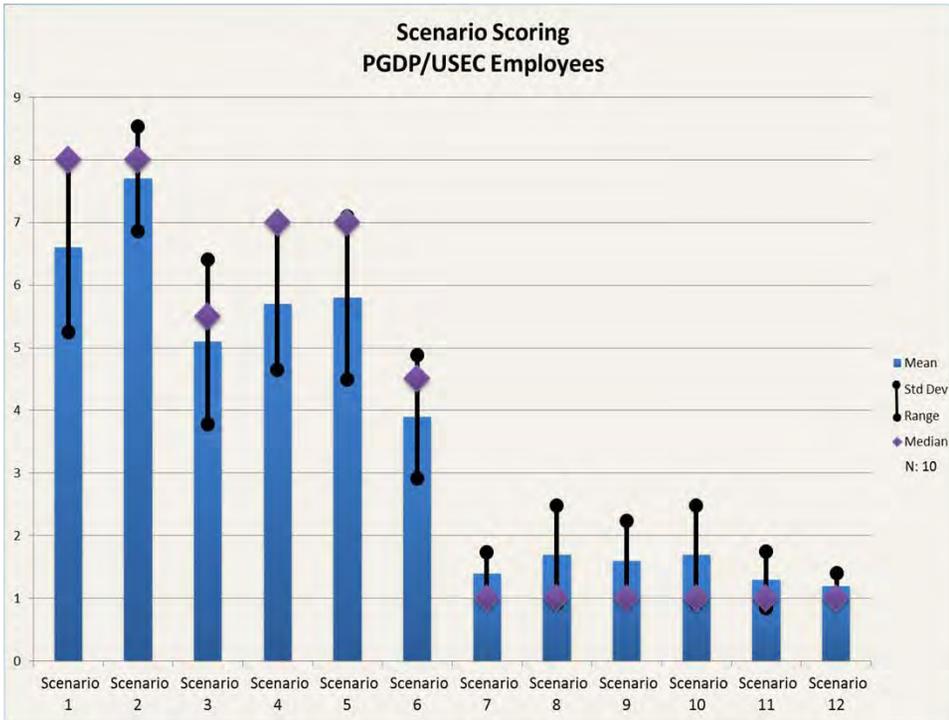
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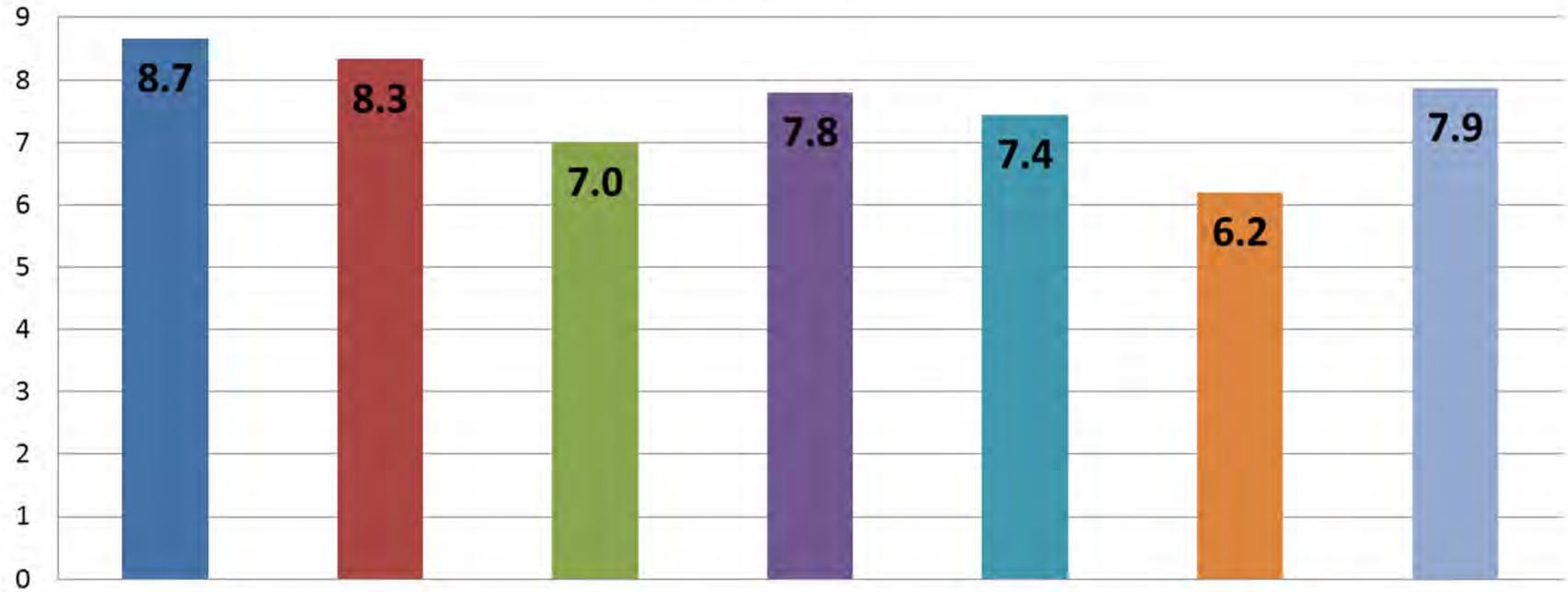
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Process Rating by Meeting

Previous



Ballard County Citizens

Economic Development/Local Government

Education/Healthcare

PGDP/USEC Employees

US DOE Employees/Subcontractors

Water Policy District Residents

WKVMA Patrons/Sportspersons

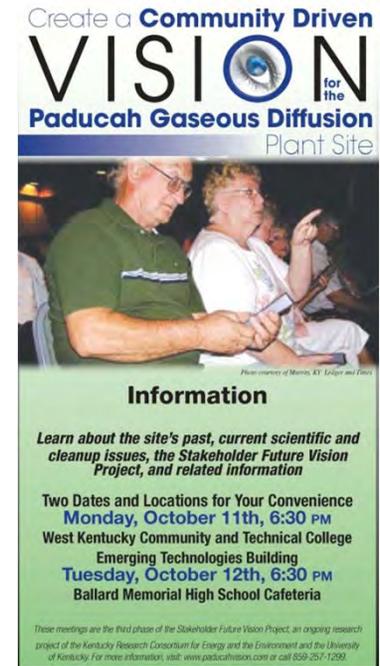
STEP THREE: Public Informational Meetings

May 6, 2010 – October 12, 2010



Goals

- Research Informational Needs
 - Inform Public of Study
 - Hold informational meetings
 - Post information on Website



Information Meetings

- 30 Multiple Choice Questions
- 5 Categories
- “Jeopardy” Format
- Opportunity for follow up questions

Assembled Group

- Community values discussion
- Scenario critiques
- Information gap identification
- Credible sources

STEP FOUR: Public Scenario Scoring Meetings

October 25, 2010 – October 27, 2010

Create a **Community Driven**
VISION for the
Paducah Gaseous Diffusion Plant Site



Vote on several land use options, including:

- Permanent Site Closure
- Expanded Wildlife Management
- Recreation Areas
- Heavy Manufacturing
- Light Industry
- Nuclear Industry

Give us your ratings, participate in democracy, and influence your community's future!

Two Dates and Locations for Your Convenience

Monday, October 25th, 6:30 PM
West Kentucky Community and Technical College
Emerging Technologies Building

Tuesday, October 26th, 6:30 PM
Ballard Memorial High School Cafeteria

These meetings are the third phase of the Stakeholder Future Vision Project, an ongoing research project of the Kentucky Research Consortium for Energy and the Environment and the University of Kentucky. For more information, visit: www.paducahvision.com or call 859-257-1299.

