

# KDFWR Wetland and Stream Mitigation Program

<http://fw.ky.gov/>

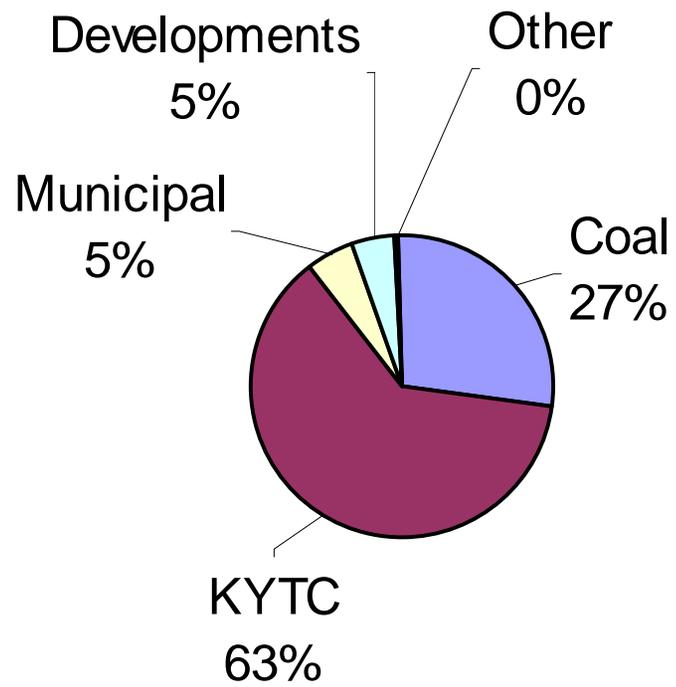


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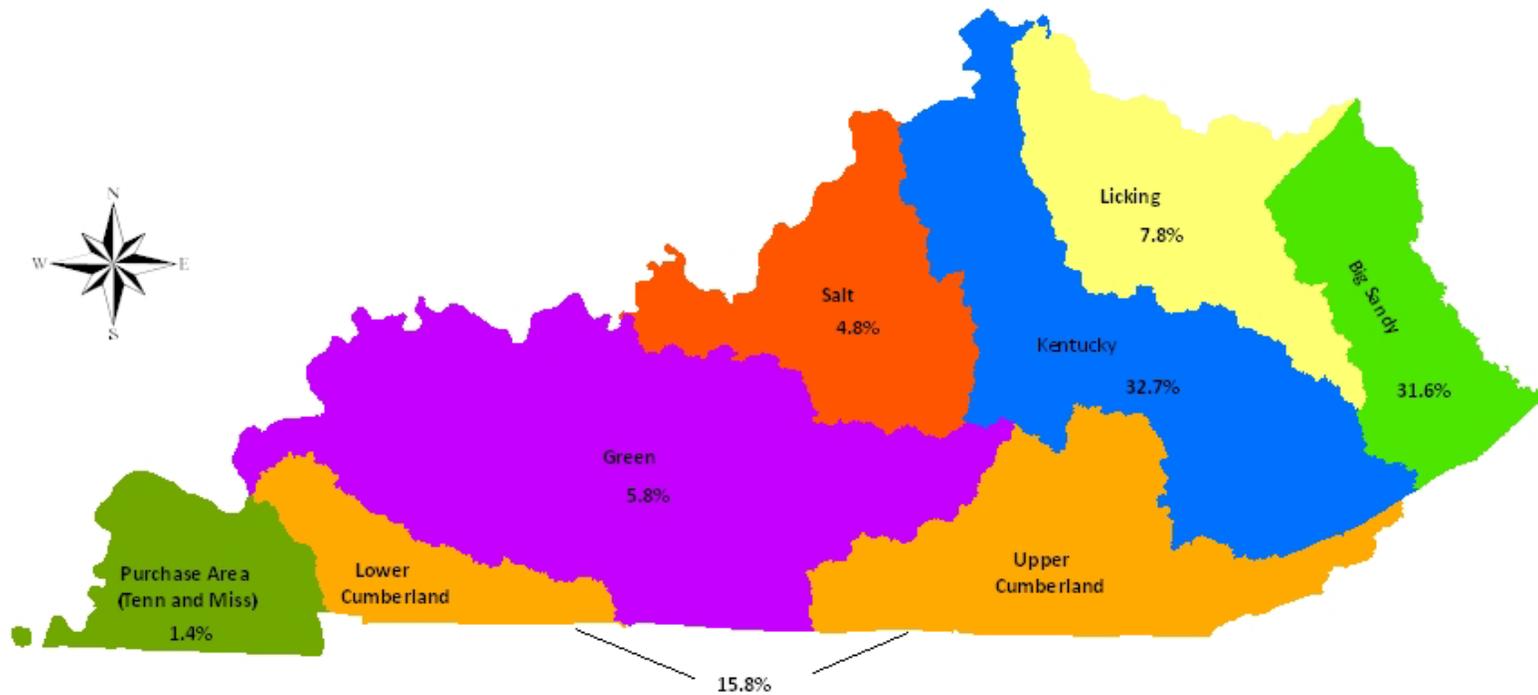
# History Of The Program

