



## **Best Management Practices (BMP) For Protecting Ground Water**

### **For Fabricated Metal Industry Using Shallow Industrial Waste Disposal Wells**

EPA recognizes that certain industrial waste disposal practices using drainage wells may pose unacceptable risks to Underground Sources of Drinking Water. These operations allow the discharge of various wastes to a drainage system neither designed for nor capable of treating them. Accordingly, BMPs for Industrial Disposal Wells focus on well closure and alternative disposal methods. We have also included BMPs for waste minimization to help facilities reduce waste disposal costs, regardless of the disposal method they use. In addition local, county, and State regulations may prohibit use of these wells. Note: these practices are recommendations only.

The BMPs listed below apply to fabricated metal industry facilities. Fact Sheet Number 2 in this series lists BMPs that are applicable to Industrial Disposal Wells in general (Including those used by fabricated metal industry facilities), particularly for closure and alternative disposal.

#### Waste Minimization

- \* Standardize metalworking fluids to the greatest extent possible
- \* Use high-quality metalworking fluid to minimize amount needed
- \* Recycle metalworking fluids through filtering, skimming, coalescing, or other methods
- \* Use deionized water in place of tap water to facilitate recycling
- \* Extend bath life and recover metals and additives through treatment
  - For example, use electrolytic dummyming to remove excess copper
  - Other methods include high surface area electrowinning/electrorefining, ion exchange, ion transfer, evaporators, and reverse osmosis

- \* Rotate electroplating barrels over bath after immersion to allow them to drain
- \* Replace barrel plating with rack plating where possible to minimize “drag-out”

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Note: These BMPs are adapted from a May 1991 EPA report titled, “Class V Well BMP Guidance - Phase I and Phase II” and have been modified in response to comments by EPA Regions. For a copy of the EPA report, please contact the Underground Injection Control Branch of the Office of Ground Water and Drinking Water, U.S. EPA