



LOUISVILLE WATER COMPANY

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September 26, 2007

Ms. Beth O'Donnell
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, KY 40602-0615

RECEIVED

SEP 27 2007

PUBLIC SERVICE
COMMISSION

Re: **Open Records Request**
PSC Case No. 2007-134

Dear Ms. O'Donnell:

In my Open Records Request dated July 30, 2007, I advised you I would supplement my response should there be any documents responsive to the Public Service Commission's Open Records Request.

4. All documents related to or arising from any proposals, plans, discussions, or negotiations on or after January 1, 2005 to extend LWC's wholesale or retail service or sale of water beyond LWC's present operations.

Response: In addition to the document produced in LWC's July 30, 2007 response, please find the following document:

- Presentation to the Lexington-Fayette Urban County Government Planning Committee; Comparison of the Louisville Pipeline and Pool3 Options to Serve Central Kentucky Water Customers

LWC agrees to further supplement this response should other responsive documents come to our attention. Please contact me at 502/569-0808 if you have any questions regarding our response.

Sincerely,

Barbara K. Dickens
Vice President, General Counsel
& Corporate Secretary

BKD/bjs
Enclosure

Presentation to the Lexington-Fayette Urban County Government Planning Committee

Comparison of the Louisville Pipeline and Pool 3 Options to Serve Central Kentucky Water Customers

September 18, 2007

R^WBECK

Mind Powered: Insight with Impact.

Agenda for Today's Presentation

- Project description
- Financial model assumptions
- Phase 1 Investigation
- Phase 2 Investigation
- Alternative pipeline proposal
- Conclusions
- Questions

Project Description

Financial analysis of two delivery alternatives

- Pool 3 option (Kentucky River)
- LWC option (Ohio River)

Two flow scenarios

- Peaking plant model (6 MGD constant flow)
- Capacity expansion model (0.5 MGD/year increase)

