

# The Complete McCracken County Ledger

What 665 Acres of Public Wildlife Land Was Actually Worth — And What GLE Actually Cost

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Subject: Global Laser Enrichment (GLE) — Paducah Laser Enrichment Facility (PLEF)

Location: McCracken County, Kentucky — formerly West Kentucky public wildlife land, adjacent to the Paducah Gaseous Diffusion Plant Superfund site

*"Moving our commonwealth forward takes cooperation and innovation, and this important project is the product of a lot of both." — Governor Andy Beshear, announcing GLE as the "largest private investment in western Kentucky history," March 2026*

This document presents the complete accounting that was never included in that press release.

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## Part 1: What Was Traded Away — The 665 Acres

### Background

In late 2024, the Kentucky Department of Fish and Wildlife quietly transferred 665 acres of the West Kentucky public wildlife land in McCracken County to Global Laser Enrichment (GLE), an Australian-Canadian company. The land had been managed for public hunting, fishing, hiking, and wildlife observation for over 70 years.

In exchange, GLE purchased 1,043 acres of frequently-flooded agricultural bottomland in Fulton County — land described as regularly inundated by the Mississippi River and enrolled in a federal wetland reserve program.

#### The habitat profile of the 665 acres transferred:

- 44% forest (293 acres of mature hardwood — oak, hickory, bottomland species)
- 24% wetland (159 acres)
- 31% open land (grassland, old fields, crop fields)
- 1% open water (ponds and creek access)

The land surrounds Bayou Creek and Little Bayou Creek, which flow adjacent to the former Paducah Gaseous Diffusion Plant — already a federal Superfund site.

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## Part 2: Ecological and Economic Value of the 665 Acres

### Section A: Trees and Forest (293 forested acres)

Service	Annual Value	Basis
Standing timber asset value	\$150,000 – \$350,000 (one-time)	\$500–\$1,200/acre for mature hardwood

Carbon sequestration	\$2,300 – \$4,700/yr	1–2 tons CO <sub>2</sub> /acre/year; eastern US forests store up to 150 metric tons CO <sub>2</sub> avoided per acre
Air quality — particulate filtration, oxygen	\$77,000 – \$590,000/yr	\$264–\$2,000+/acre/year near-urban forest filtration
Cooling effect / heat island reduction	\$50,000 – \$200,000/yr	\$20+/tree/year; canopy reduces ambient temperatures
Stormwater interception / erosion control	\$30,000 – \$120,000/yr	Forest canopy intercepts millions of gallons of runoff annually
Wildlife habitat — roosting, nesting, denning	Incalculable	50+ species depend on mature hardwood structure

### Section B: Wetlands (159 acres)

Service	Annual Value	Basis
Water quality filtration / pollutant removal	\$1,430,000/yr	\$9,000/acre/year; equivalent to a \$5M water treatment plant
Flood control / stormwater storage	\$1,270,000/yr	\$8,000/acre/year; one acre holds 1–1.5 million gallons
Nutrient cycling / groundwater recharge	\$200,000 – \$500,000/yr	Recharge of aquifers; nitrogen/phosphorus recycling for agriculture
Fish and waterfowl nursery habitat	Incalculable	Primary breeding/staging for migratory waterfowl and juvenile fish

Source: FEMA Ecosystem Service Value Updates 2022; EPA Economic Benefits of Wetlands; Texas A&M; Wetland Valuation Research

### Section C: Bats — Six Species Including Federally Protected

The tricolored bat (*Perimyotis subflavus*) was documented on the property. Additional species present or in range include the Indiana bat and northern long-eared bat (both federally endangered), the gray bat (federally endangered), the little brown bat, and the hoary bat — all of which use this landscape for summer roosting and foraging.

Service	Annual Value	Basis
Agricultural pest control	\$3,000,000 – \$8,000,000/yr	Scaled from \$22.9B national figure; bats forage 5–7 miles from roost protecting tens of thousands of surrounding crop acres
Avoided pesticide costs	\$500,000 – \$2,000,000/yr	Bat loss documented to increase insecticide use 31% in affected regions (published in Science)

Corn fungus reduction	Not yet quantified	Illinois field study: bat exclusion increased crop fungal disease ~50x above bat-protected fields
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**Kentucky context:** The state has already lost approximately 80% of its tricolored bat population to white-nose syndrome. At Mammoth Cave National Park, just east of McCracken County, tricolored bat populations have crashed 85%. A population this decimated cannot absorb the casual loss of 665 acres of prime summer habitat.