Goals

- Introduce Scenarios
- Answer Questions
- Score Scenarios
- Solicit Participant Scenarios
- Score Participant Scenarios

Create a Community-Driven Vision for the
Paducah Gaseous Diffusion Plant Site



Photo courtesy of Marisa, KY Ledger and Times

Future Scenarios Meeting
Give us your rating for twelve examples of options for the future of the plant site. Two Dates and Locations for your convenience

Monday, October 25th, 6:30 p.m.
West Kentucky Community and Technical College
Emerging Technologies Building

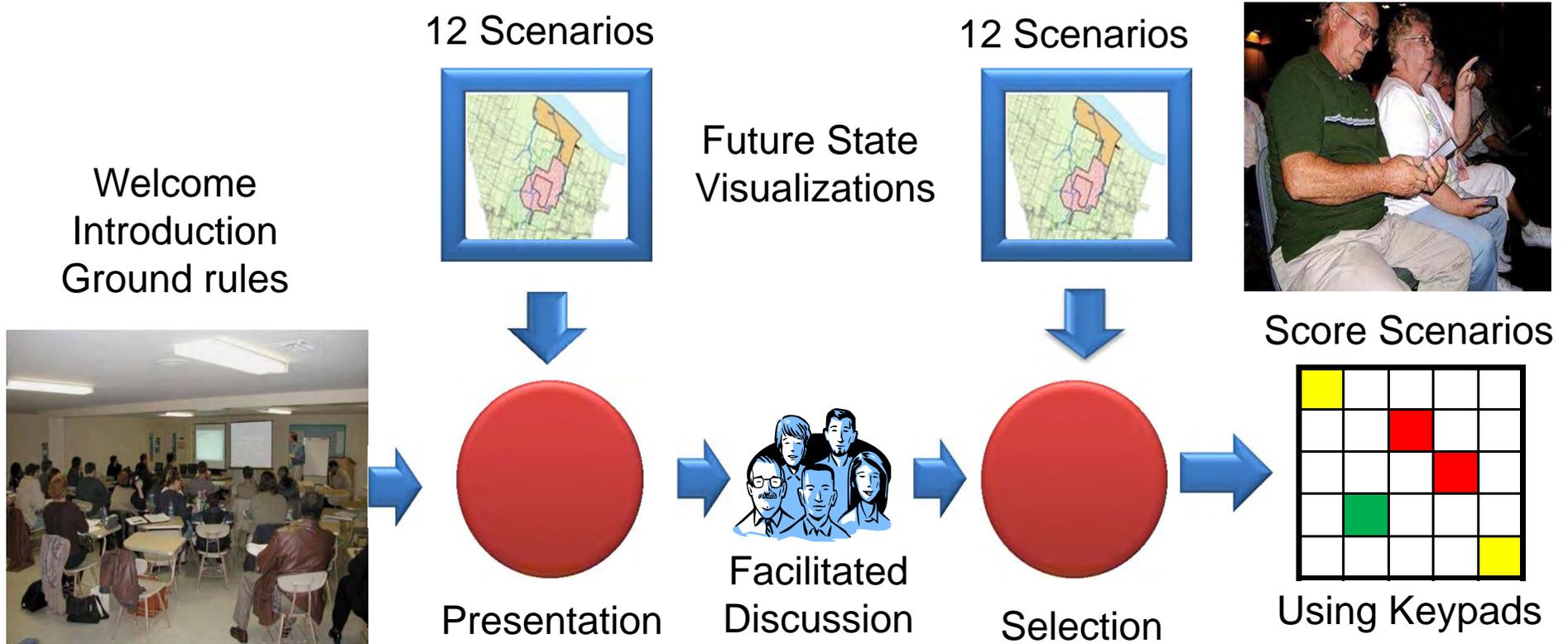
Tuesday, October 26th, 6:30 p.m.
Ballard Memorial High School Cafeteria

These meetings are the third phase of the Stakeholder Future Vision Project, an ongoing research project of the Kentucky Research Consortium for Energy and the Environment and the University of Kentucky. For more information, visit: www.paducahvision.com or call 859-257-1299.

Scenario Scoring Meetings

- 12 Scenarios
- Utilize Structured Public Involvement Process
- Utilize Key Pad Technology

Structured Public Involvement (SPI)

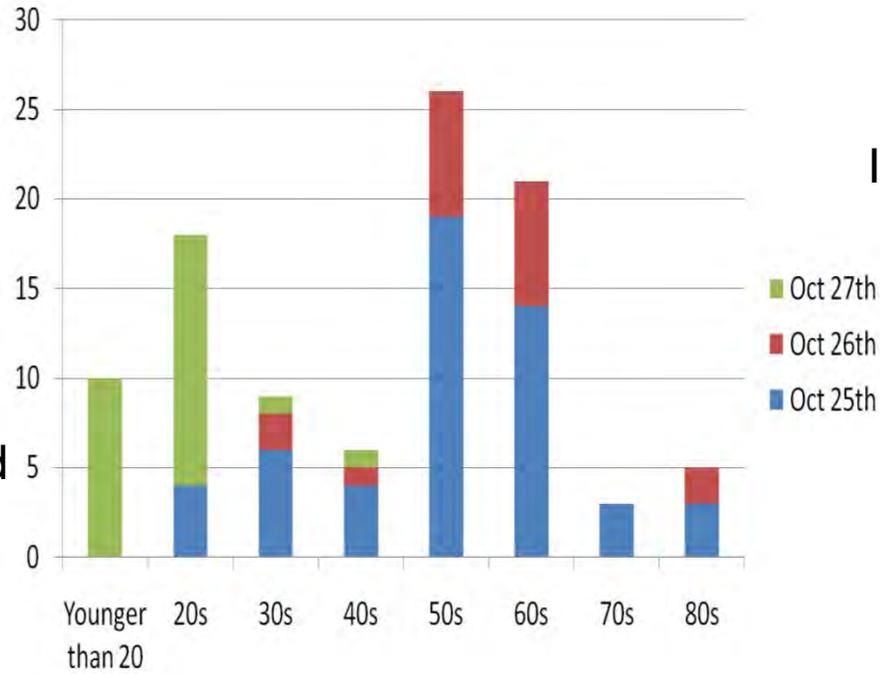


- **Chauffer** manages and operates equipment, enters comments solicited from participants
- **Emcee's** job is to enforce democratic process, keep process moving and on track
- **SME** interprets, aids understanding, helps avoid misinformation



Age Demographics

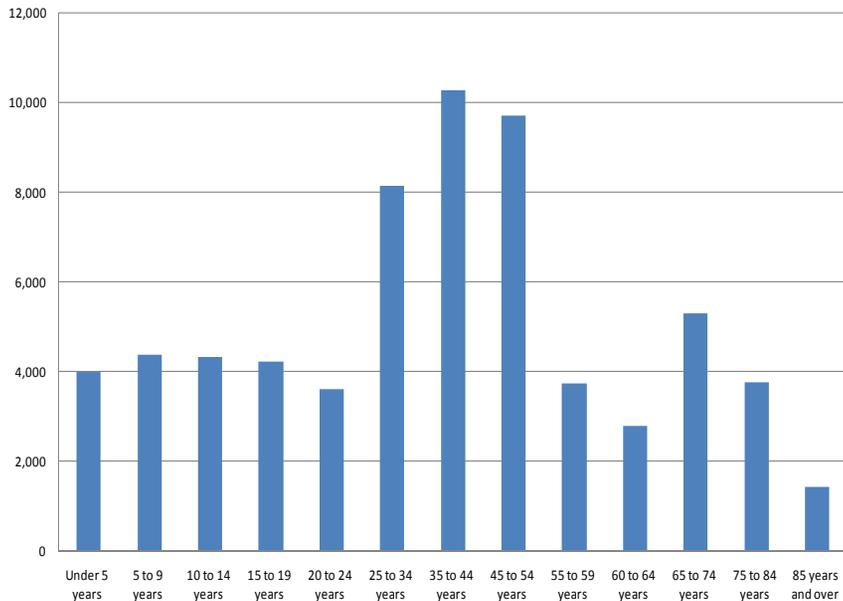
Data collected to date have a gap in the 30s and 40s, which is the largest demographic in both McCracken and Ballard Counties.



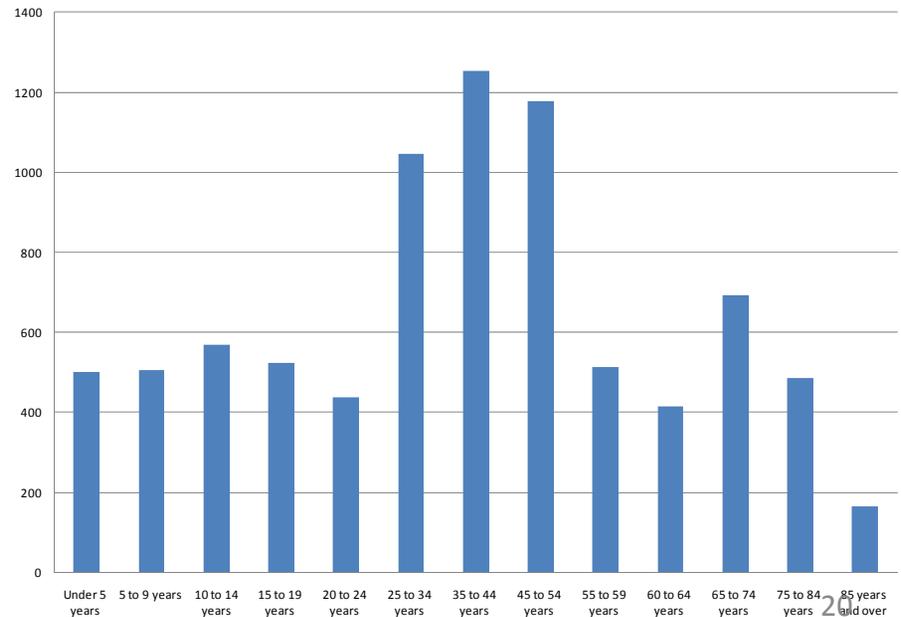
Missing segment
In which jobs and kids
are especially
Important.