- The 2000 General Assembly authorized creation of the Stream & Wetland Mitigation Trust under KRS 150.255, effective July 2000
- August, 2001: KDFWR began the search for potential stream restoration projects
- December 2001: First FILO payment received
- September-October 2002: COE-KDFWR FILO Agreement signed.
  - Established MRT and general program rules
- August 2003: Second agreement signed establishing MRT and rules
  - Details of program such as project selection, conceptual plans, etc.
- 2008-present: ILF Draft Modified Instrument

## Source of In-Lieu Fee

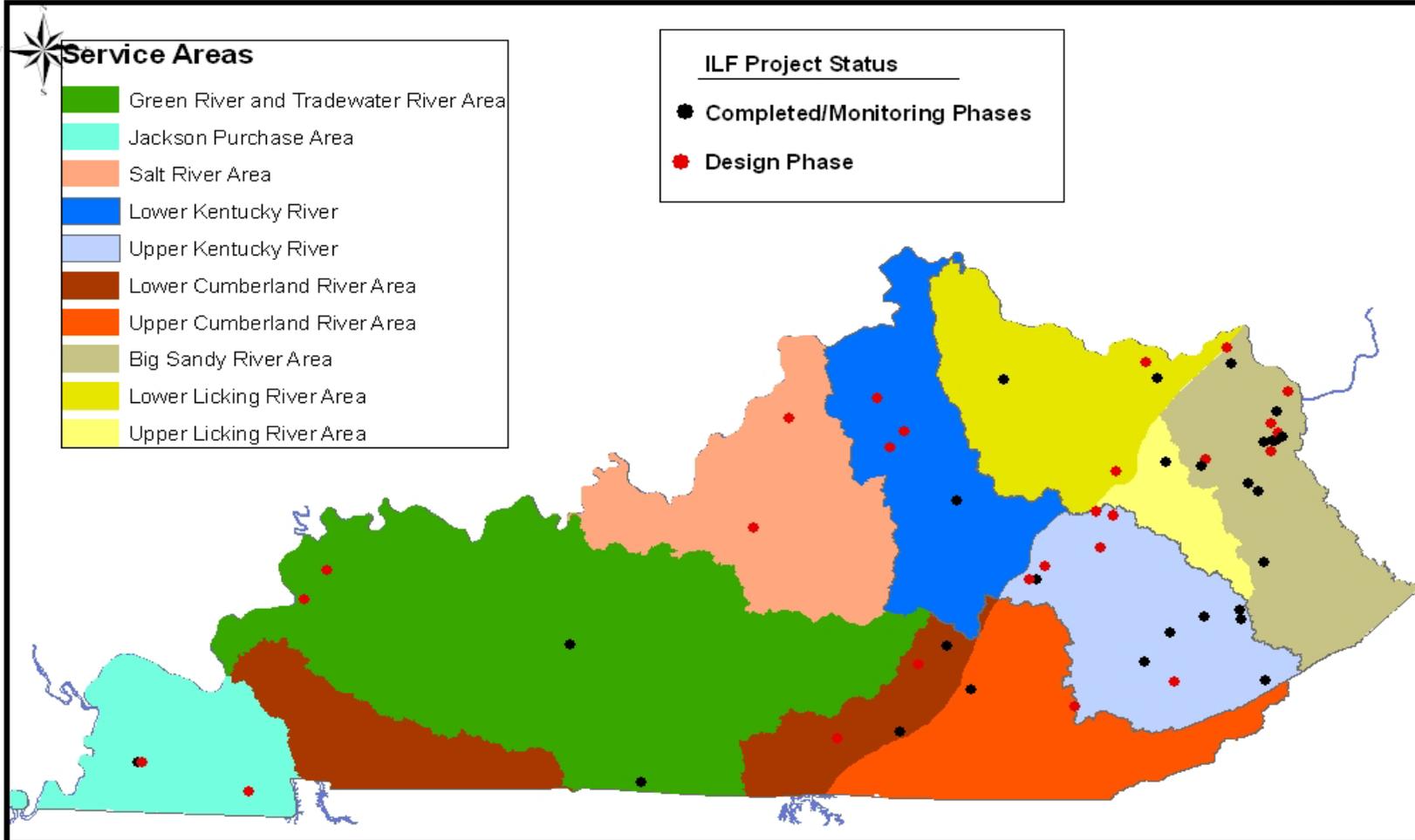


# Percent of Fees Received, By Major River Basin



0 25 50 75 100 Miles  
Scale 1:3,000,000

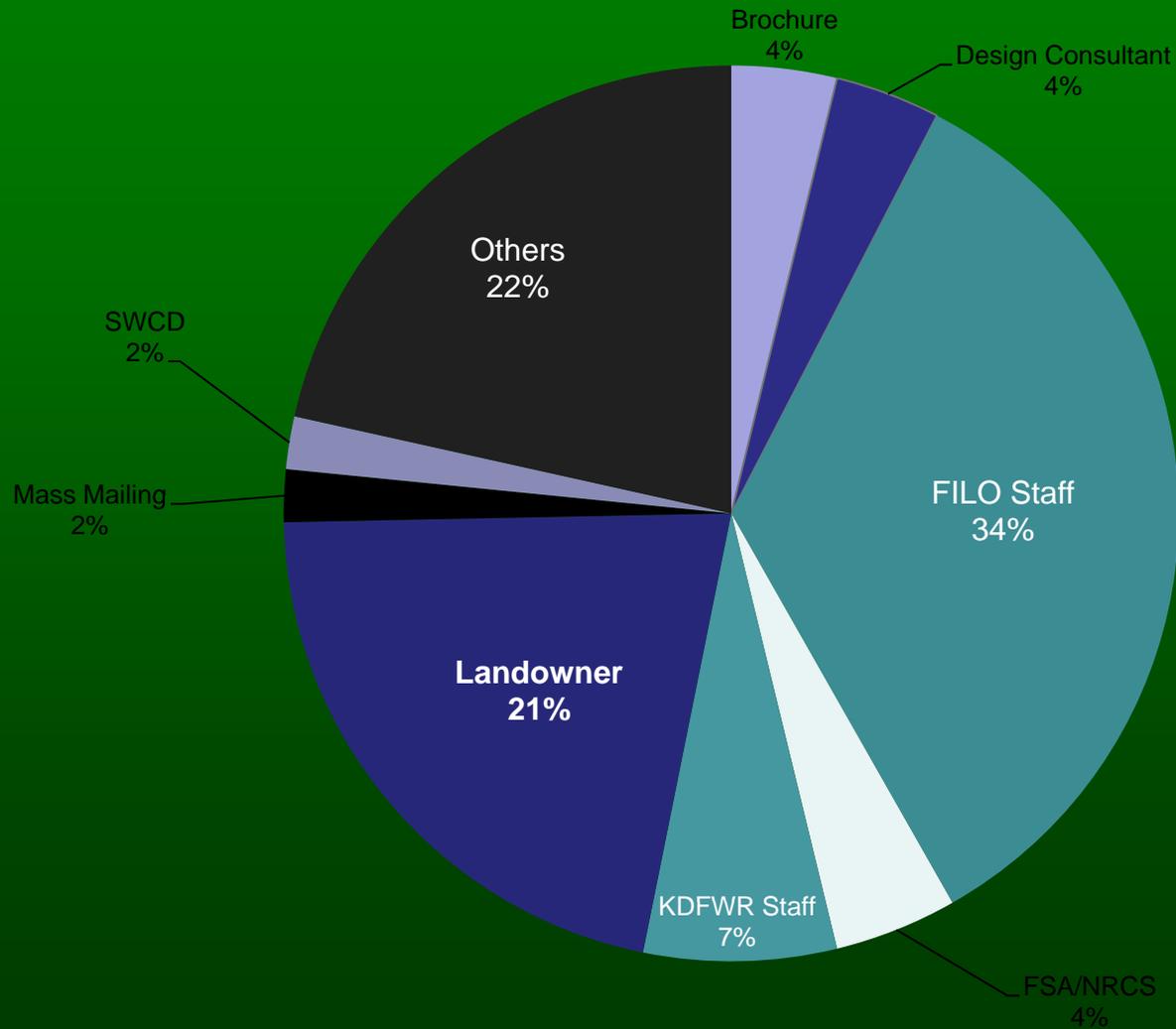
# ILF Project Status X Service Areas



1:2,567,182

