

# “Economic Feasibility” Under the Safe Drinking Water Act: Achieving Efficiency, Equity and Equal Protection

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# Road map

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- A. Competing statutory goals
- B. SDWA as enacted v. as implemented
- C. Non-statutory USEPA policies
- D. Efficiency, equity, and administrative consequences of 'affordability'
- E. Remedy: establish by rule the economic feasibility principle

# A. Competing statutory goals

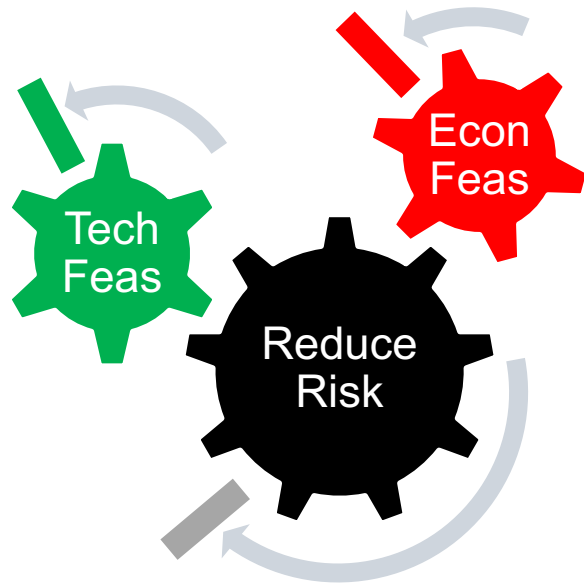
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1. Establish stringent national standards
2. Accommodate small systems' lack of scale economies
3. Ensure 'benefits justify costs'

# B. SDWA

## As enacted

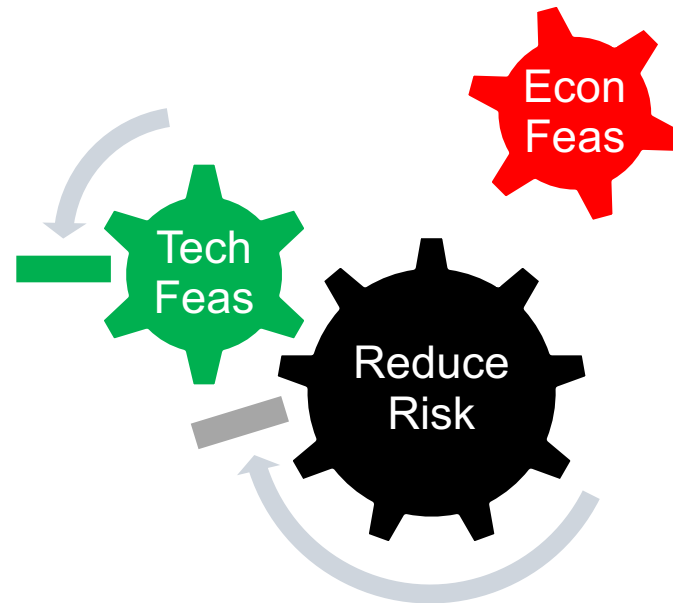
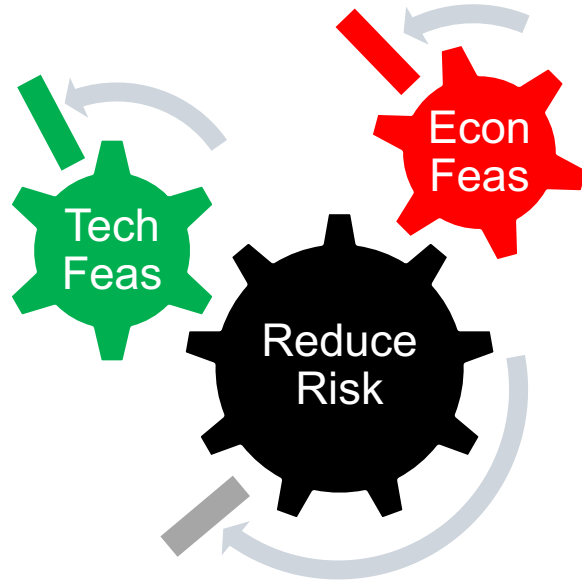
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# B. SDWA