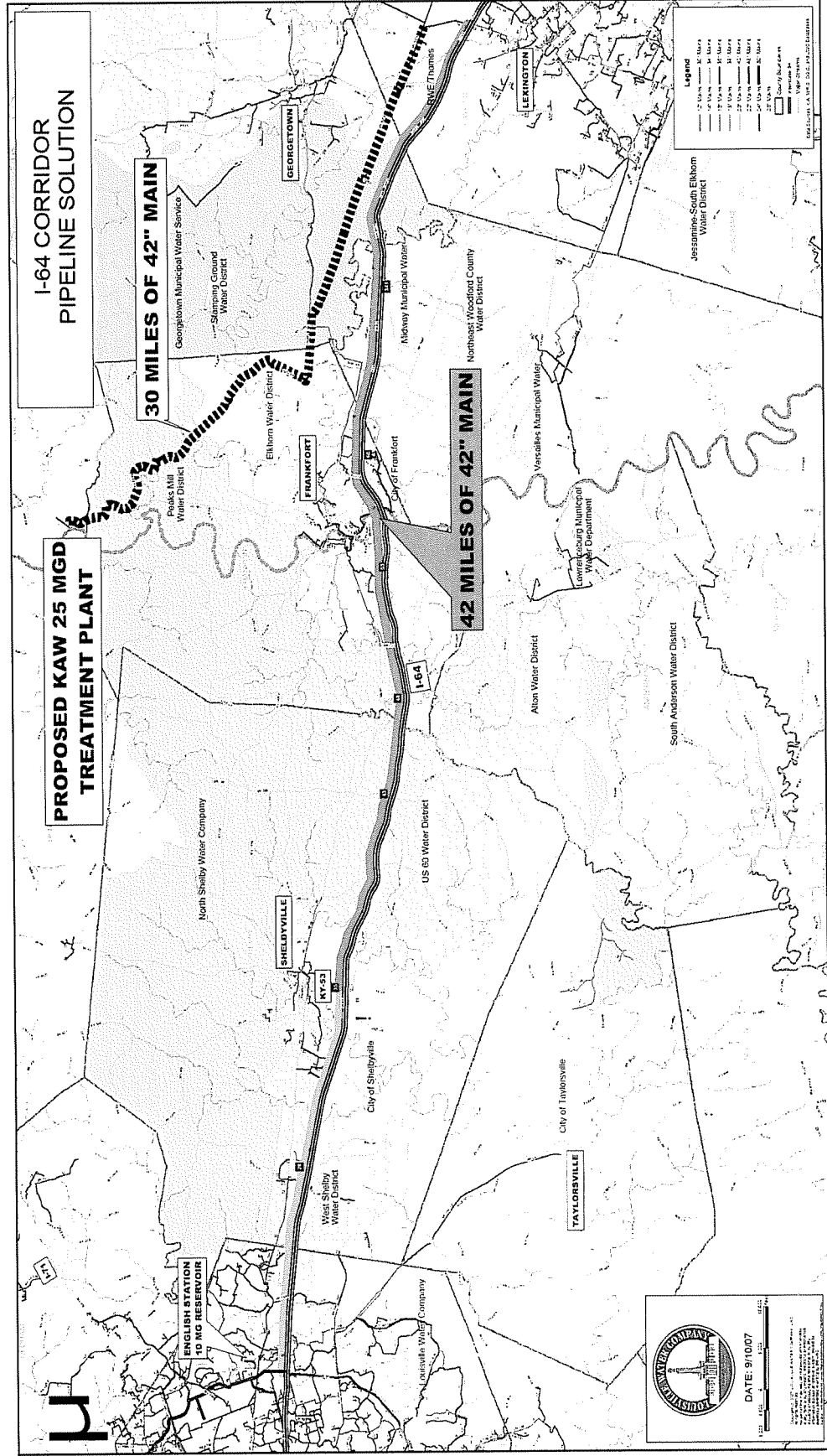
Two timeframes

- Phase 1 - 2008-2030
- Phase 2 - 2030-2050

Financial model assumptions include:

- Construction costs per KAW (Gannett Fleming) and BWSC (O'Brien & Gere) reports
- O&M expenses per KAW PSC testimony
- Inflation @ 2.4%
- Construction cost increases @ 3%
- Municipal bond interest rate @ 4.7%
- KAW after-tax return @ 7.75%
- LWC wholesale rate increases @ 3% per year
- Rehabilitation & Replacement funds established based on average asset life
 - Pipelines- 75 years
 - Treatment and pumping facilities- 40 years

Phase 1 Delivery alternatives have differing pipeline alignments



Phase 1 Investigation (2008-2030)

Pool 3 Option

25 MGD intake, WTP and pump station @ Pool 3

30 mile, 42" transmission main from Pool 3 to Fayette County

Booster pump station

3 MG Storage tank

UV system in 2011

O&M expenses per KAW

KY River Authority withdrawal fee @ \$0.05/1,000 gallons

LWC Pipeline Option

Not necessary

42 mile, 42" transmission main from KY 53 to Fayette County

Booster pump station

3 MG Storage tank

Riverbank filtration in 2009

Transmission O&M expenses only

KY River Authority withdrawal fee @ \$0.05/1,000 gallons

LWC wholesale rate (initially \$1.71/1000 gals)

Pool 3 capital costs are 48% higher than the LWC 42-inch pipeline

Phase 1 Capital Cost Comparison (\$ million)

	Pool 3	LWC Pipeline
Construction estimate	\$108.3 M	\$73.0 M
Contingency	<u>21.6</u>	<u>14.6</u>
Probable construction cost	\$129.9	\$87.6
Engr. /permitting/ admin. /land	33.3	22.0
Interest/financing	<u>4.2</u>	<u>3.7</u>
Total Phase 1 Project cost	\$167.4 M	\$113.3 M
Difference	\$54.1 M	

Present worth costs are lower for LWC pipeline in either scenario

Phase 1 Present worth cost comparison

	Constant flow 6 MGD	Increasing flow 0.5 MGD/year
Pool 3 option	\$316.5 M	\$326.4 M
LWC option	\$250.3 M	\$297.8 M
Difference	\$ 66.2 M	\$ 28.6 M

What happens after 2030 when additional capacity is needed?

Pool 3 Option

New 15 MGD Ohio River intake and pump station

30 mile, 30" raw water transmission main to Pool 3

Expansion of Pool 3 WTP from 25 to 45 MGD

Parallel 30 mile, 30" main to Fayette County

New booster pump station

New 2 MG storage tank

Additional staff needed

LWC Pipeline Option

Not necessary

Not necessary

Not necessary

Parallel 42 mile, 30" main from KY 53 to Fayette County

New booster pump station

New 2 MG storage tank

No additional staff needed

Phase 2 Pool 3 capital costs are twice the LWC option

Phase 2 Capital Cost Comparison (\$ million)

	Pool 3	LWC Pipeline
Construction estimate	\$111.0 M	\$54.1 M
Contingency	<u>22.2</u>	<u>10.8</u>
Probable construction cost	\$133.2	\$64.9
Engr./permitting/ admin./land	33.3	16.2
Interest/financing	<u>4.8</u>	<u>2.4</u>
Total Phase 2 Project cost	\$171.3 M	\$ 83.5 M
Difference	\$87.8 M	

Present worth costs are substantially lower for LWC pipeline over 40-year analysis

2010-2050 Present worth cost comparison

	Constant flow 6 MGD	Increasing flow 0.5 MGD/year
Pool 3 option	\$394.6 M	\$625.7 M
LWC option	\$296.9 M	\$508.9 M
Difference	\$ 97.7 M	\$116.8 M

A 36-inch pipeline from Louisville is feasible

- Lower pipe material and construction cost than 42" pipeline
- Lower contingencies and engineering costs are typical for pipeline projects
- 36" pipeline flow velocities acceptable at 25 MGD
- Additional pump station overcomes higher energy loss