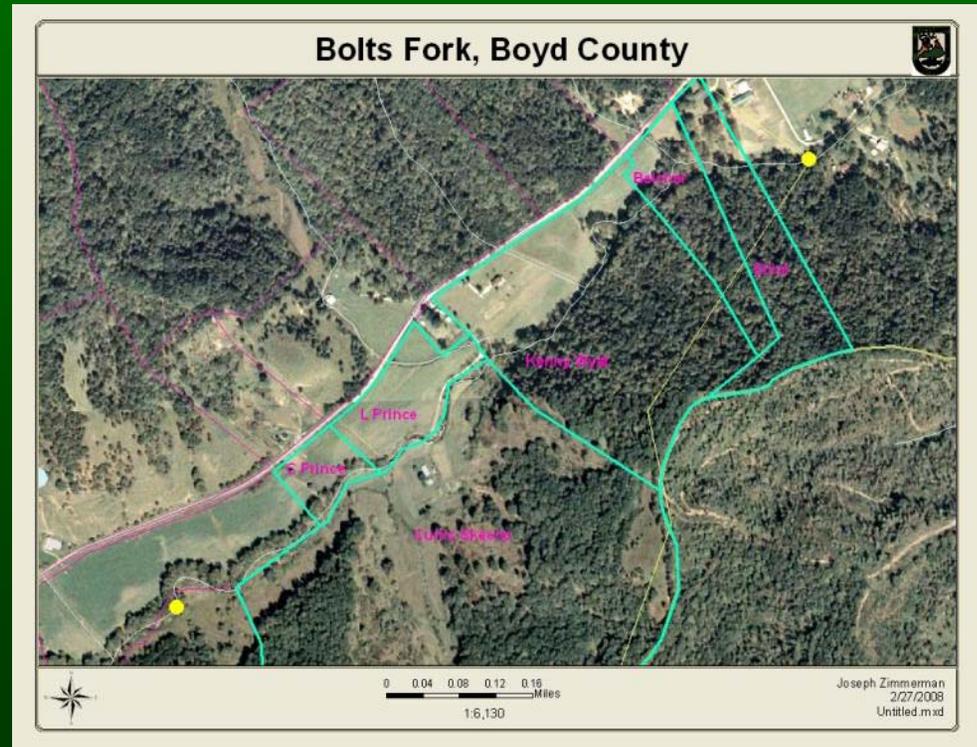
0 50 100 150 200 Miles

# Outreach Responses



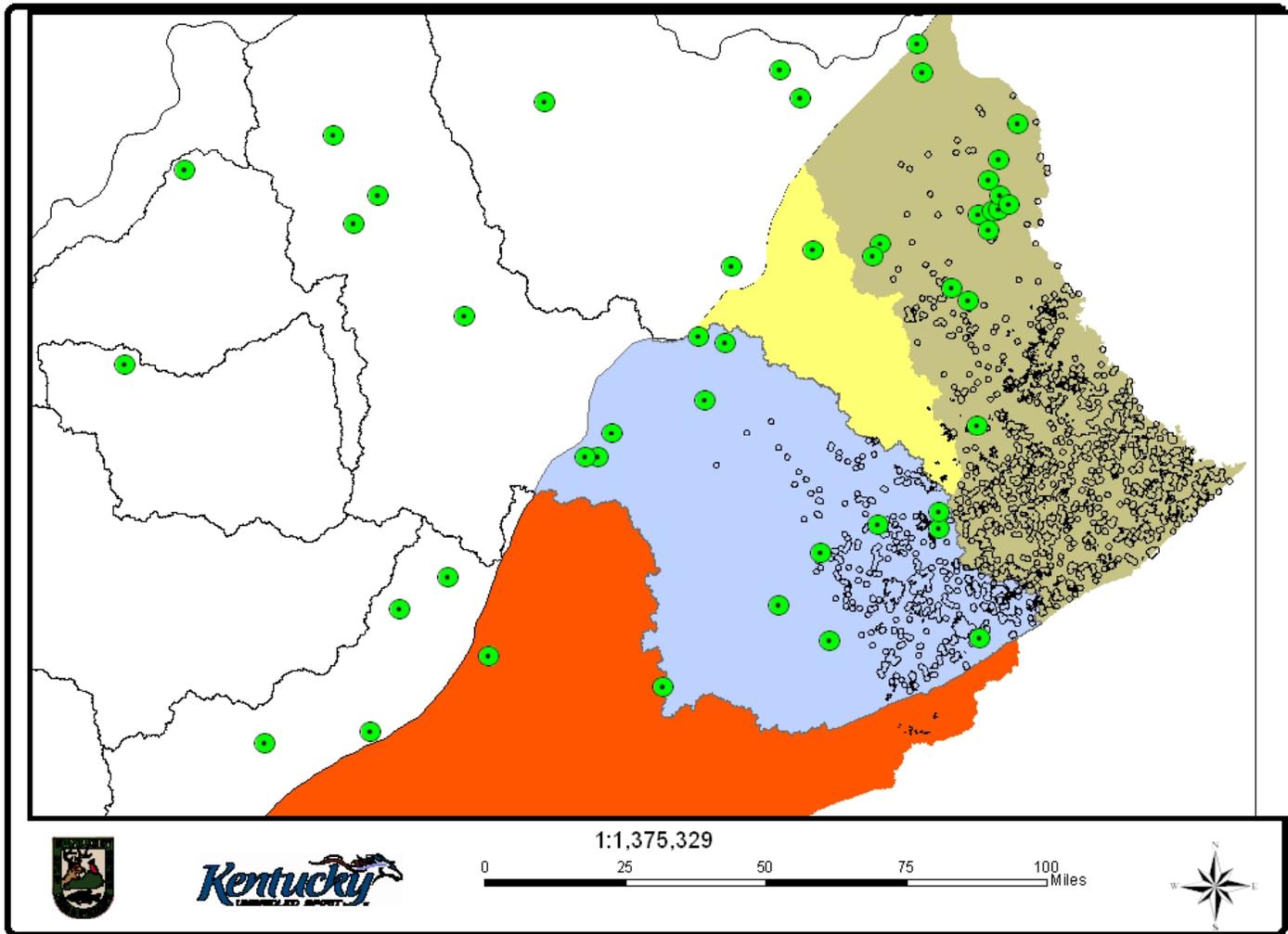
# Site Selection

- Water quality restrictions
- Conservation easement requirements
- Valley width/lateral constraints/agricultural impacts
- Change in conservation easement requirements/landowner consensus
- Credit protocol/economy of scale