As enacted

As implemented



## C. Non-statutory USEPA policies

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1. Health-precautionary risk assessment
2. Minimal small-system accommodation
3. 'Affordability' in lieu of economic feasibility
4. Equal protection via equal quantity of *ex post* risk

# C1. Health-precautionary risk assessment

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- a. '[R]isk assessments should not knowingly underestimate or grossly overestimate risks'
- b. '[R]isk assessments [should] take a more "protective" stance given the underlying uncertainty with the risk estimates generated'
- c. EPA will [focus on] the upper end of a range of risks or exposures when we are not very certain about where the particular risk lies'

Source: USEPA 2004

## C2. Minimal small-system accommodations

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- a.** Small-system consolidation is strongly preferred
- b.** Variances and exemptions are actively discouraged

Source: USEPA 1998 (ref. 1974 legislative history)

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# C3. 'Affordability' in lieu of economic feasibility

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- a.** Expenditure for drinking water  $\leq 2.5\%$  national MHI is 'affordable'
- b.** Household expenditure variability within and across system sizes is irrelevant
- c.** Household benefits are irrelevant

Source: USEPA 2004

## C4. Equal protection via equal quantity of *ex post* risk

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- a.** Equal quantity of *ex post* risk
  - i. Risk reduction varies little
  - ii. Total and marginal costs vary a lot
  - iii. Inconsistent with WTP
- b.** Equal price for risk reduction
  - i. Risk reduction varies a lot
  - ii. Total and marginal costs vary little
  - iii. Consistent with WTP

# Aside: How do we choose quantity- vs. price-based equal protection?

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## Choose quantity-based for

- Constitutional rights, e.g.
  - Free speech/religion
  - Protection from unreasonable search/seizure
  - No takings without just compensation
  - Trial by jury
  - Voting rights
- Public goods funded by general taxation
  - National security
  - Access to justice
  - Public health & welfare
- Examples of private goods?

## Choose price-based for

- Public goods funded by user fees
- Private goods & services supplied in competitive markets (including health & safety goods/services)
- Private goods supplied by natural monopolies
  - Natural gas & electricity
  - Refuse collection
  - Public schools
  - Drinking water

# D1. Efficiency consequences of 'affordability'

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- a. Standards may be efficient, but only for very large metro systems
- b. Elsewhere, 'affordability' threshold is a 2.5% income tax on households
- c. This tax is a wealth transfer to rentseekers, produces no government revenue
- d. External subsidies are required to hide standards' inefficiency and inequity

## D2. Equity consequences of 'affordability'

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- a. Benefactors and beneficiaries are the same, so every inefficiency also is an inequity
- b. MHI is a problematic indicator
  - Poorest households in any domain are taxed the most
  - National MHI disproportionately taxes lower-income regions, communities, and households

## D3. Administrative consequences of 'affordability'

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- a. Early rules consumed regulatory budget headroom
- b. Once the regulatory budget is reached, no new risks can be regulated unless inefficient existing rules are rescinded
- c. SDWA § 1412(b)(9) impedes regulatory reform ('anti-backsliding')
- d. Infrastructure funding deficit is exacerbated