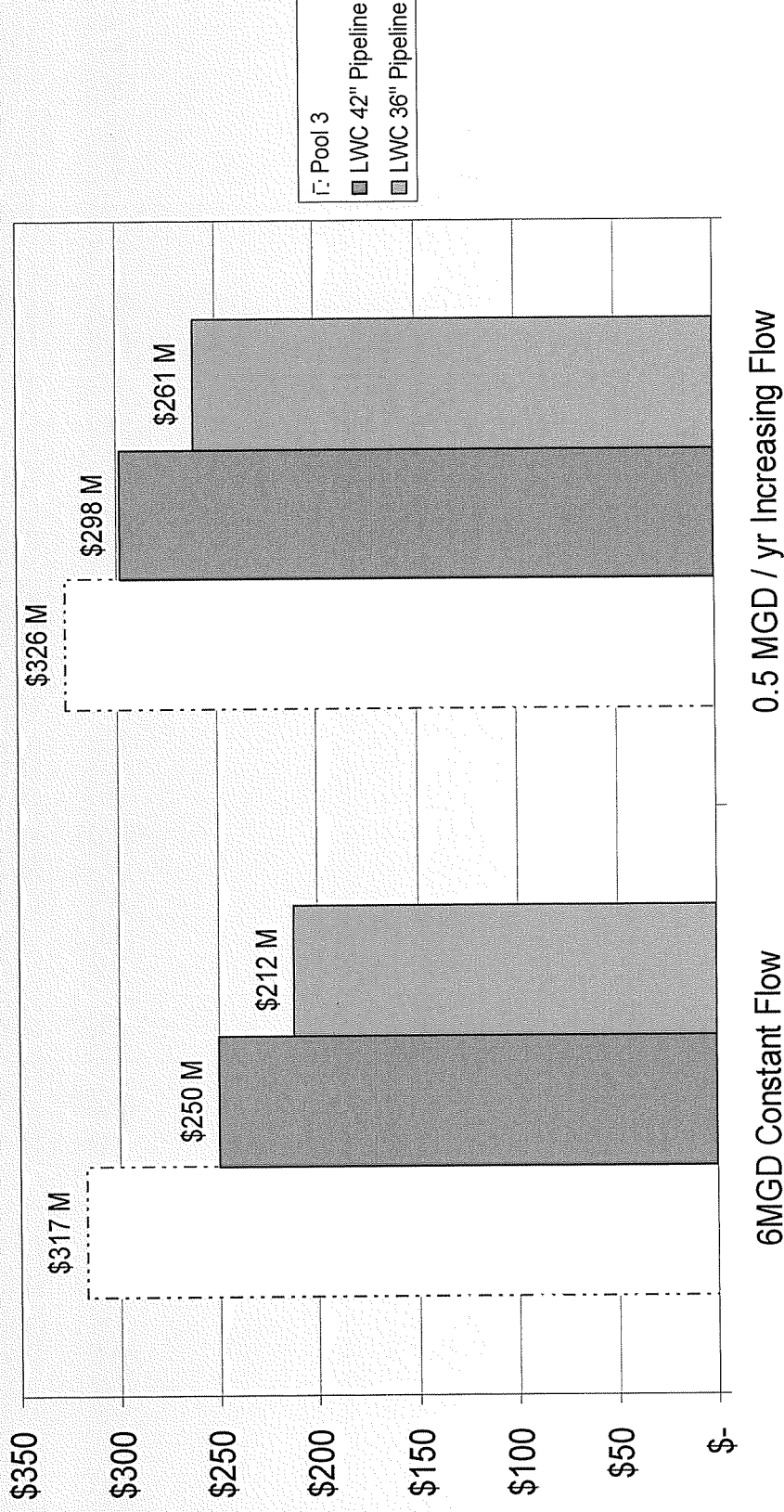
Additional \$25 million in capital cost savings over 42-inch pipeline option

Capital Cost Comparison (\$ millions)

	Pool 3	LWC-36”	LWC-42”
Construction estimate	\$108.3 M	\$64.5 M	\$73.0 M
Contingency	<u>21.6</u>	<u>6.4</u>	<u>14.6</u>
Probable construction cost	\$129.9	\$ 70.9	\$87.6
Engineering/permitting/ admin/land	33.3	14.3	22.0
Interest/financing	<u>4.2</u>	<u>2.9</u>	<u>3.7</u>
Total Phase 1 Project cost	\$167.4 M	\$ 88.1 M	\$113.3 M