**The survey:** The U.S. Fish and Wildlife Service conducted an acoustic bat survey of the 665-acre site. It lasted 7 nights. The agencies' own published standards require a minimum of approximately 75 detector-nights across all four seasons for a site this size with documented bat presence. Spring emergence surveys, summer foraging surveys, fall swarming and mating surveys, and winter hibernacula surveys are all separate requirements under USFWS guidelines — because bats behave entirely differently in each season.

Source: Penn State Extension; USFWS Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines 2026; published research in Science, Conservation Biology, Journal of Mammalogy

### Section D: Pollinators (Bees, Butterflies, Moths)

Service	Annual Value	Basis
Wild bee and native pollinator habitat	\$200,000 – \$800,000/yr	665 acres of open/forest edge habitat; pollinators contribute \$34B/yr to US agriculture
Honey production / apiary forage	\$50,000 – \$150,000/yr	WMA wildflower fields provide critical forage for managed hives in surrounding region

### Section E: Freshwater Mussels — "The Livers of the Rivers"

Bayou Creek and Little Bayou Creek, which flow through and adjacent to the former wildlife land, are habitat for federally endangered freshwater mussels including the snuffbox, sheepnose, rabbitsfoot, and spectaclecase. Each mussel filters up to 10 gallons of water per day.

Service / Risk	Value	Basis
Biofiltration of Bayou Creek and Little Bayou Creek	\$500,000 – \$3,000,000/yr	USGS freshwater mussel ecosystem services research
Legal liability if harmed during construction	\$6,000,000 – \$15,000,000+ per incident	Documented ESA mussel kill settlements: Clinch River VA = \$6.1M; Dunkard Creek PA/WV = \$15M

Source: USGS Ecosystem Services Provided by Native Freshwater Mussels; American Fisheries Society mussel kill guidelines

### Section F: Wildlife Food Web and Public Use

Item	Value	Notes
Migratory birds — 200+ species, Mississippi Flyway	Incalculable	Western Kentucky is critical Flyway corridor; herons, egrets, waterfowl, neotropical songbirds
Deer, turkey, quail, rabbit — hunting and recreation	\$50,000 – \$300,000/yr	WMA described as one of Kentucky's best quail areas; statewide wildlife recreation = \$5.9B/yr
70 years of public access — permanently lost	\$2,000,000 – \$5,000,000 (NPV)	Hunting, fishing, hiking, birding by McCracken County residents — cannot be replaced by Fulton County bottomland
Amphibians, dragonflies, predatory insects	Incalculable	Natural pest suppression; ecological health indicators
Public health — green space proximity to Paducah	Unquantified	Proven mental and physical health benefits of accessible green space for urban populations

### Section G: Ecological Value Summary

Category	Value
Annual ecosystem services (conservative)	\$7,000,000 – \$16,000,000 per year
Over GLE's 40-year license term	\$280,000,000 – \$640,000,000
One-time asset losses (timber, land differential, public access)	\$10,000,000 – \$20,000,000

### Part 3: Public Money Paid to GLE

Source	Amount	Notes
Kentucky Business Investment program (15-year)	\$24,000,000	Performance-based; approved by KEDFA March 2026
Kentucky Enterprise Initiative Act (sales/use tax)	\$3,000,000	Construction costs, equipment, fixtures
McCracken County tax breaks	~\$71,900,000	Under a nondisclosure agreement — the public cannot see the terms. County Judge Executive Craig Clymer confirmed he could not disclose the mechanism.
U.S. Department of Energy grant to GLE	\$28,500,000	Federal taxpayer money
Land value differential — McCracken prime habitat vs. Fulton floodplain	\$1,000,000 – \$3,000,000	665 acres of prime mixed-habitat WMA exchanged for frequently-flooded agricultural bottomland

**Total confirmed public money to GLE: approximately \$128,400,000 – \$130,400,000**

## Part 4: The Adjacent Federal Obligation

The GLE facility will be constructed and operate for 40 years immediately adjacent to the Paducah Gaseous Diffusion Plant — a federal Superfund site with pre-existing contamination including trichloroethylene (TCE), technetium-99, polychlorinated biphenyls (PCBs), and PFAS discovered in 2020. In 1988, technetium-99 was found in off-site drinking water wells north of the plant.