# E. Remedy: establish by rule the economic feasibility principle

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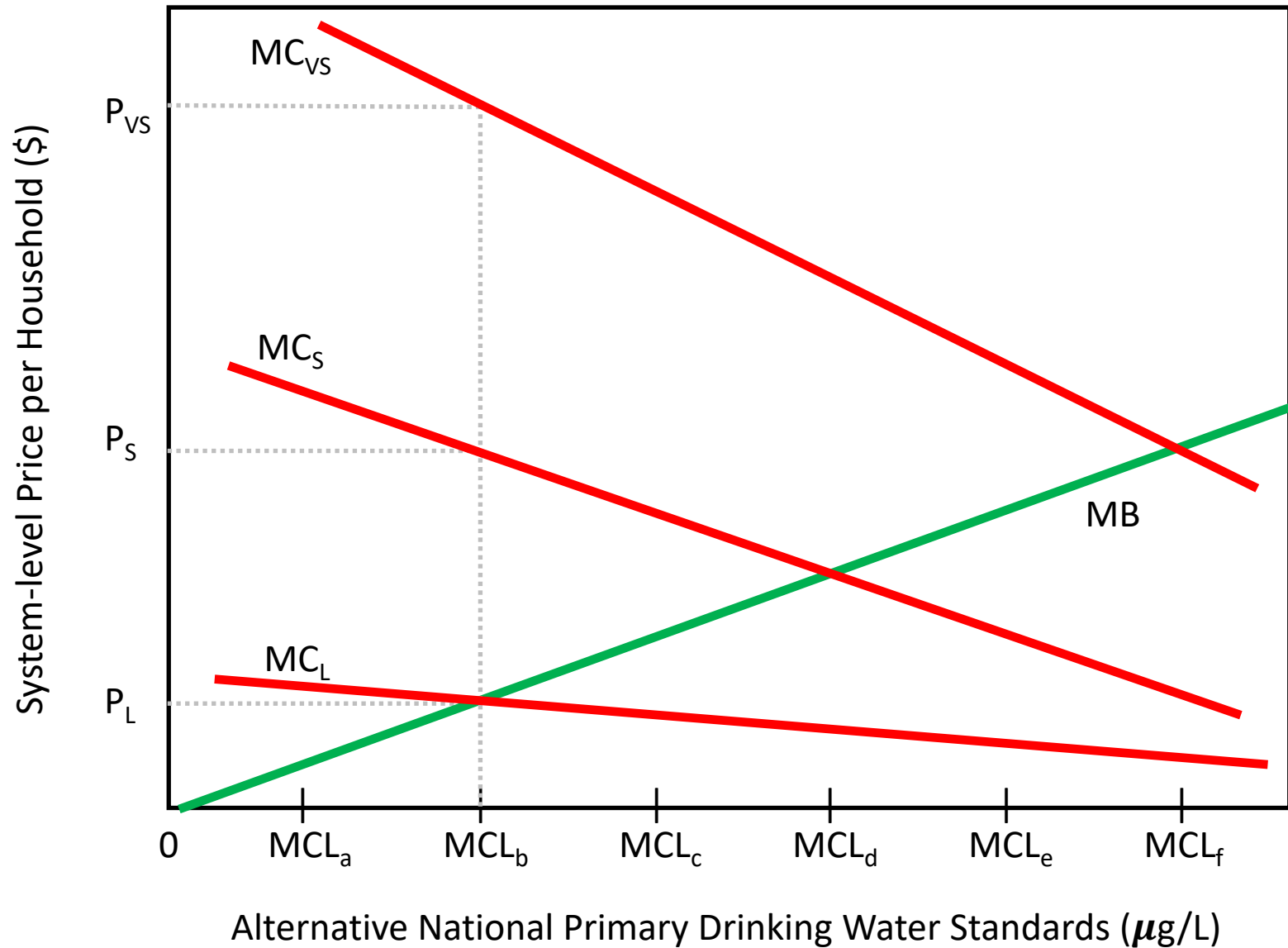
## Current practice

1. MCL for large systems; small systems punt
2. Variances & exceptions have limited value and aren't really available
3. Inefficiency & inequity endemic; deadweight losses endemic