20-year present worth costs are attractive for 36-inch pipeline option

Phase 1 (2030) Present Worth Cost Comparison



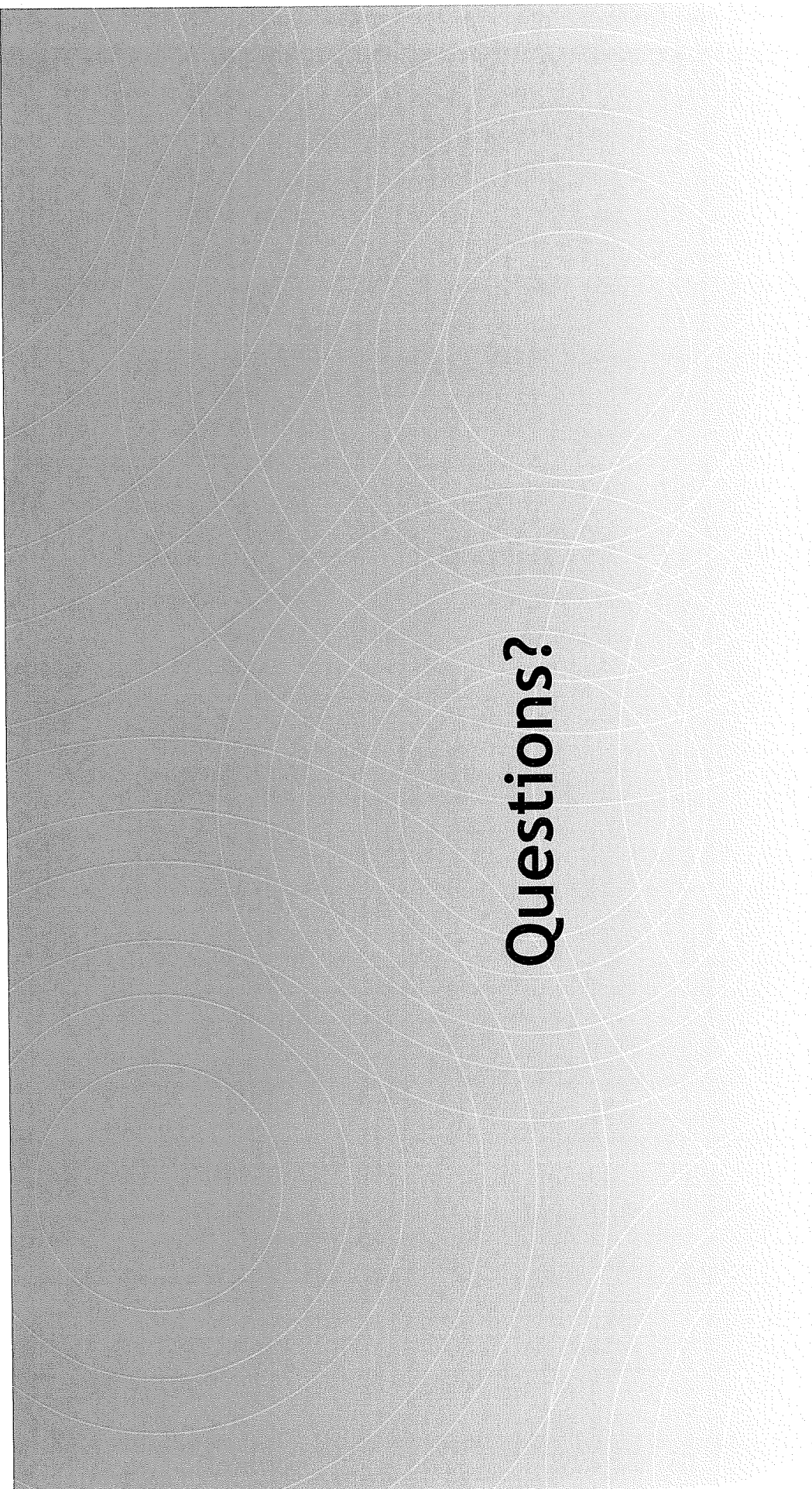
Conclusions of R.W. Beck study

- Construction costs for LWC pipeline are lower than Pool 3 in all scenarios

- LWC pipeline is lower cost solution in Phase 1, saving ratepayers between \$28 and \$66M over 20 years

- LWC pipeline is lower cost solution over 40-year analysis, with savings ranging from \$98M to \$117M

