

Step 3: Data Evaluation and Option Identification

Figure 3-2: Hierarchy of Environmentally Favorable Options



Source: EPA, 1988

In general, screening considerations should include the following (adapted from EPA 1988):

- *What is the main benefit expected from implementing this option?*
- *Does the technology exist to develop the option?*
- *How much does it cost? How do costs compare to other options? Would it be cost-effective, considering the specific conditions at your facility and your business model?*
- *Can the option be implemented in a reasonable amount of time without disrupting production?*
- *Has this option been used successfully by other wineries?*
- *What are the water quality criteria for use of this option, such as maximum acceptable BOD or TDS?*
- *Would the option be considered a sustainable approach, as advocated by the Code of Sustainable Winegrowing Practices Self-Assessment Workbook (Wine Institute and California Association of Winegrape Growers, 2002)?*

It can be helpful to categorize the wastewater from each winery operation as low, medium, or high quality. Options can then be identified that are suitable for each water quality category. Detailed screening criteria may include:

- Ability to accommodate significant shifts in wastewater quality and quantity
- Potential to manage or minimize effect of process upsets
- Ability to consistently meet wastewater effluent quality goals
- Efficient use of space



- Minimal need for addition of nutrients or neutralizing chemicals
- Efficient energy use and/or recovery of energy
- Low volume of process residuals (e.g., sludge, air emissions)
- Ease of operation, maintenance and monitoring
- Durability of equipment and materials
- Constructability and/or implementability
- Compatibility with existing and proposed facilities
- Safety issues
- Low impact on the environment or aesthetics
- Cost effectiveness
- Regulatory agency acceptance and permitting

It should be possible to complete the initial screening process with relatively limited research beyond staff knowledge and readily available information. If more thorough research and evaluation appears to be warranted, this will be accomplished as part of the feasibility analysis.