Harder for this
demographic to
attend meetings.

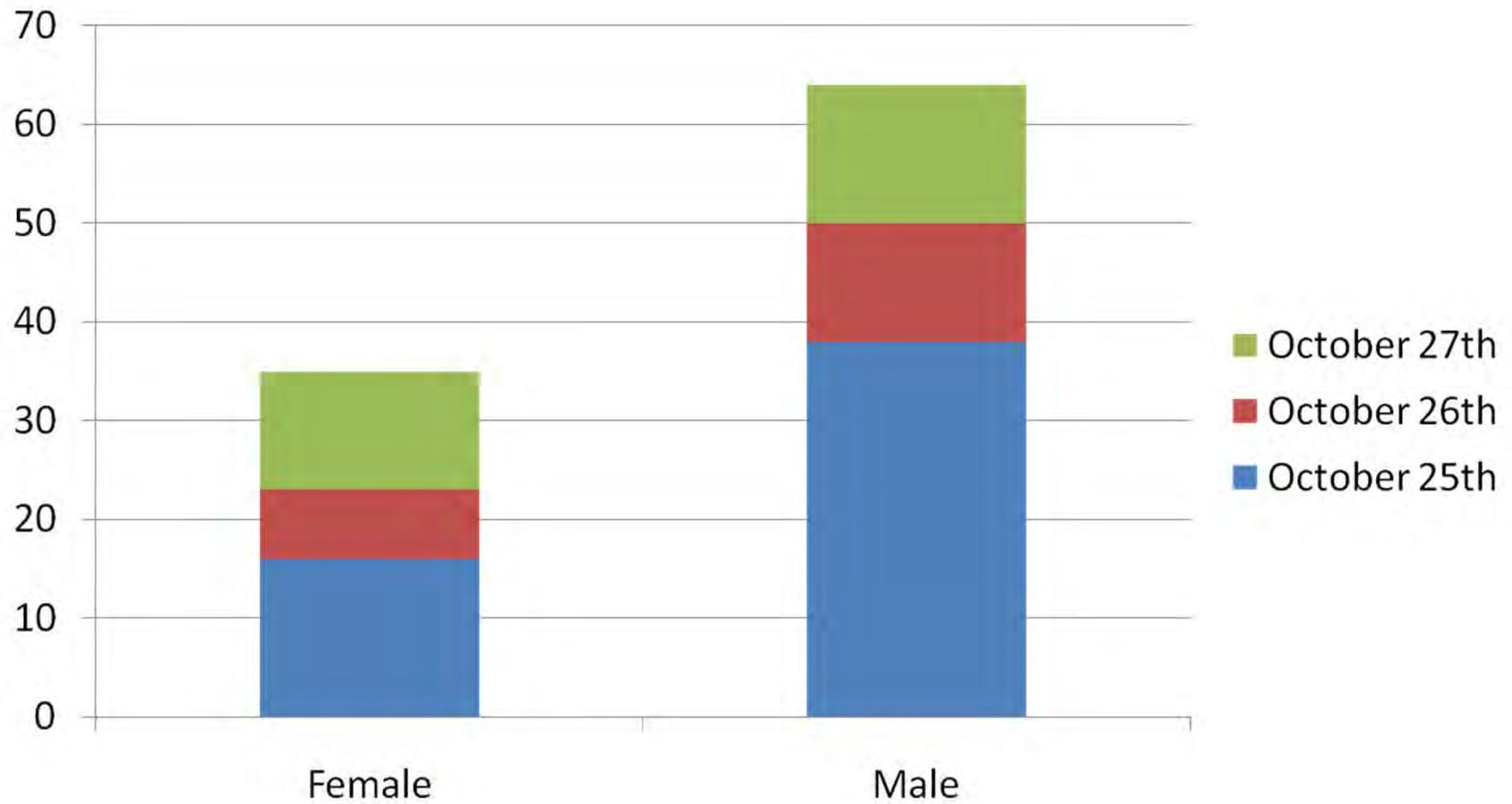
McCracken County Age Distribution



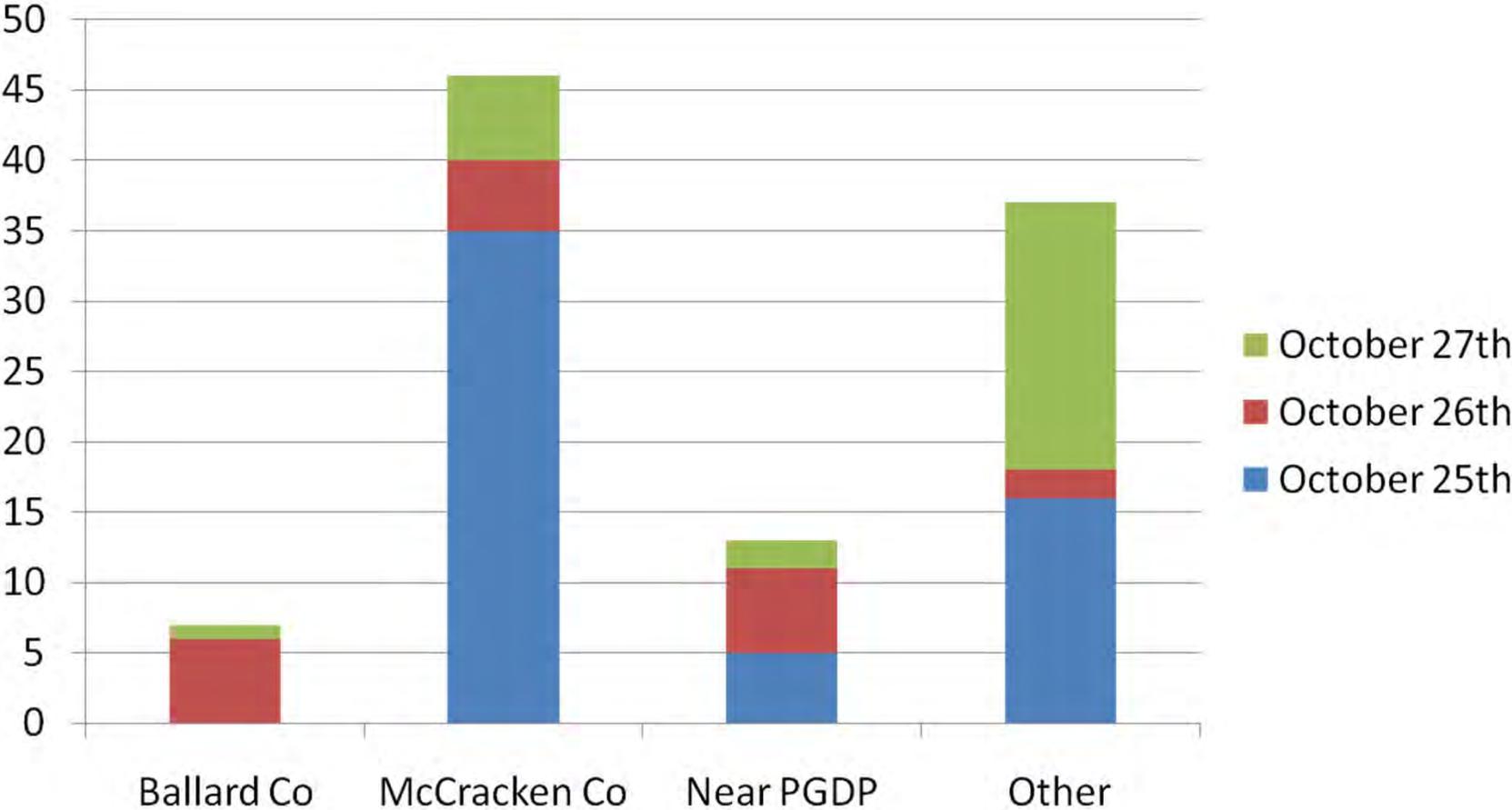
Ballard County Age Distribution



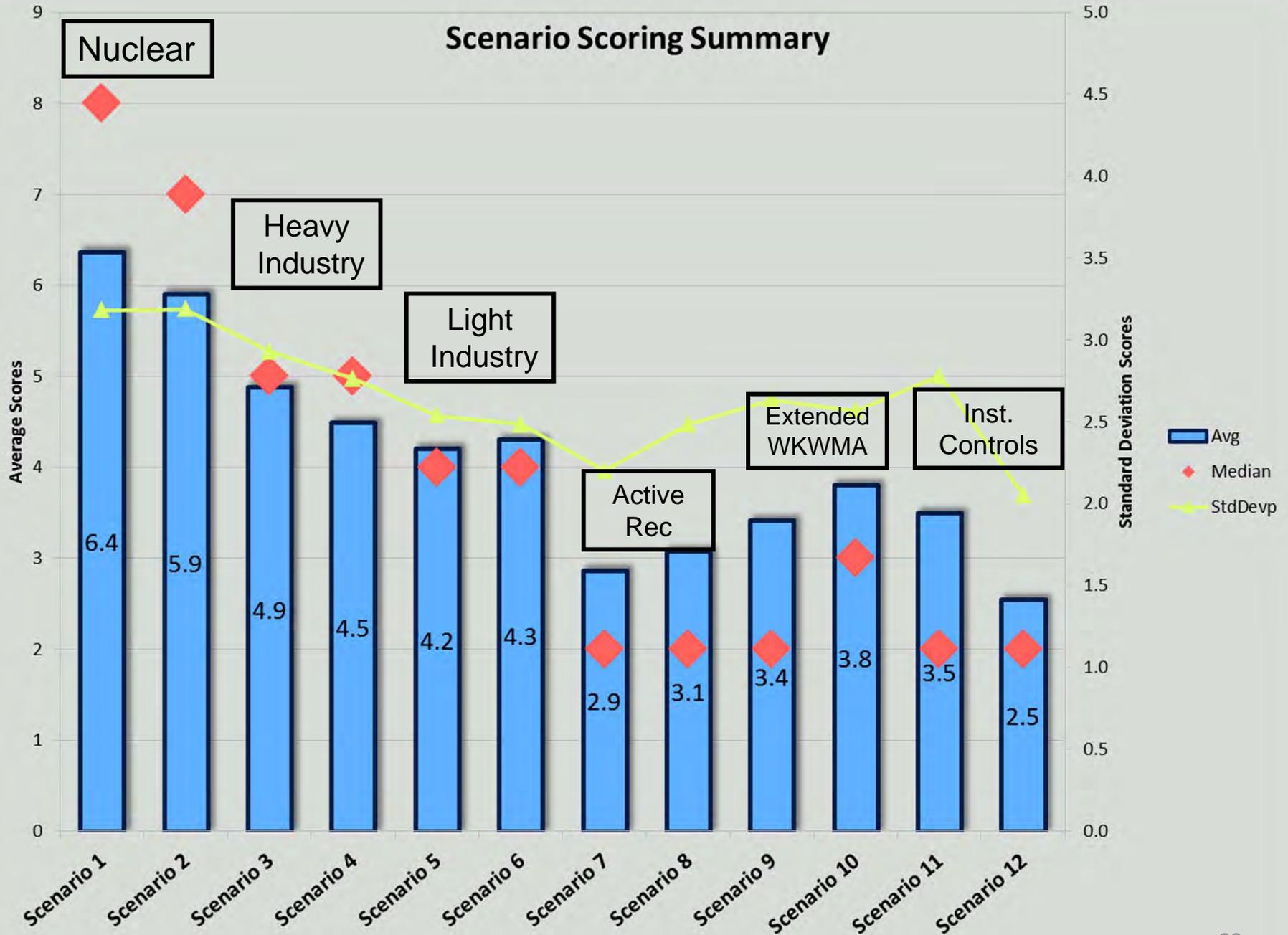
Women/Men?