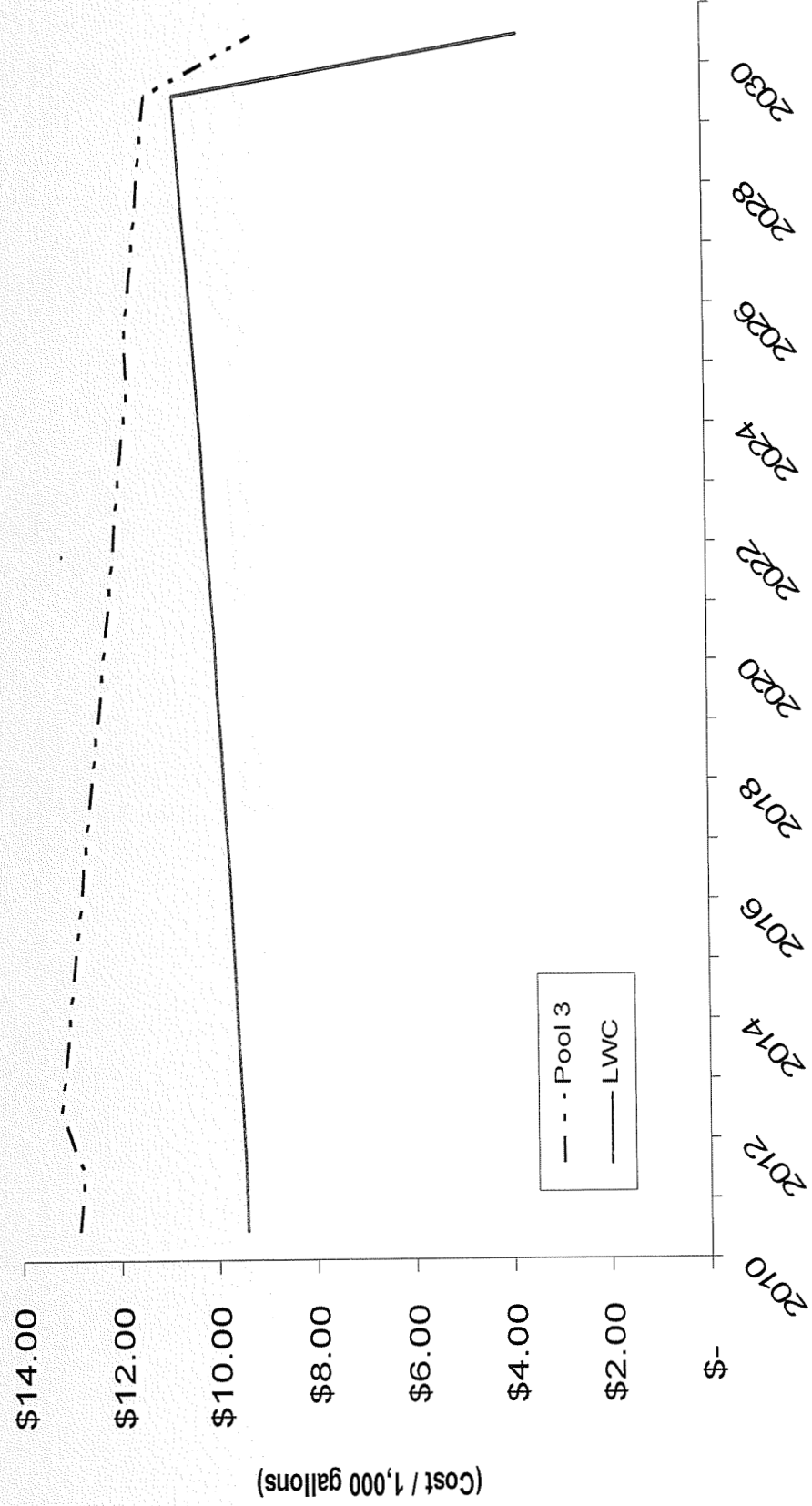
- A 36" pipeline from LWC is a viable alternative to the 42" pipeline, with additional cost savings of \$37M



Questions?