# Mineral Challenges: Coal Operations

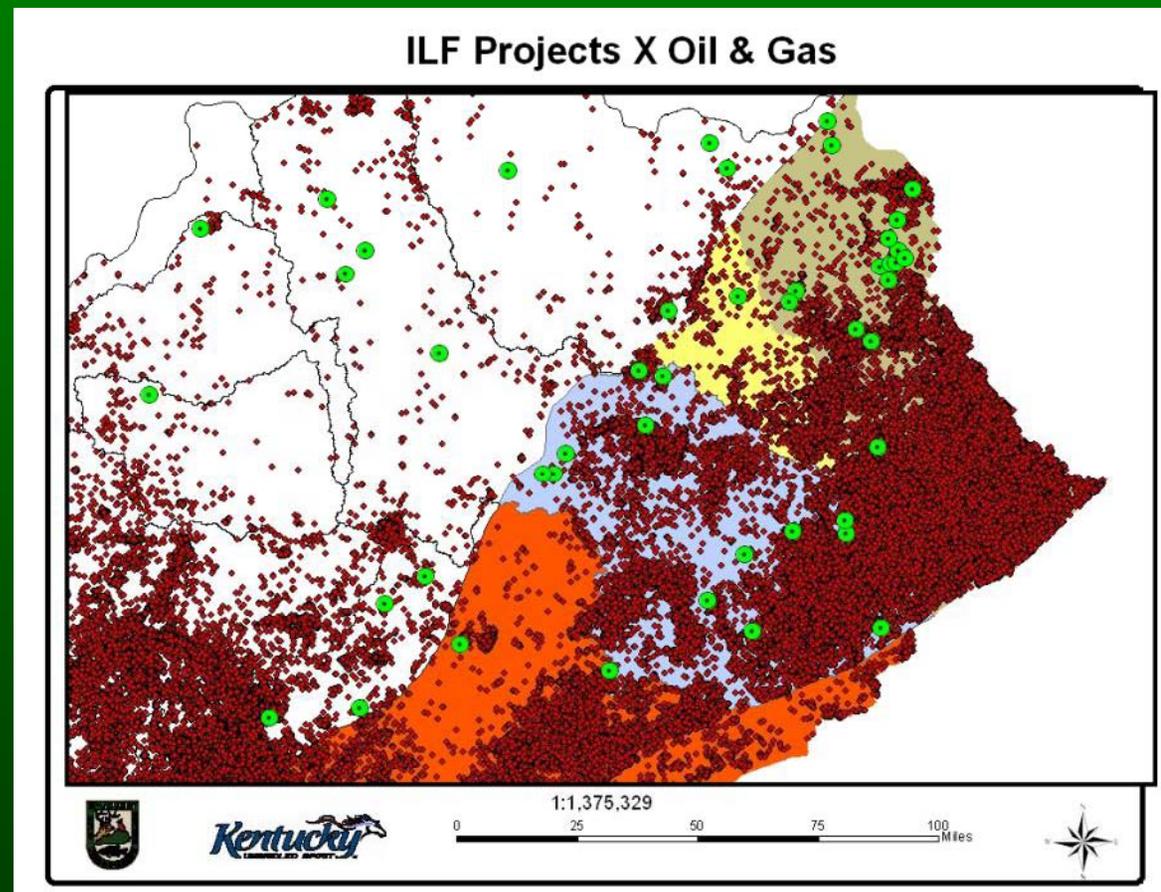
## ILF Projects & Appalachian Coal Mining Operations



# Mineral Challenges: Oil & Gas Wells

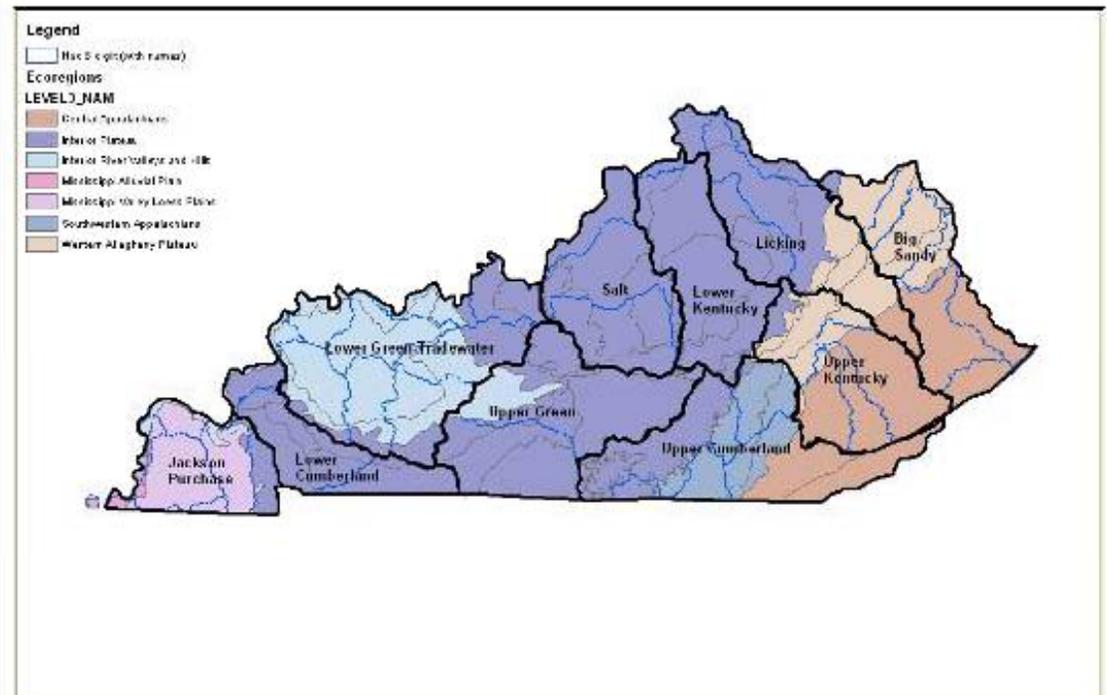
## MINERAL SOLUTIONS:

