Sustainable Materials Management

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Sustainable Materials Management: What is it?

Sustainable materials management (SMM) is a means of reducing the environmental impacts of a product throughout its life cycle.

The environmental impact of a product doesn't come entirely from when it is disposed. The selection and processing of raw materials to make the product and its packaging; the fuel used to transport the good to market; the energy used to store, maintain, and/or operate the product; and the energy and materials used to recycle the product all have environmental impacts that can be reduced by product design that integrates SMM principles.

How are materials not being used as efficiently as possible?

Successful businesses are adept at maximizing customer value and minimizing costs. The environmental impacts of end-of-life disposal, materials sourcing, and product use are not always considered in product design and distribution as such issues have not always been clearly valued by consumers. As consumer tastes and preferences change, companies are responding to the increased demand for environmentally sustainable products by adding value through sustainable materials sourcing, recycling take-back programs, reduced and recyclable packaging, and greater user customization and upgradability.

What steps can a business or organization make to integrate SMM principles?

- Consider sustainable sourcing options.
    - Use post consumer recycled content raw materials.
    - Consider sustainable raw material products such as wood approved by the Forest Stewardship Council.
- Reduce materials and energy use in processing.
    - Improve or reduce the need for in-process recycling of scrap material and processing fluids by using less material and/or achieving higher recovery rates.
    - Pursue zero-landfill goals or policies.
    - Have an effective environmental management system for auditing wastes and identifying areas to improve production.
- Design for durability and optimal recycling or reuse.
    - Design products to last. Make wear parts easy to replace or upgrade, allowing the user to replace obsolete parts but retain the original working equipment.
    - Consider take-back recycling or repurposing programs for used or obsolete equipment, also known as extended producer responsibility.
        - Several companies, such as Apple, will accept old equipment for refurbishment or recycling and offer discounts to participating consumers toward the purchase of new products.
    - Make products easy to disassemble and various material types (plastics, metals, etc.) easy to separate to maximize recycling potential.

Would you like to know more about SMM and what your company or community can do? Contact Ben Jarvis at *ben.jarvis@deq.idaho.gov* or (208) 373-0146.