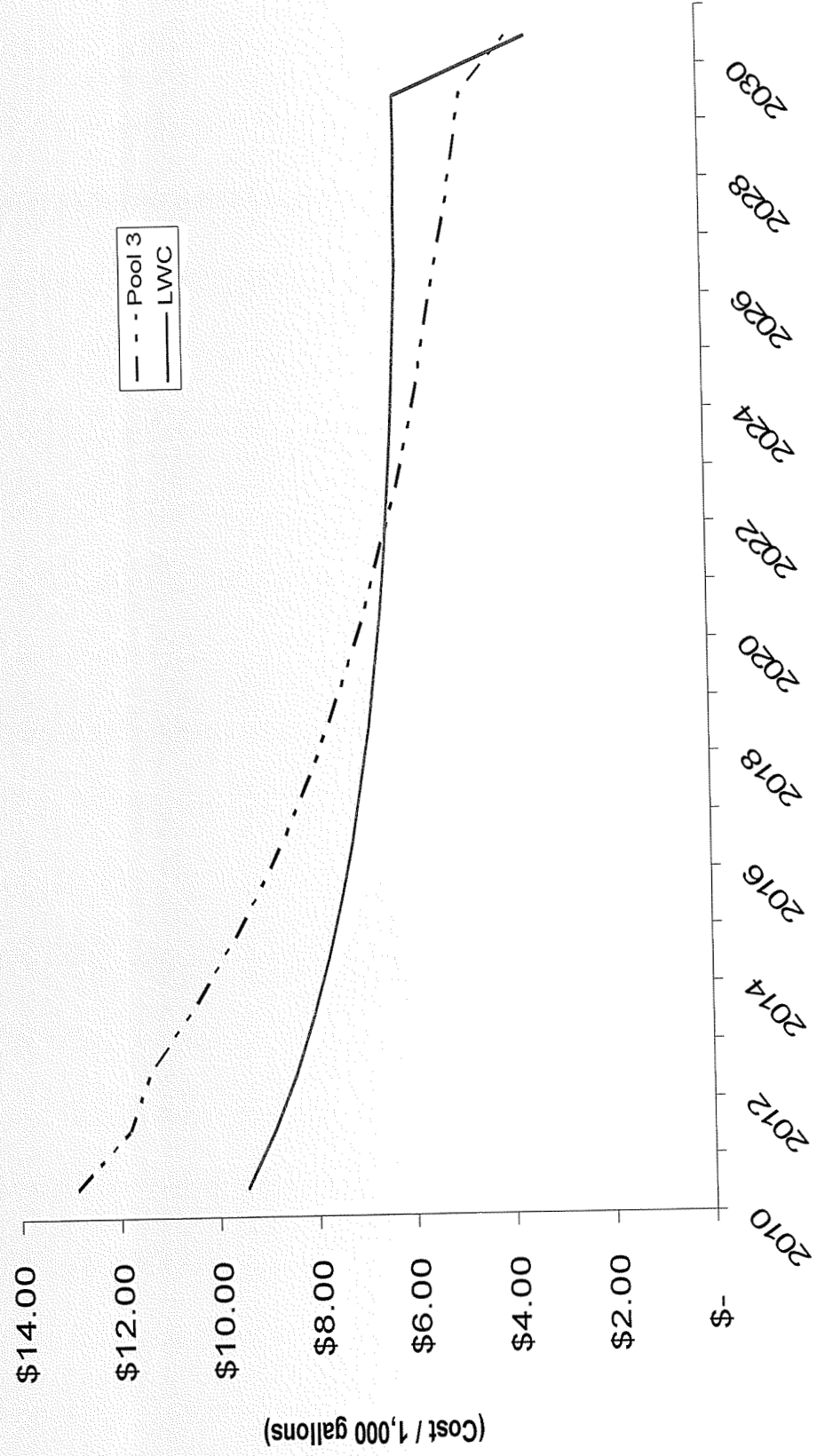
Unit costs favor the LWC option for both constant flow scenario...

Unit cost comparison (6 MGD Constant)