- Off-site mitigation to meet Final Rule reqs.
- Mineral easements/agreements
- Public Lands w/ mineral BMP's or restrictions



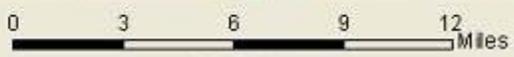
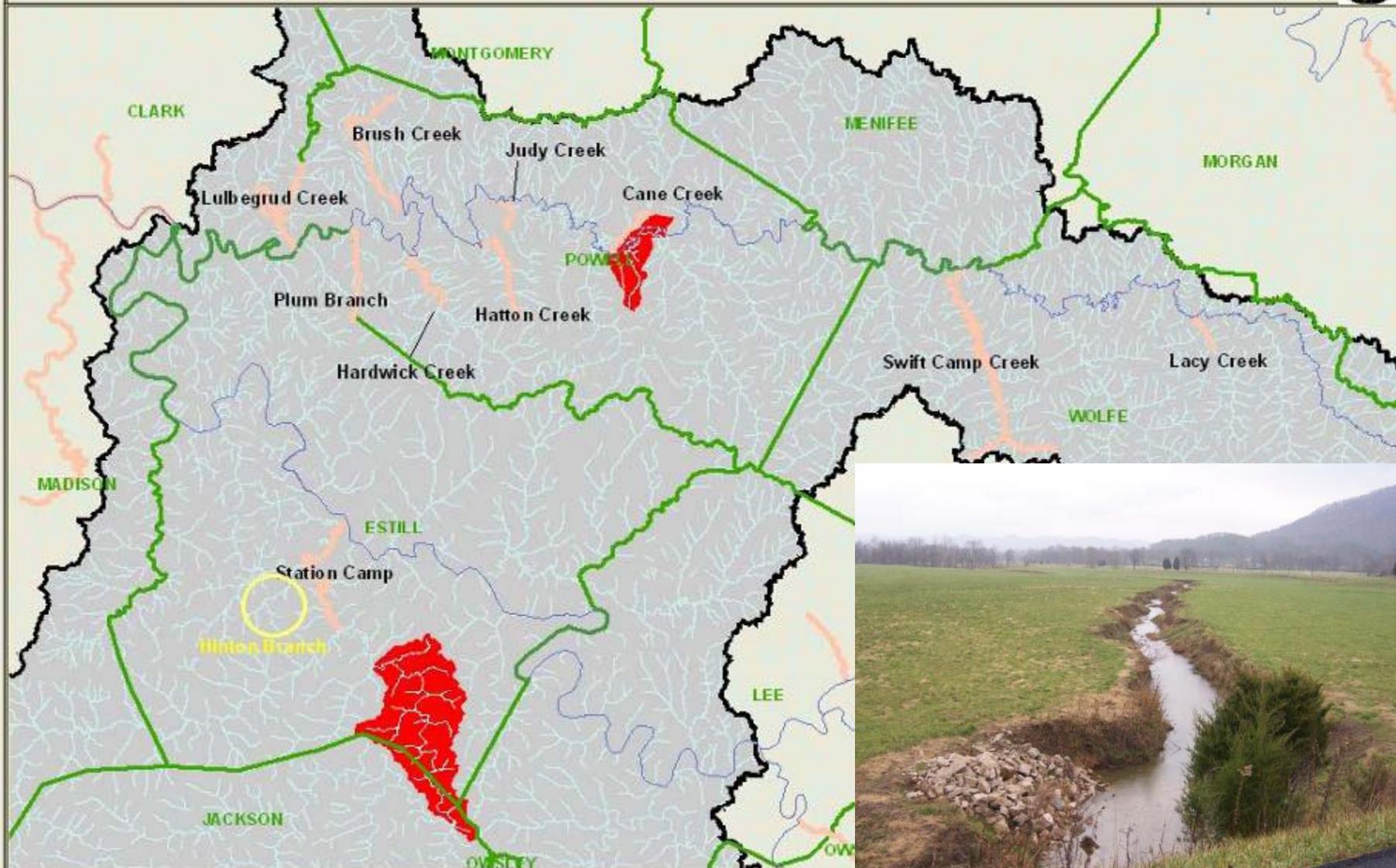
# Site Selection