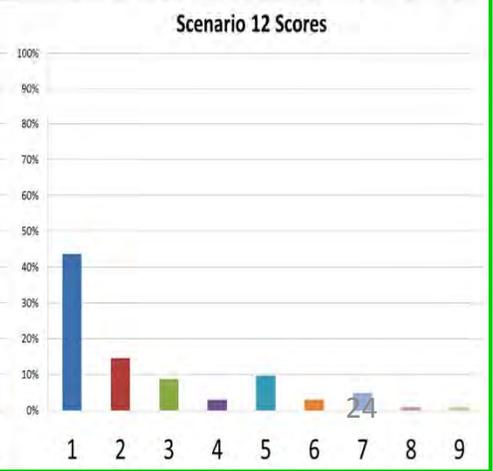
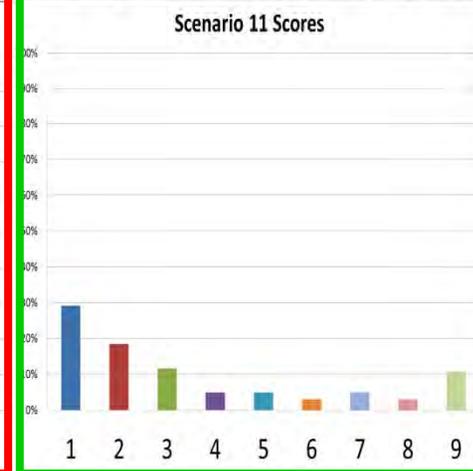
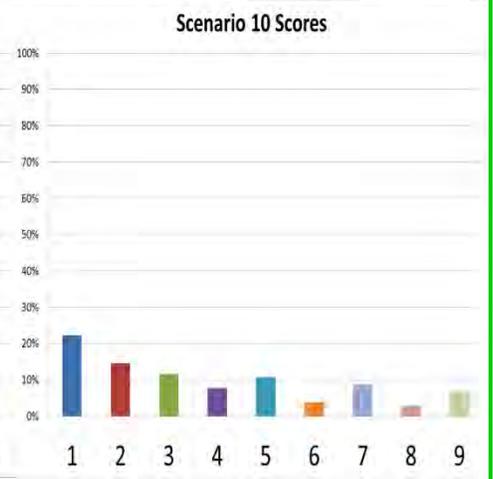
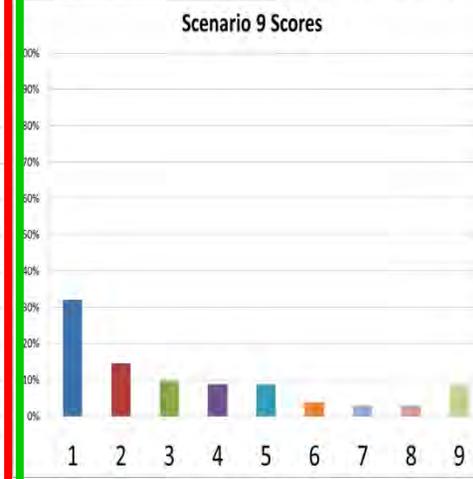
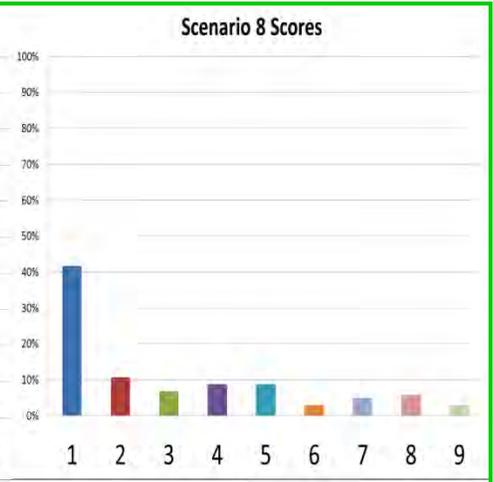
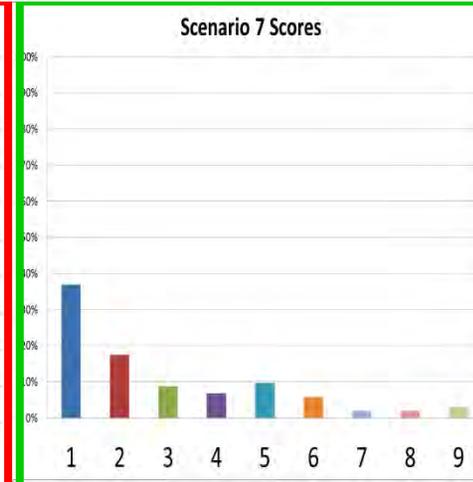
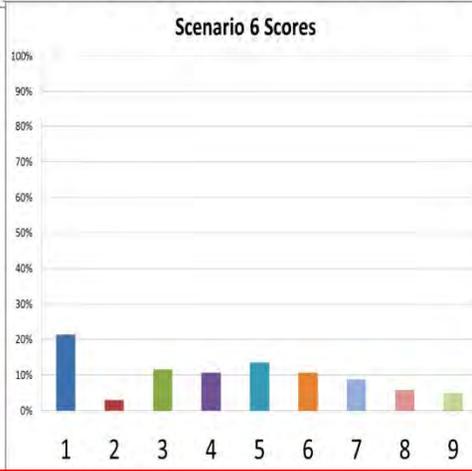
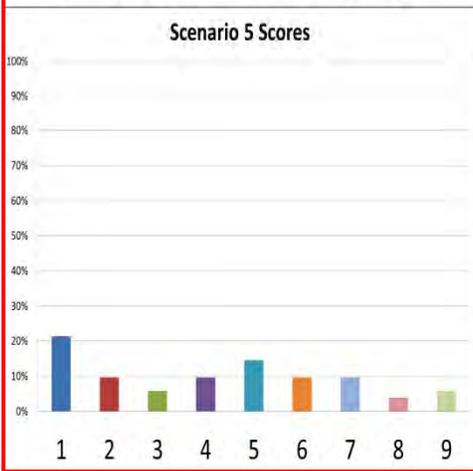
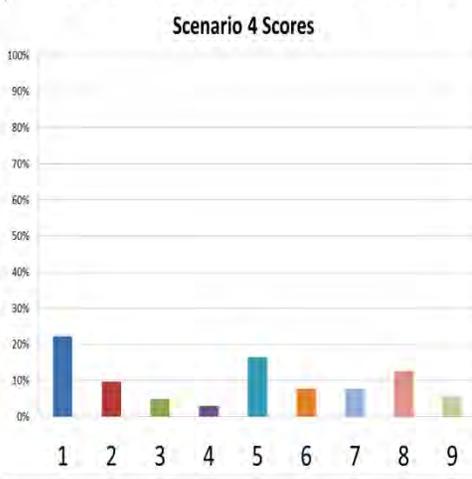
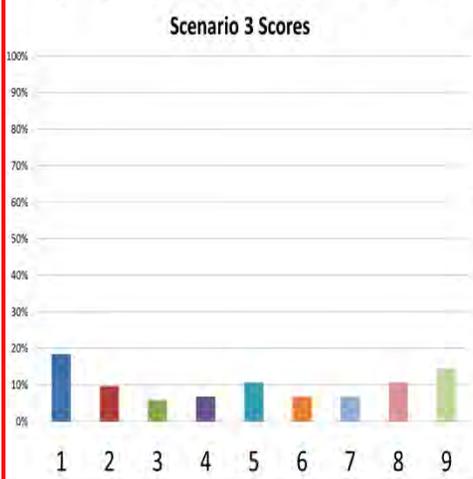
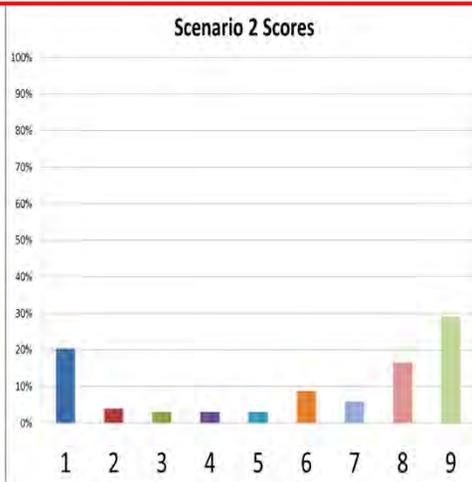
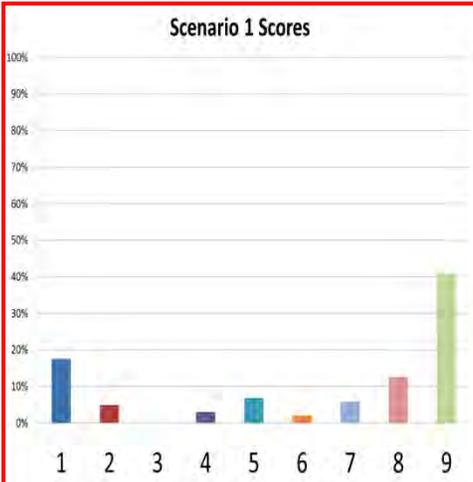


Where Do You Live?



Scenario Scoring Summary





General Land Use Findings

- Of the range of six major possible land use options for the PGDP footprint, industrial land uses scored higher than non-industrial land uses. However, relying on only the average scenario scores as a basis of evaluation or comparison can be misleading.
 - While more participants supported a nuclear industry option than opposed it, this scenario also received very strong opposition from at least 20% of the participants; the only scenario to receive greater opposition was heavy industry.
 - The light industry land uses received the lowest average score among the industrial land-uses, but it also received the least opposition.
 - Among the non-industrial land uses, the expanded wildlife management option received the most favorable response, although only marginally better than the other two: structured recreational and institutional controls.

Nuclear Industry Participant Discussion

Balancing Perceived Economic, Environmental, Health, & Seismic Risks

- “[T]he idea of nuclear power is appealing to me... I’m not really opposed to having that around us as long as...it can be made safe.”
- “I like the idea of a nuclear power plant, using some alternative energy sources instead of coal...”
- “If it’s safe, then I say yes it is a good future use...”
- “It would bring a lot of jobs into the community... But in the end...you’ve got potential environmental disaster [and] further contamination.”
- “I’m all for nuclear power as long as you do two things. One, get nuclear power that doesn’t leave waste. And second is repeal Murphy’s Law.”

Heavy Industry Participant Discussion

Weighing jobs, the environment, waste disposal, & perceptions