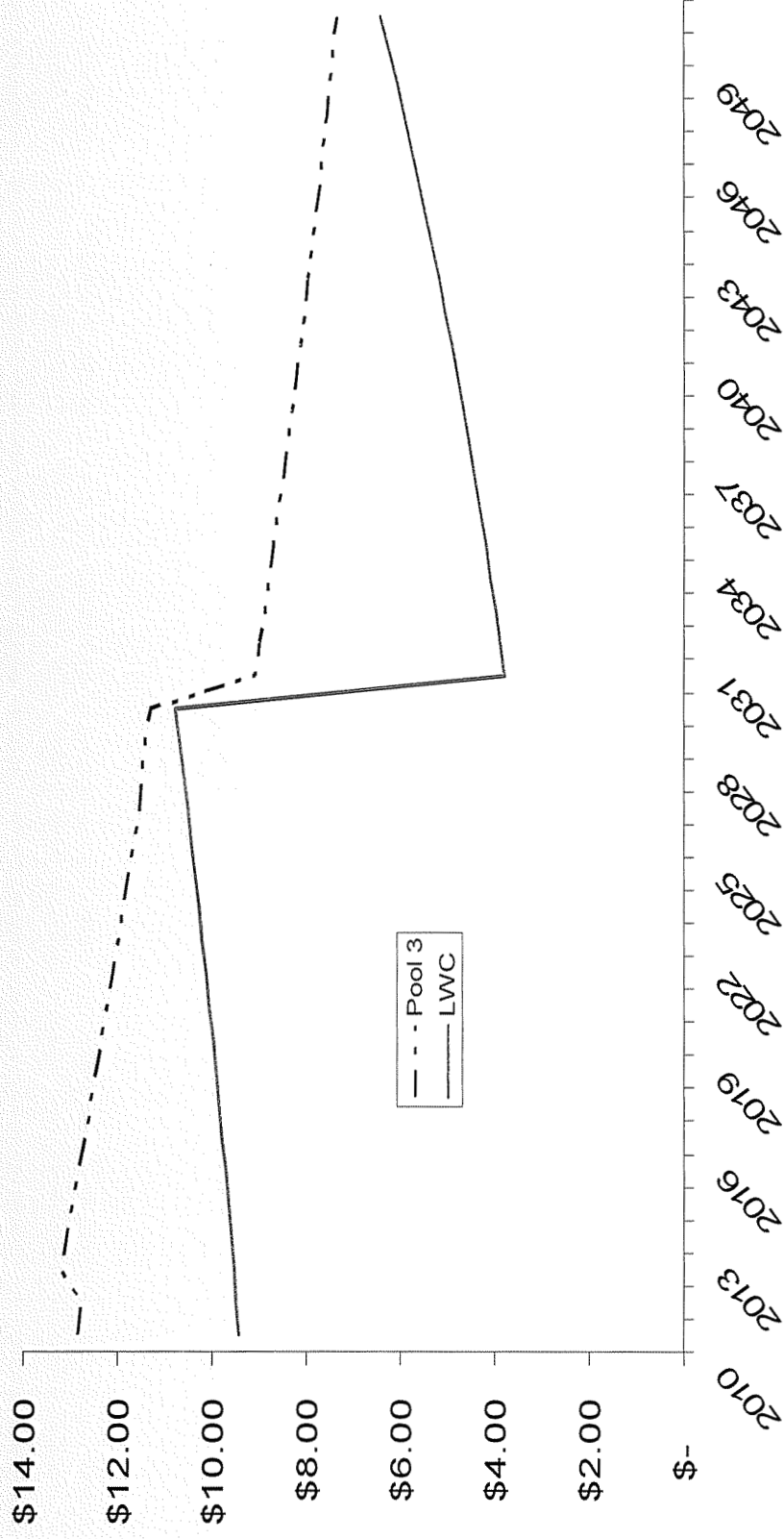
...and the increasing flow scenario

Unit Cost Comparison (0.5 MGD / yr Increase)



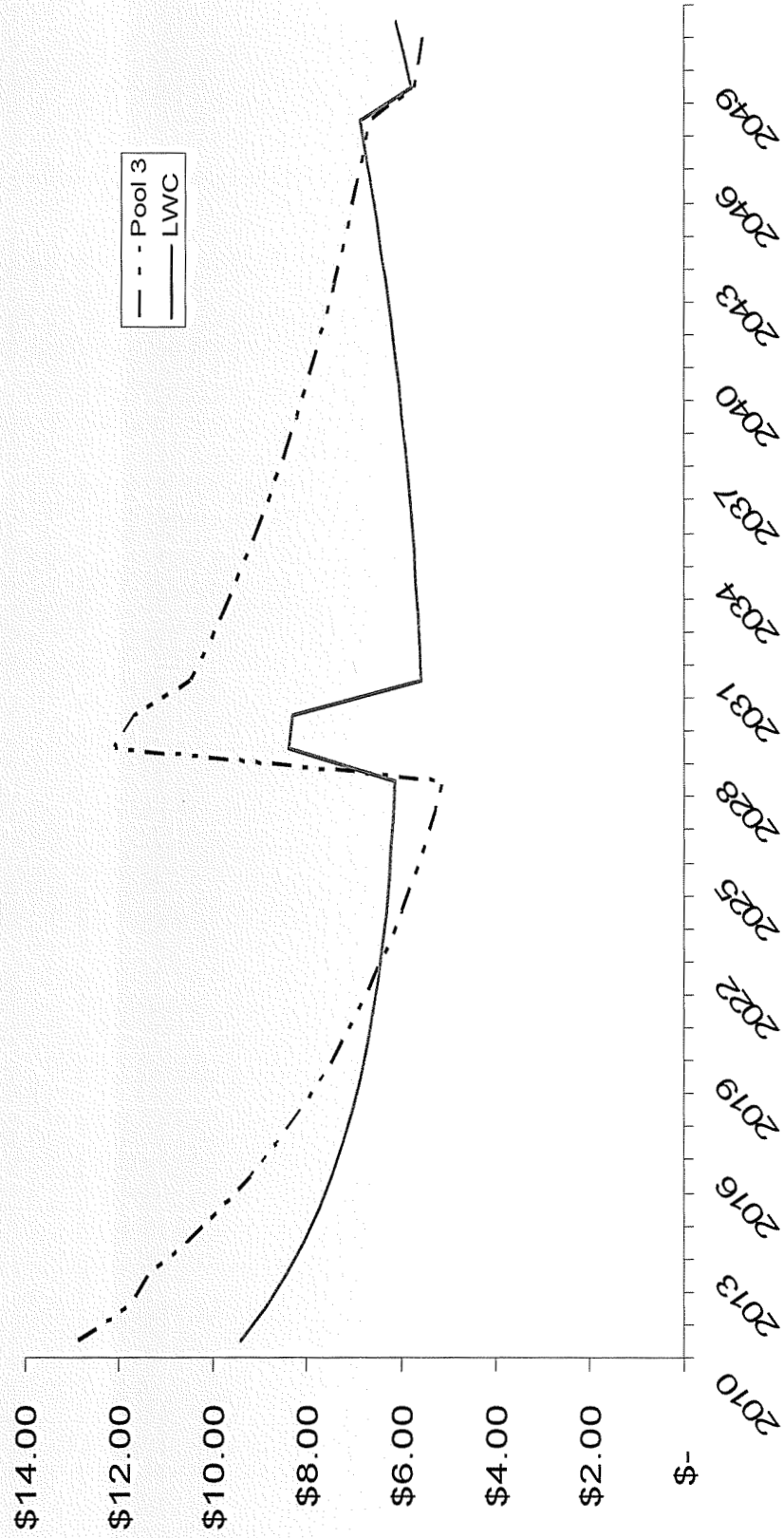
Unit costs favor the LWC option throughout 40 years when flow is fixed at 6 MGD