Item	Amount	Source
Total projected PGDP Superfund cleanup cost	\$17,000,000,000	U.S. Department of Energy Paducah Lifecycle Baseline, 2018
Projected cleanup completion	2065	DOE
Already spent as of 2018 (all three GDP sites)	\$15,500,000,000	U.S. GAO report GAO-20-63

GLE's facility will operate next to this Superfund site simultaneously with the cleanup — for the entire 40-year license term — adding new radiological and chemical loads to an already compromised groundwater system.

## Part 5: Human Health Risks and Projected Costs

### What GLE Will Handle

GLE will re-enrich depleted uranium hexafluoride (UF<sub>6</sub>) — one of the most chemically toxic industrial substances processed at scale. When UF<sub>6</sub> contacts atmospheric moisture, it instantly converts to hydrofluoric acid (HF) and uranyl fluoride — both capable of causing pulmonary edema, chemical burns, kidney damage, and death at high concentrations. GLE will process more than 200,000 metric tons of this material.

### Historical Record at This Exact Site

A NIOSH study of 6,820 Paducah Gaseous Diffusion Plant workers (1952–2003) found:

- Non-Hodgkin's lymphoma elevated at 49% above the expected rate (SMR = 1.49)
- Non-significant elevations in kidney cancer and brain cancer
- Elevated colon cancer in office workers

The PGDP already contaminated off-site drinking water wells (1988), private wells with VOCs, Bayou Creek and Little Bayou Creek with PCBs, and groundwater with PFAS (2020).

### Projected Health Costs — 40-Year Facility Life

Risk / Cost	Projected Amount	Basis
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Worker health costs — elevated cancer, kidney, lymphoma risk	\$50,000,000 – \$200,000,000	Based on PGDP worker cohort data; 240 workers over 40 years
Community health monitoring, water testing, medical surveillance	\$20,000,000 – \$80,000,000	If properly implemented
Emergency response capacity — HF/UF6 release preparedness	\$10,000,000 – \$50,000,000	Capital + training for Paducah Fire and regional hazmat
Post-decommission cleanup liability — GLE facility	\$500,000,000 – \$2,000,000,000+	Based on PGDP precedent scaled to site size; taxpayer risk
290,000+ metric tons radioactive waste — stored on-site	Unknown — permanent	No licensed disposal site exists anywhere in the United States
Property value decline in surrounding residential areas	\$30,000,000 – \$100,000,000	Nuclear facility proximity studies

### The Classified Safety Problem

The SILEX laser enrichment technology at the heart of GLE's process was classified by the U.S. Secretary of Energy in 2001. Key safety details are withheld as corporate trade secrets. The NRC's Safety Evaluation Report is not due until January 2027.

The public comment period on the draft Environmental Impact Statement closed May 11, 2026 — eight months before the safety analysis will be complete.

McCracken County residents were asked to comment on a facility whose full safety profile they were legally barred from seeing.

Princeton University's Program on Science and Global Security has published peer-reviewed research finding that SILEX technology poses nuclear proliferation risks comparable to or greater than gas centrifuge technology. This would be the first commercial-scale SILEX facility ever built anywhere in the world.

### Part 6: The Regulatory Failures

Failure	Detail
Bat survey — conducted 7 nights	Bat survey legally required: ~75+ detector-nights across all 4 seasons
CEQ oversight	Rescinded February 2025 by Trump Executive Order; NEPA implementing regulations eliminated January 8, 2026
NRC independence	Trump executive orders (May 2025) placed NRC under White House review; former NRC chairman fired
USFWS staffing	Funding and staffing cut under DOGE; ESA definition of "harm" proposed to narrow
Public comment on safety	Closed May 11, 2026 — Safety Evaluation Report due January 2027

McCracken County NDA	Judge Executive Craig Clymer could not disclose financial terms of county incentives due to nondisclosure agreement with GLE
Environmental review	The Kentucky Resources Council formally petitioned the NRC in May 2026, arguing the entire environmental review violates federal law because it relied on generic data rather than site-specific analysis — and that the survey of protected species was fundamentally inadequate to meet Endangered Species Act requirements.