- “We thought it was probably the most feasible thing you could do with the land.”
- “We think it’s probably a good idea, as long as the industry that it brings in doesn’t damage the wildlife area anymore.”
- “[Y]ou’d have a lot of jobs there, but you’d still have the same old problems we’ve always had.”
- “I just don’t see how you’re gonna convince [industry] that this is perfectly safe and, you know, we can build right next to this [WDA]. I think...it’s gonna, basically, condemn the site for any future development.”

Light Industry Participant Discussion

Public appeal; waste & recreation constraints

- “We thought it was one of the easier [scenarios] for maybe the public to accept.”
- “[This scenario represents] the continuation of jobs and employment here with light industry... That’s encouraging ‘cause we’re all interested in continuing to have a job.”
- “No use of the trained workforce—the nuclear workforce—we thought that was a negative...”

Expanded Wildlife Participant Discussion

Economic and environmental tensions

- “[Expanding the WMA represents] a lot of continued and enhanced recreational uses of the area; enhanced economic potential, secondary to widespread recreational uses.. And then, in a way, it would maintain and improve the overall quality of the life in the surrounding community.”
- “It blends well with the surrounding area... But...you’ve gotten rid of industry and the whole jobs and employment kind of thing has went away. So, I mean, good preserve, bad that you lose jobs.”

Current Land Use Findings

Based on qualitative and quantitative data collected to date:

- It appears that the community's preferences between different land use types were somewhat independent of the following secondary factors: 1) the land use of the property surrounding the PGDP industrial footprint, i.e. property that has been currently leased to KY as part of the WKWMA, 2) the disposition of the current burial grounds, and 3) the disposition of future wastes associated with the D&D of the facility. However, preferences within similar land use types were influenced by these secondary factors.
- It appears that the majority of respondents oppose the construction of structured recreational facilities within the existing WKWMA.