## Proposed alternative

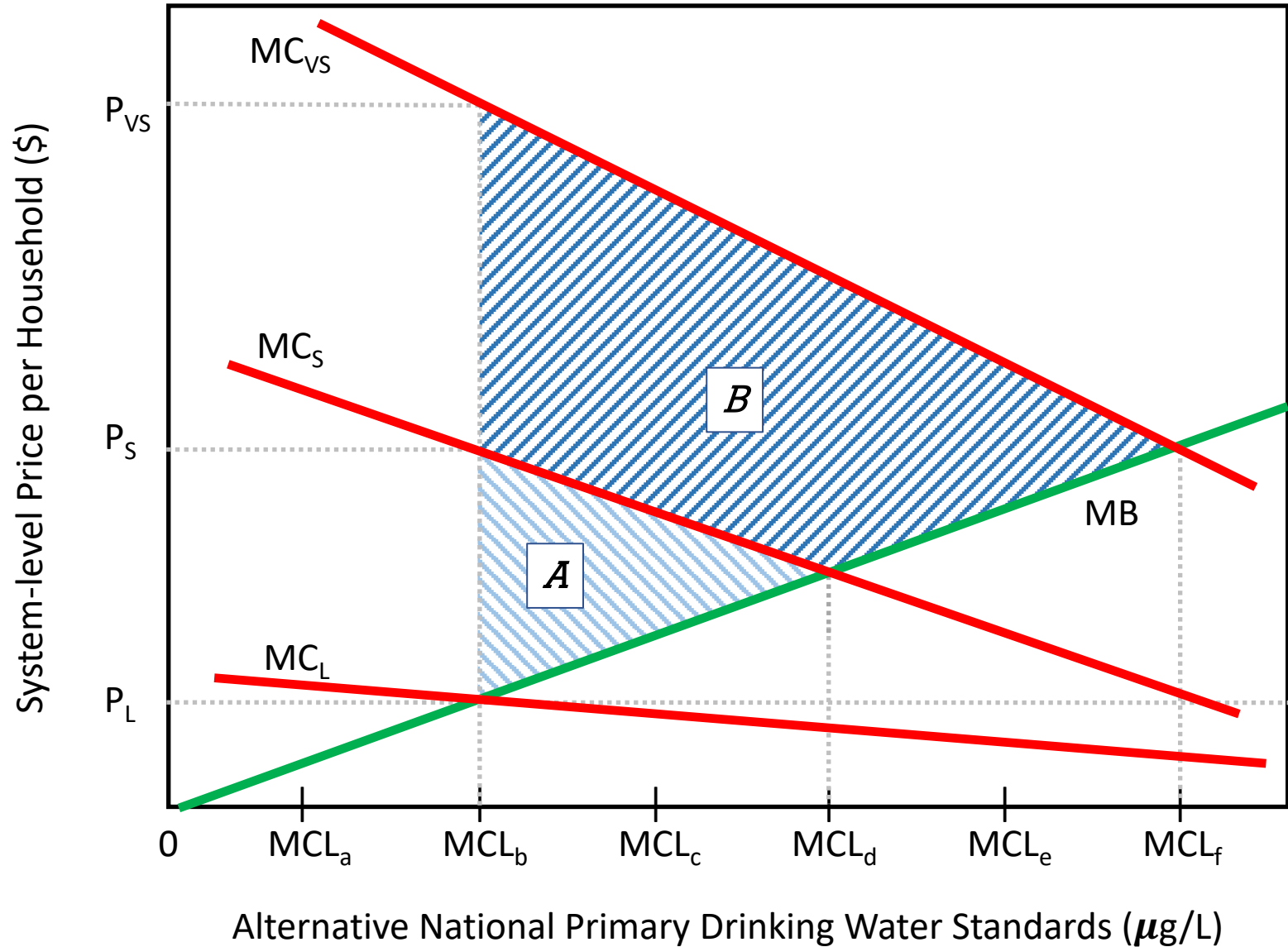
1. MCL for smallest non-exempt system
2. Variances & exemptions are not necessary
3. Efficiency & equity enhanced; deadweight losses avoidable