## Part 7: The Complete Public Cost Ledger

### Ecological and Public Use Value Surrendered

Category	Amount
Annual ecosystem services — 40-year lifetime	\$280,000,000 – \$640,000,000
One-time asset losses (timber, land, public access)	\$10,000,000 – \$20,000,000
Ecological subtotal	\$290,000,000 – \$660,000,000

### Public Subsidies to GLE

Category	Amount
State and federal incentives	\$55,500,000
McCracken County incentives (NDA — estimated)	\$71,900,000
Land value differential	\$1,000,000 – \$3,000,000
Subsidy subtotal	~\$128,400,000 – \$130,400,000

### Human Health and Cleanup Liability

Category	Amount
Worker and community health costs (40 years)	\$70,000,000 – \$280,000,000
Emergency response capacity	\$10,000,000 – \$50,000,000
GLE facility post-decommission cleanup (taxpayer risk)	\$500,000,000 – \$2,000,000,000+
Property value decline	\$30,000,000 – \$100,000,000
Health/liability subtotal	\$610,000,000 – \$2,430,000,000+

### The Pre-Existing Federal Obligation Next Door

Category	Amount
PGDP Superfund cleanup — taxpayer funded through 2065	\$17,000,000,000

## GRAND TOTAL — CONFIRMED PUBLIC COST AND VALUE SURRENDERED

Category	Low Estimate	High Estimate
Ecological value surrendered	\$290,000,000	\$660,000,000
Public subsidies to GLE	\$128,400,000	\$130,400,000
Health and liability costs	\$610,000,000	\$2,430,000,000
PGDP Superfund (pre-existing)	\$17,000,000,000	\$17,000,000,000
<b>TOTAL</b>	<b>\$18,028,400,000</b>	<b>\$20,220,400,000+</b>

Plus: incalculable losses to federally endangered species, the food web, 70 years of public heritage, and generational groundwater liability.

**GLE's investment: \$1,760,000,000 — McCracken County's true cost: \$18 billion to \$20 billion+**

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## Part 8: What You Can Do

**NRC Public Docket** — NRC-2025-1007 at Regulations.gov. Written comments are still being considered even after the formal deadline.

**Your representatives** — U.S. Senators and House members from Kentucky have oversight authority over the NRC and can request a formal explanation of why a 7-night bat survey was accepted for a 665-acre Superfund-adjacent site with documented endangered species presence.

**Stay updated on KRC's petition to the NRC** by signing up for their newsletter at:  
<https://bit.ly/SubscribeToKRCNews>

Website: [www.protectmccrackencounty.com](http://www.protectmccrackencounty.com)

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## Sources and Methodology

All figures are estimates based on the following published sources:

- NRC Draft Environmental Impact Statement for the GLE Paducah Laser Enrichment Facility (March 2026), Docket 070-07033
- U.S. DOE Paducah Lifecycle Baseline (\$17B cleanup, 2018)
- U.S. GAO Report GAO-20-63: Nuclear Cleanup at Former Gaseous Diffusion Plants
- EPA PGDP Superfund Site Profile
- FEMA Ecosystem Service Value Updates (June 2022)
- EPA Economic Benefits of Wetlands (Publication 832-R-93-005)
- Penn State Extension: The Value of Bats to Crop Production and Revenue
- USGS: Ecosystem Services Provided by Native Freshwater Mussels
- USFWS: Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines (2026)

- NIOSH/University of Louisville: Mortality Patterns Among Paducah Gaseous Diffusion Plant Workers (PMC2983475)
- Princeton Program on Science and Global Security: A Proliferation Assessment of Third Generation Laser Uranium Enrichment Technology (2016)
- NCBI Bookshelf: Uranium Hexafluoride Acute Exposure Guideline Levels
- Bat Conservation International: White-Nose Syndrome data
- Kentucky Resources Council Petition to NRC (May 2026)
- Kentucky KEDFA public records (March 2026)
- WKMS, Kentucky Lantern, and Paducah Today reporting (2024–2026)
- Dogwood Alliance: Kentucky Wetland Forest Ecosystem Services Fact Sheet
- Published research in Science, Conservation Biology, Journal of Mammalogy, and Hydrobiologia

Dollar figures are estimates derived from peer-reviewed research and are clearly labeled as such throughout. All figures have been scaled appropriately to the McCracken County/western Kentucky context. Sources available on request.

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