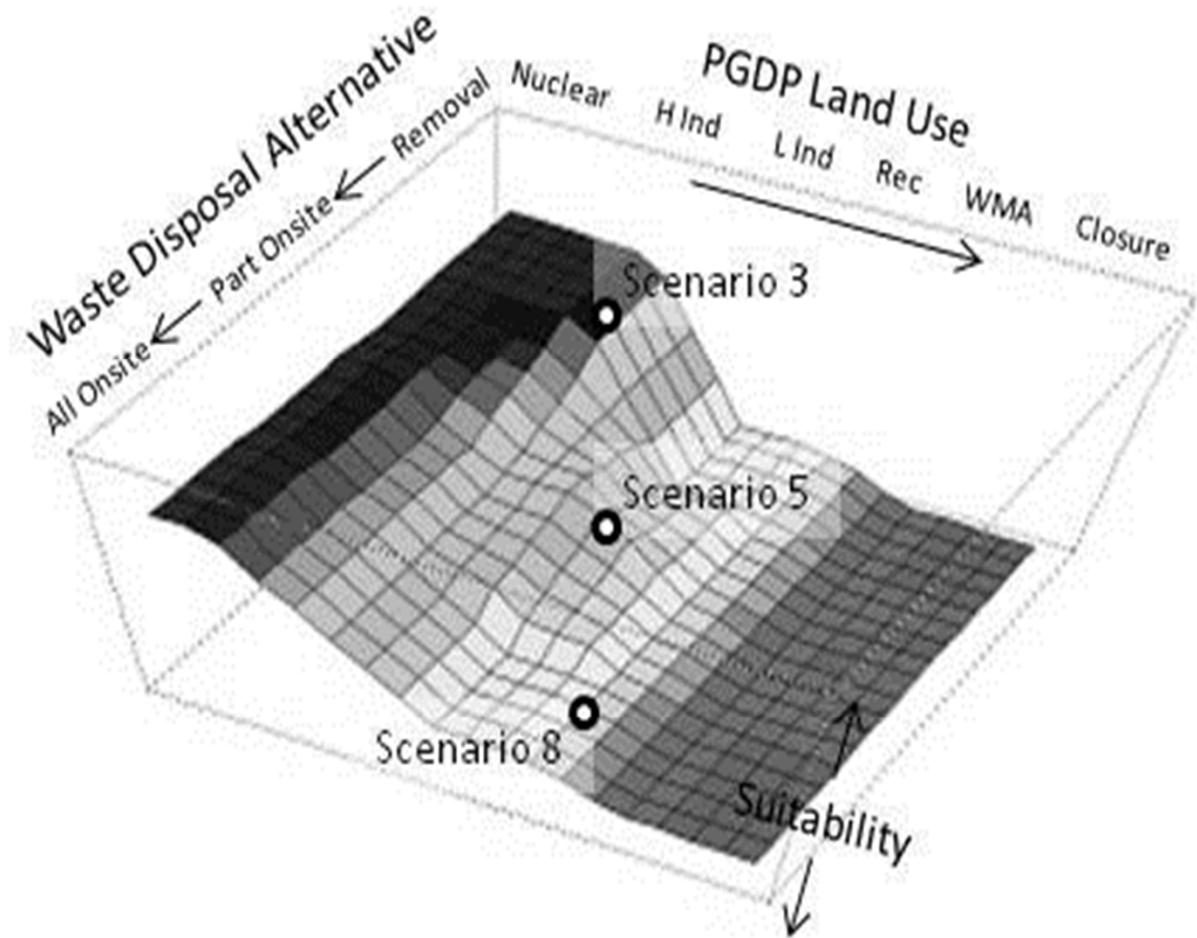
Current Land Use Findings

- Based on the quantitative and qualitative data collected to date, it appears that a large proportion of respondents favor removal of all of the burial grounds. However, this preference is influenced by the actual land use.

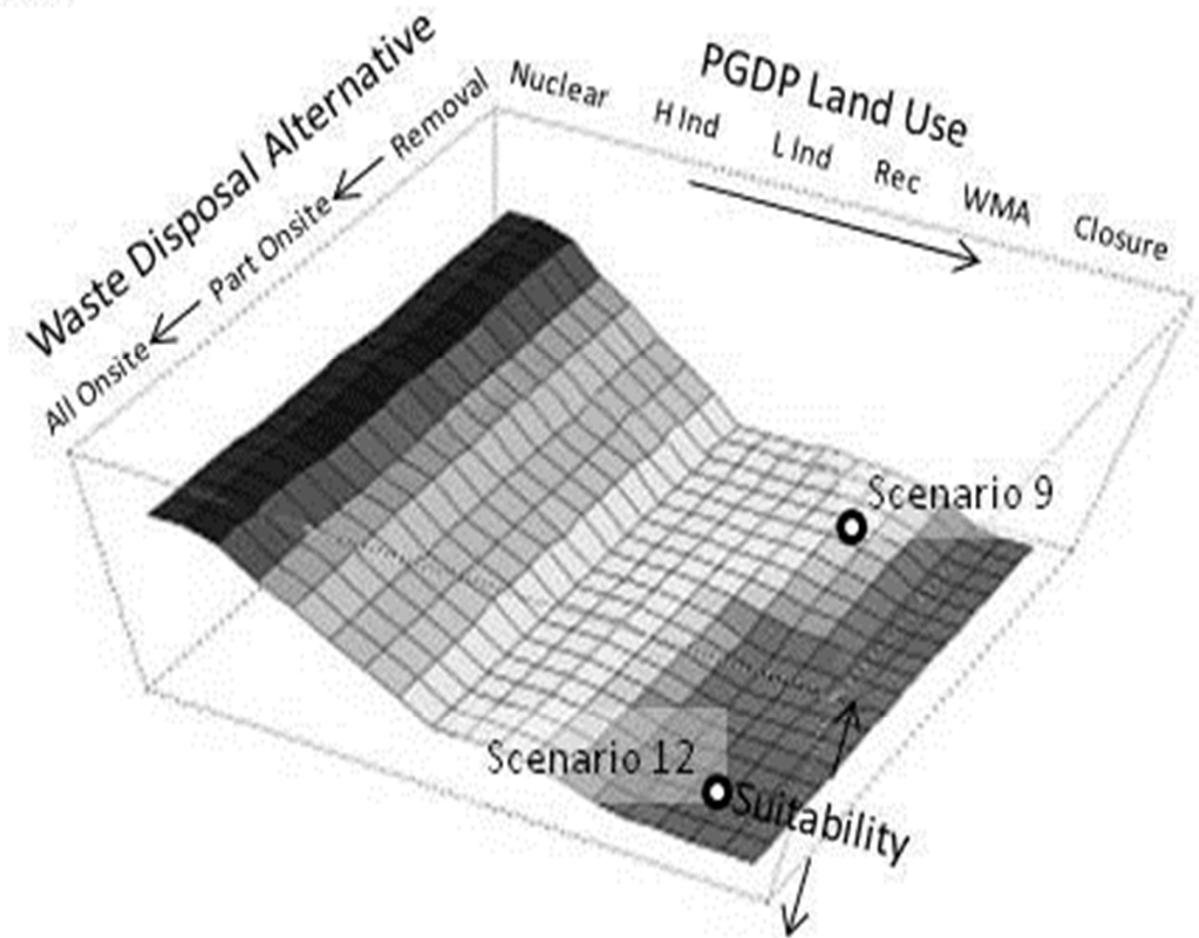
Current Land Use Findings

- To a slightly lesser extent, a larger proportion of respondents also oppose the construction of a new waste disposal facility on site. Reasons for opposition included:
 - Environmental and health concerns
 - Future development concerns
- However, some respondents support such a facility, citing:
 - Job security (e.g. individuals from USEC and DOE employee community)
 - Discourage competing interests (e.g. individuals from the WKMMA users)
 - Unethical to ship our waste to others (e.g. individuals from the environmental community)

- PGDP Land Use – x axis
- WMA Land Use – Added Recreation
- Waste Disposal Alternative – y axis
- Legacy Waste – Dig Up