# E1. Decision-making under USEPA practice

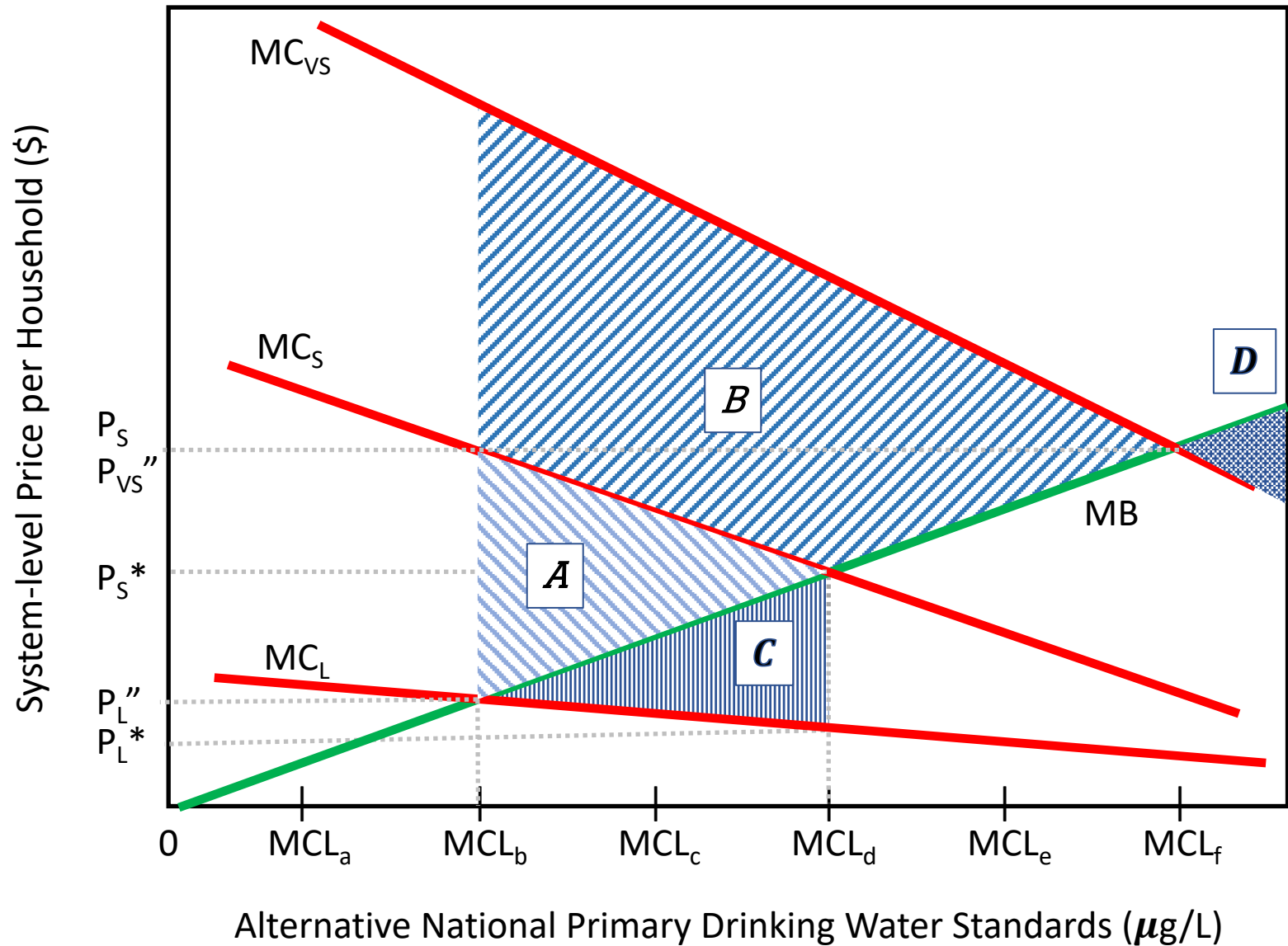




# E2. Deadweight losses under USEPA practice

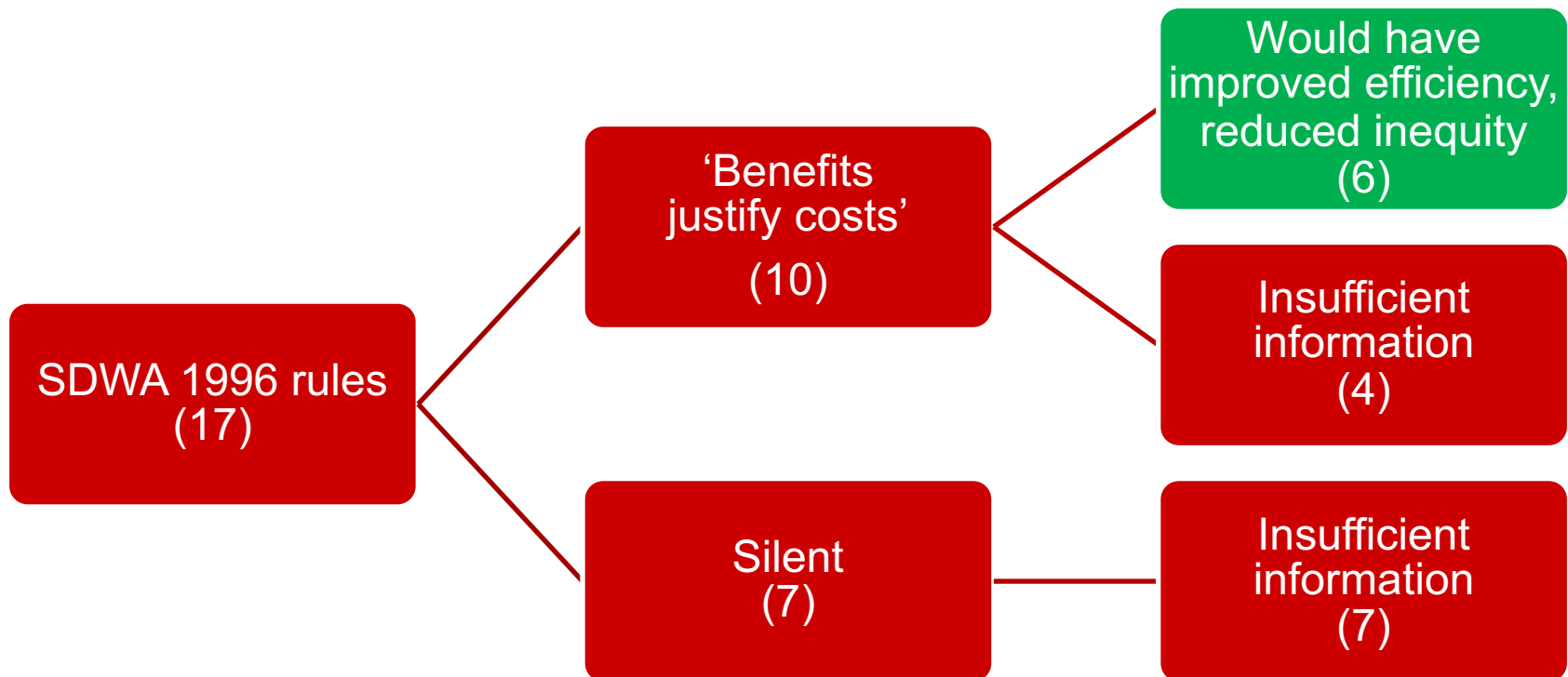


# E3. Deadweight losses avoided under remedy



# Effects of economic feasibility on SDWA 1996 rules

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# Summary

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- Inefficiency and inequity in SDWA persist after SDWA 1996
- ‘Affordability’ in lieu of economic feasibility exacerbates inefficiency and inequity
- Proposed economic feasibility principle would
  - Stop inefficiency and substantially reduce inequity
  - Reduce or eliminate need for variances
  - Redirect Revolving Fund subsidies to poor communities lacking the financial capacity to make cost-effective investments

# Questions?

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