1. Landowner Cooperation
2. Proximity of In-Lieu Fees
3. Project Size
4. Stream Size
5. Degree of Impairment
6. Likelihood of Success
7. EPA 303d list streams
8. Priority watersheds & T&E species



Service Areas and Level 3 Ecoregions

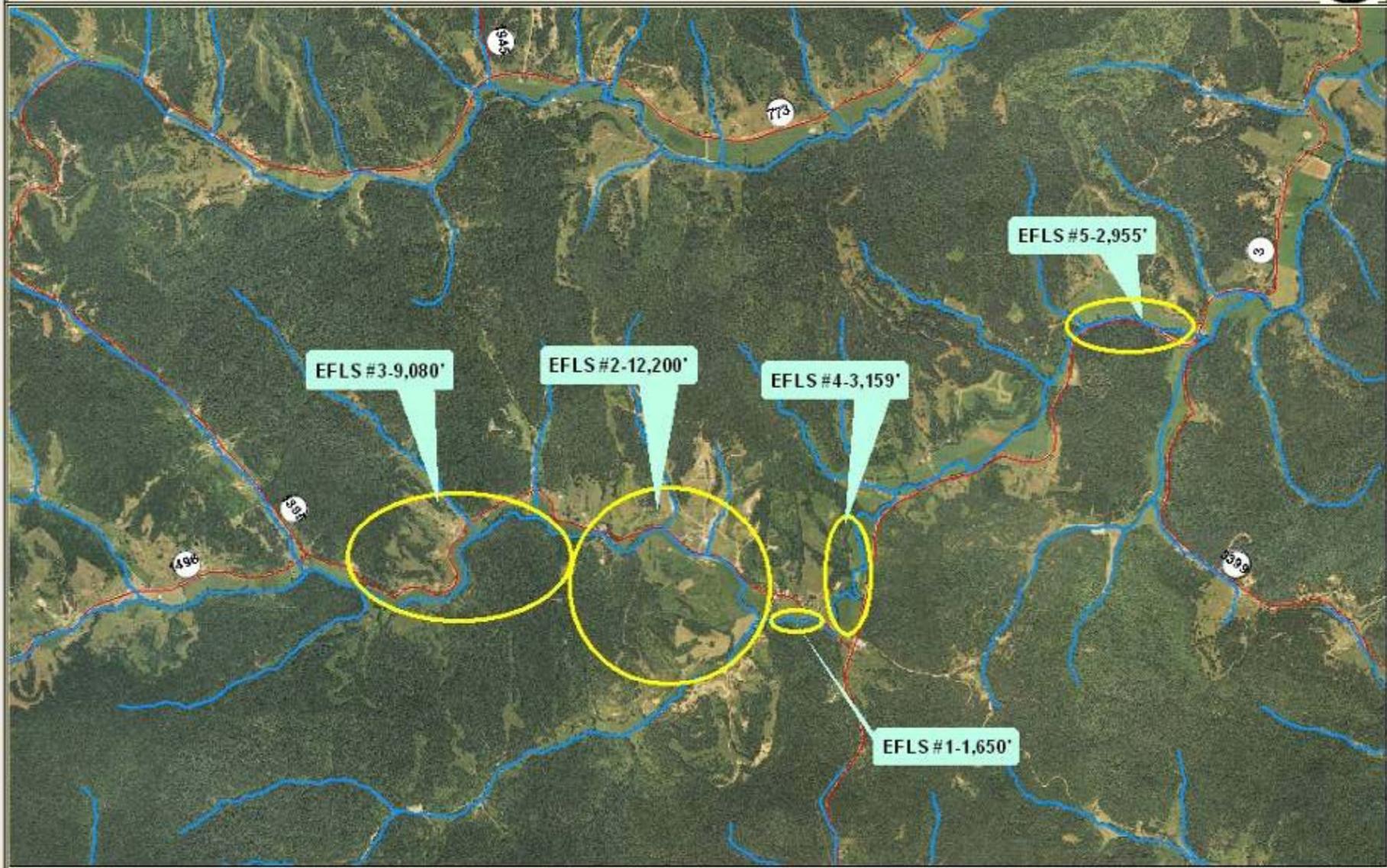
# Upper KY River SWAP Cons Area with 303d DOW Sites



1:299,512

Joseph Zimmerman  
11/30/2007  
Untitled.mxd

# East Fork Little Sandy River Basin Restoration Projects, Lawrence County



EFLS #3-9,080'

EFLS #2-12,200'

EFLS #4-3,159'

EFLS #5-2,955'

EFLS #1-1,650'