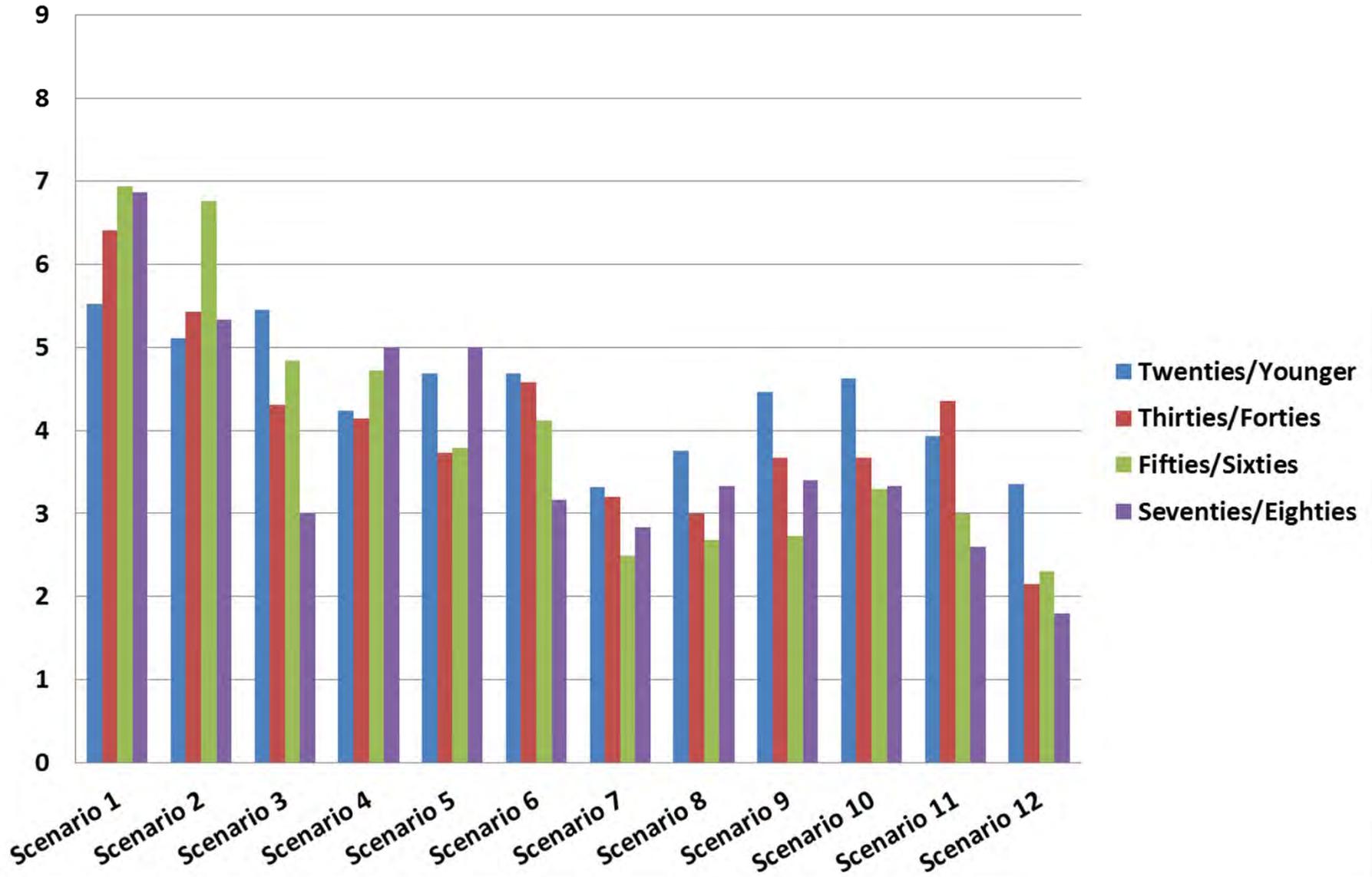
- PGDP Land Use – x axis
- WMA Land Use – Added Recreation
- Waste Disposal Alternative – y axis
- Legacy Waste – Leave As Is



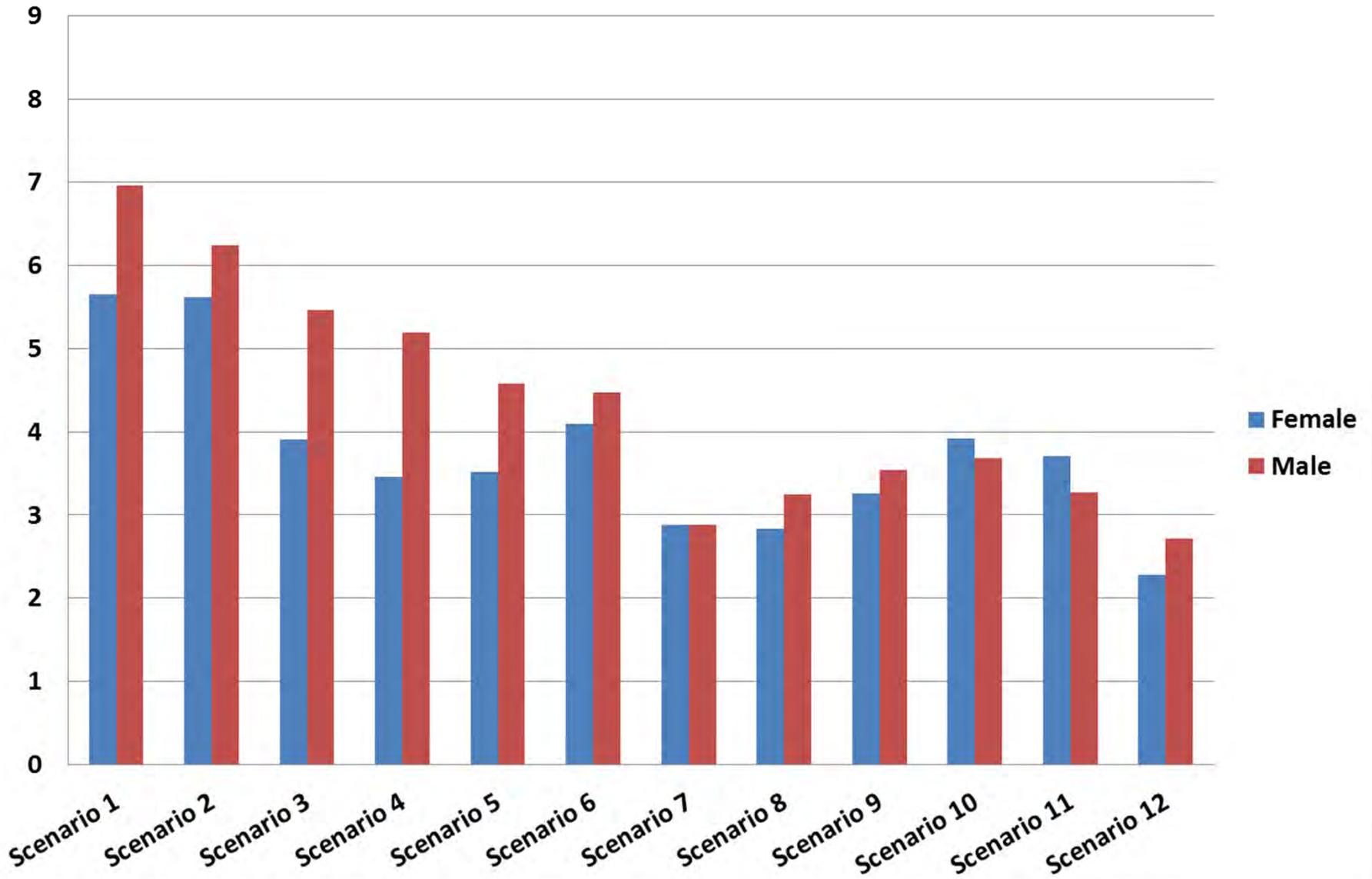
Supplemental Land Use Findings

- The solicitation of additional scenarios from the public produced an additional land use scenario that received average scores greater than the best score (6.4) of any of the 6 original landuses:
 - Research Facility
 - Alternative Energy Research Center (6.5)
 - Remediation Research Center Combined with Power Plant (6.9)
 - Remediation Research Facility (7.2)
 - Federal Lab to Test Cleanup (7.1)
- Notably is the fact that the research facility was suggested independently at all three public scoring meetings
- In general, this landuse also received very little opposition
- **Supports similar previous CAB recommendations**