Unit Cost comparison (6 MGD Constant)



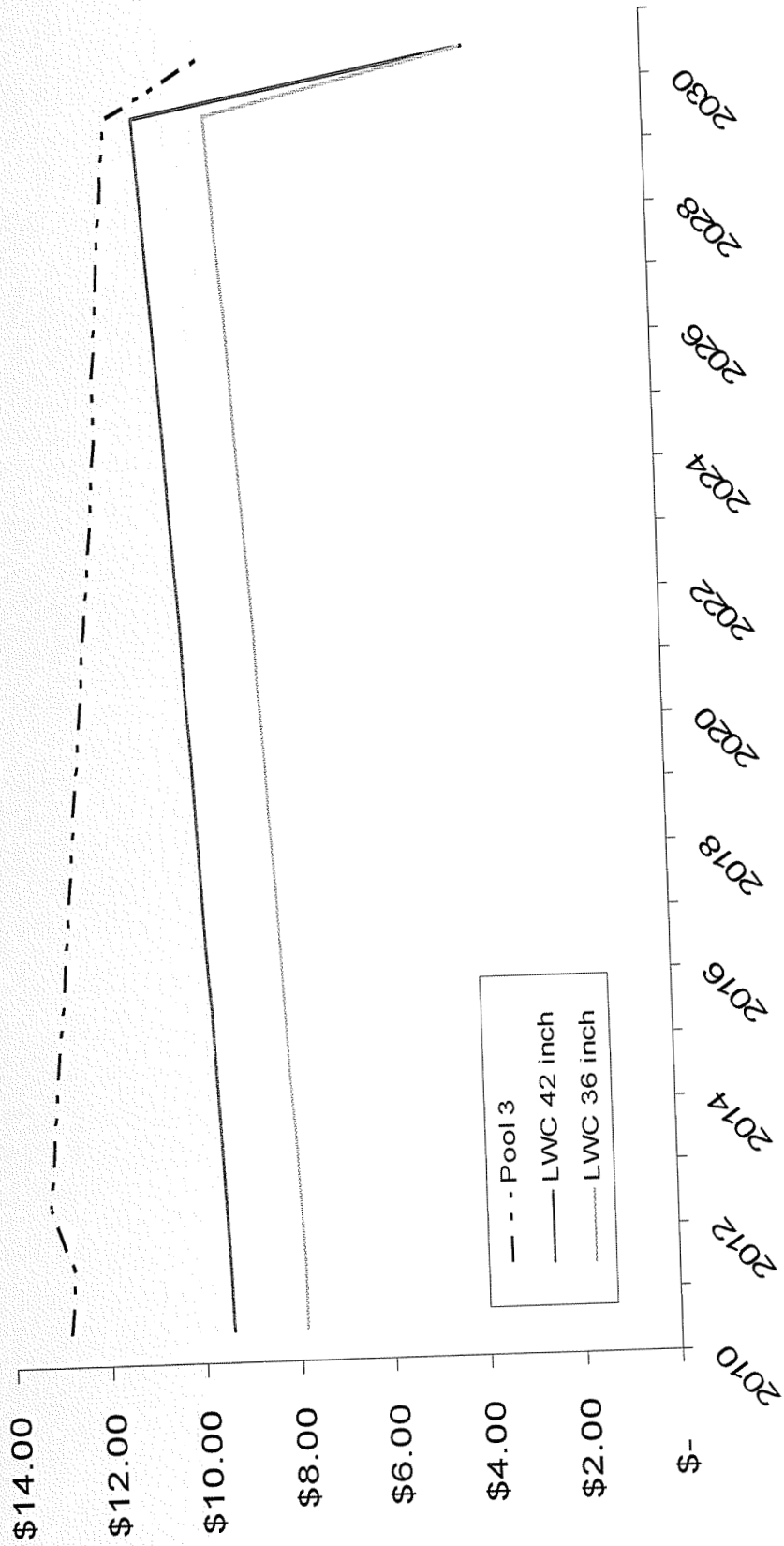
...as well as under the increasing flow scenario

Unit Cost comparison (0.5 MGD Increase)



As are the unit costs under constant flow...

Unit Cost Comparison (6 MGD Constant)



...and increasing flow scenarios

Unit Cost Comparison (0.5 MGD Increase)