1:32,742

KDFWR FILO Program

# Site Selection



# East Fork Little Sandy #3 Proposed Credits-EIU's

Reach	Pre-Construction			Post-Construction			Net
	Length (ft)	EII	Credit	Length (ft)	EII	Credit	
EFLS 0-1000'	1000	0.47	470	1000	0.93	930	460
EFLS 1000-2000'	1000	0.47	470	1000	0.93	930	460
EFLS 2000-3000'	1000	0.47	470	1000	0.93	930	460
EFLS 3000-4000'	1000	0.47	470	1000	0.93	930	460
EFLS 4000-5000'	1000	0.47	470	1000	0.93	930	460
EFLS 5000-6000'	1000	0.47	470	1000	0.93	930	460
EFLS 6000-7183'	1183	0.47	556	1183	0.93	1100	544
Trib 1	420	0.47	197	420	0.93	391	193
Trib 2	468	0.47	220	468	0.93	435	215
Trib 3	131	0.47	62	131	0.93	122	60
Trib 4	294	0.47	138	294	0.93	273	135
Trib 5	330	0.47	155	330	0.93	307	152
Trib 6	597	0.47	281	597	0.93	555	275
Trib 7	64	0.47	30	64	0.93	60	29
<b>TOTALS</b>	<b>9487</b>		<b>4459</b>	<b>9487</b>		<b>8823</b>	<b>4364</b>

# Construction Issues

- Landowners requesting work from contractors outside of project area
- Landowner expectations



# Construction Issues

- Seasonal timing causing delays
- Routine maintenance of site—Who's responsibility?



# Construction Issues

- USFWS Indiana Bat Tree Cutting Restrictions



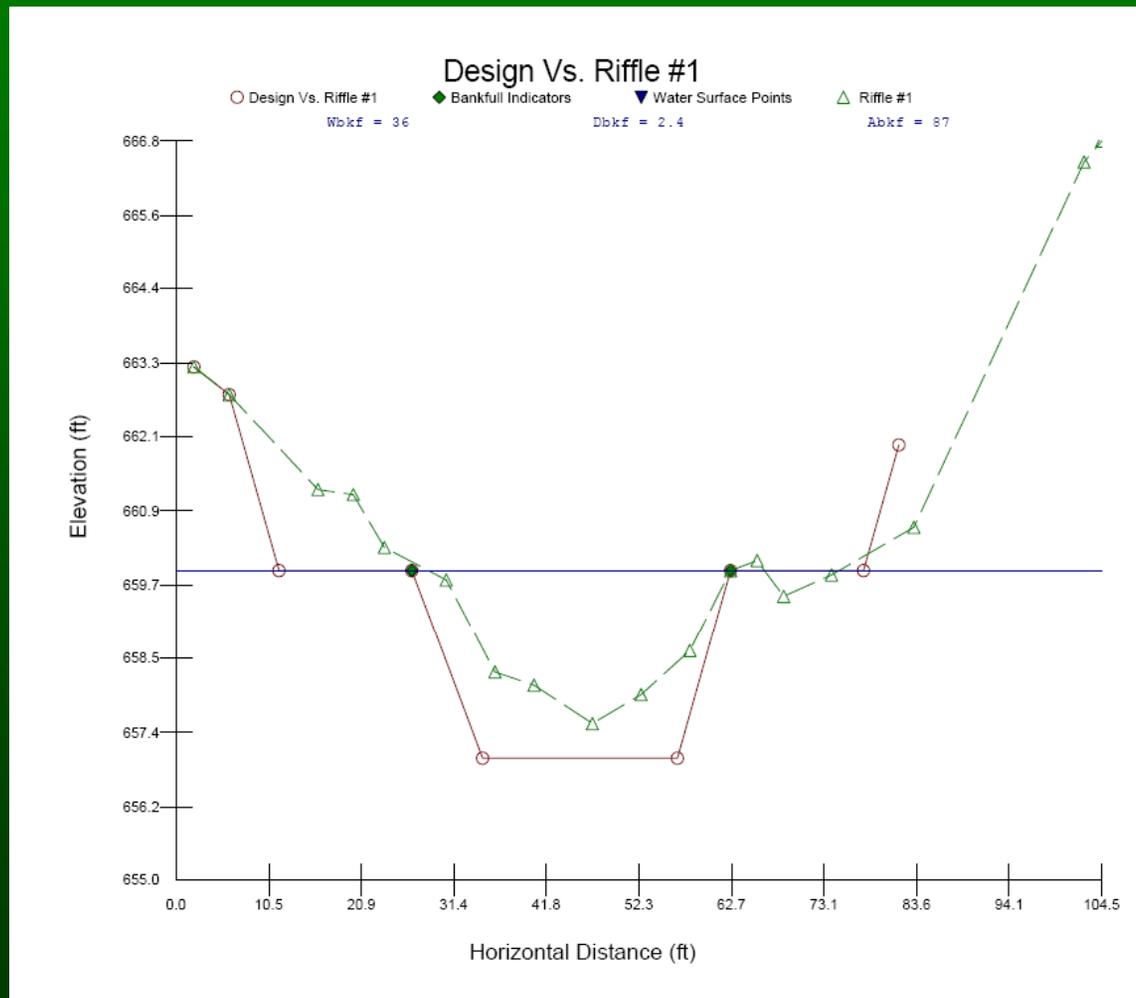
# Lessons learned-Monitoring

- Designers forcing pattern in confined valleys
- Downstream 1/3 of meander bends/perpendicular flood flows



# Lessons learned-Monitoring

- As vegetation becomes established, channel dimensions are shifting



# Lessons learned-Monitoring

- Equipment storage near project area



- Vegetation success is variable depending on soils, installation, and compaction levels