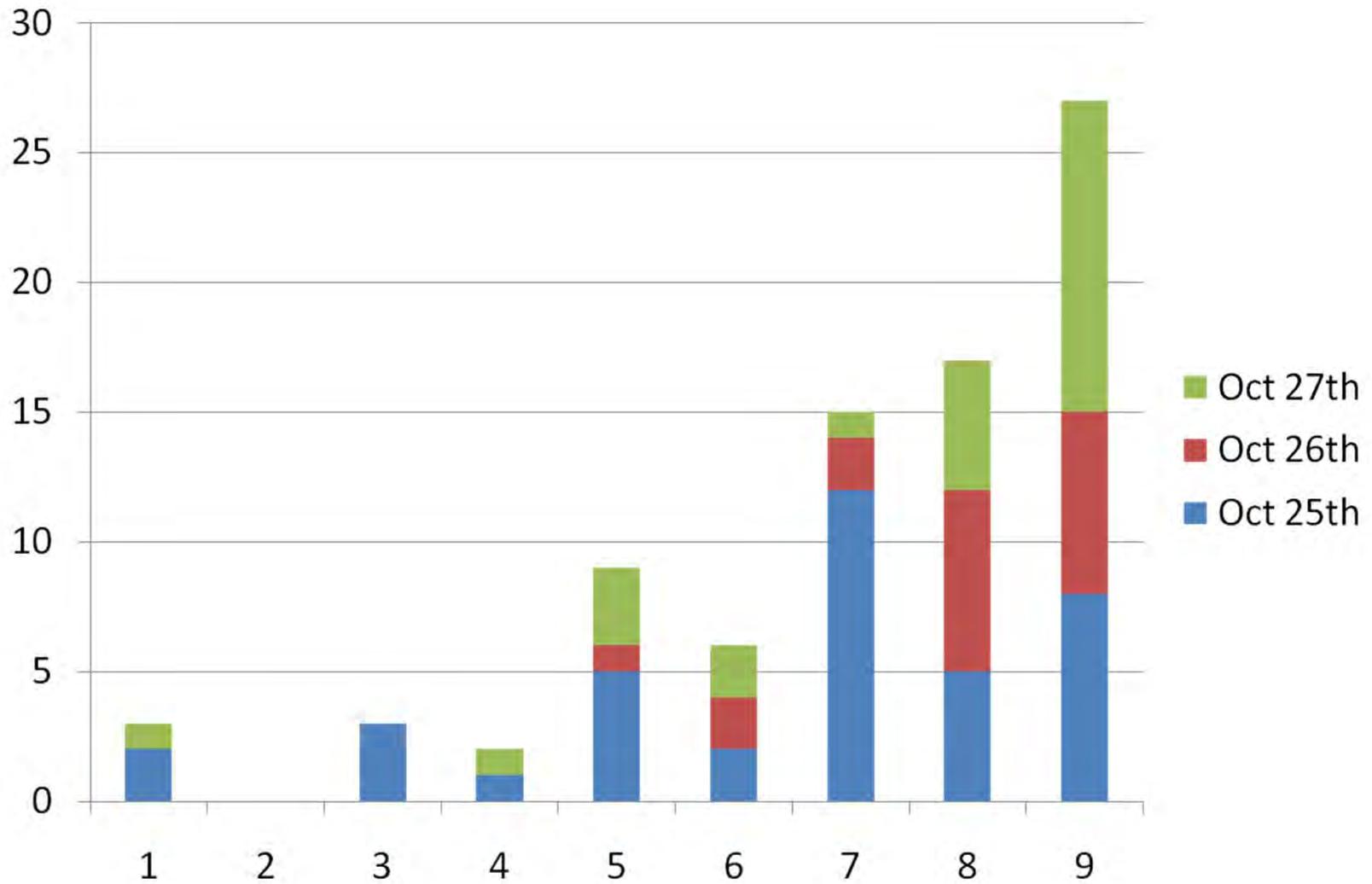
Scenario Scores by Age



Scenario Scores by Gender



Process Satisfaction



Project Accomplishments

- Developed an effective process for public engagement that integrates:
 - Community Based-Participatory Communication
 - Basis for qualitative analysis
 - Unique use of visual instruments for discussion facilitation
 - Provides framework for citizen ownership of process
 - Provides an effective methodology for solicitation of community values
 - Structured Public Involvement
 - Basis for quantitative analysis
 - Use of computer visualizations for composite analysis of complex multi-faceted issues
 - Public empowerment through anonymous use of keypads
 - Public accountability through real-time process evaluation
 - The ability to demographically and anonymously measure who is in the room, and to track the varying pattern of their preferences

Project Accomplishments

- Developed an effective process for public engagement that:
 - Assesses and incorporates community values
 - Fosters community trust by providing accountability and transparency:
 - Stakeholder Pilot Group
 - Real-time results via key pads
 - Arnstein Ladder
 - Provides equal voice to all participants
 - Anonymous key pads
- Developed a process that has applicability to future DOE public engagement opportunities

Project Accomplishments

- Identified the diverse stakeholder groups
- Identified and documented community:
 - Values
 - Concerns
 - Data needs
 - Trusted data sources
- Documented community experiences and expectations with public engagement process
 - Community does not expect full citizen control
 - Present expectations may be influenced by past experiences

Community Preference Qualifiers

- Community Representation
 - Level of Participation (103)
 - Pattern of Participation (30-40 year olds missing)
- ‘This Project’ vs. THE PROJECT vs. *projecting*
 - Long Term PROJECT vs short term ‘vision project’
 - Community has to ‘project’ preferences under inevitable long term uncertainty.
 - Eg. Ongoing DOE WDA meetings
 - Eg. University of Louisville Worker Epidemiological Study published during ‘This Project’
 - JAPAN

General Public Engagement Findings

- These findings arise out of a public engagement history where there have been:
 - Possible perception that issues are too complex for “ordinary” citizens to understand
 - Negative experiences with public involvement
 - Fear of losing control of the process
 - Consequent lack of public turnout for public meetings
- Which yields:
 - Lack of an effective strategy to truly involve the public
- This situation creates significant barriers in trying to implement the relevant recommendations of the “Politics of Cleanup” Report, which was specified as a roadmap for this project to follow.

General Public Engagement Findings

- This is consistent with the findings of Battelle's 2003 Report "An Evaluation of DOE-EM Public Participation Programs"
 - Interviewees "... expressed concern that community interests were not being taken into account and that a combination of an inattentive public and an insufficiently aggressive public awareness and involvement effort was resulting in a civic failure"

Politics of Cleanup Recommendations

- #1: **All Parties Must Collaborate** — The federal government, local governments, community members, state and federal agencies, and Congress must collaborate when developing the cleanup and future use vision for the site.
- #5: **Understand Community Values** — To properly collaborate, the parties must work to understand the values of the community, and must work to incorporate such values into the planning process.

Politics of Cleanup Recommendations

- #6: **Education Is Essential** — The parties must take the time to educate each other on the technical and policy issues underlying the cleanup and to commit staff resources to engage each other. Discussion, which need to take place throughout the process, must also include the question of technical risk and perceptions of risk, recognizing perceptions of risks posed do not always align with the technical risk.
 - *DOE and the regulators need to exert whatever time and effort it takes to educate the affected entities about the various issues involved in site cleanups.*

Politics of Cleanup Recommendations

- #14: **Following the Minimum in the Law Is Not Enough** — Minimum regulatory requirements are insufficient to support substantive public involvement; the parties must develop public involvement processes that are tailored to site-specific needs, recognizing that process is different from negotiations.
 - *A public involvement process for the sake of process will yield little positive results and will not serve to support a timely cleanup*

Policy Conclusion

- If the recommendations of the POC Report are to be fully achieved, Public Engagement must be pursued as an *ongoing, iterative, and evolving process* that:
 - Involves the total community
 - Is tailored to local community
 - Incorporates community values
 - Fosters collaboration
 - Provides accountability and invokes trust
 - Continues to inform and educate stakeholders
 - Provides for an inclusive and truly democratic way for the concerns and preferences of the local citizens to be both heard and valued

Policy Conclusion

- In this context, we believe the results of this study should not be viewed as a means to an end, (as significant as these initial insights of this study may be) but the first step in building a more effective process of public engagement.
- We believe that the methodologies that have been brought together in this project provide the tools and strategies to achieve such a goal.

Recommendations

- UK PES Project Team will provide DOE with a project proposal to address integration of a coordinated public engagement process into its public outreach activities.

Next Steps: How to Reach Community

- Enable www.paducahvision.com so that scenarios can be rated online.
- Present scenarios at WKWMA Clubhouse during April 28th neighborhood association meeting
- Promote website at the CAB's EcoFair in May, Rotary at April 27 meeting, C of C meeting.
- Want to create outreach to schools.

Other Venues? Clubs? Invitations?

- Scenario Presentation and Evaluation Takes About an Hour
- We want to reach more people: several hundred would be nice!
- We want to reach more women.
- We want to reach more 30-50 demographic.
- Me: tgrossardt@uky.edu
 - 859-257-7522
- Anna Hoover: aghoov2@email.uky.edu
- Comment box www.paducahvision.com

Ideas?

- Make it competition
- Go to school on in service days
- Offer child care
- Solicit leaders of Lions, rotary
- Influence of ongoing factors like EQ