



BMP Performance Goals Water Conservation

- 1. Integrate water conservation management as part of the overall environmental policy for the facility.**
- 2. Assess facility infrastructure and current practices.**
 - a. Complete a building fixture inventory (sinks, faucets, toilets, etc.)**
 - b. Complete an irrigation system inventory/identify value of current irrigation controls and hard costs (parts, power)**
 - c. Complete a water-use profile –buildings/operations/landscape/golf**
 - d. Inventory and analyze water features of property – topography, flow, storage capacity**
 - e. Evaluate buildings, amenities, structures, landscape and golf course design for water conservation opportunities, including new and existing facilities**
 - f. Identify existing water conservation and efficiency efforts**
- 3. Conduct a water-use audit.**
 - a. Audit building and operations water use**
 - b. Perform irrigation audit(s) and/or other techniques to analyze spatial distribution, irrigation efficiency or water need**
 - c. Consider local, regional and national recommendations for audits, protocol, timing, etc.**
- 4. Develop a written water-use plan, addressing the following areas:**
 - a. Efficiency**
 - b. Conservation**
 - c. Drought contingency in geographical areas where applicable**
- 5. Implement practical tracking and recordkeeping measures.**
 - a. Use an adequate number of meters, gauges, etc.**
 - b. Monitor and record use data**
 - c. Complete reports and use analysis**
 - d. Complete cost analysis**
- 6. Set goals for water-use efficiency/conservation.**
 - a. Identify feasible building efficiency upgrades (fixtures, use patterns, etc.)**
 - b. Investigate and identify feasible alternative (non-potable) irrigation water sources; reclaimed, water-harvesting from runoff, stormwater, saline sources, etc.**
 - c. Identify future water use needs**

- d. **Coordinate water efficiency/conservation strategies with organizations governing water rights, water use and management, including any planning/zoning groups**
- e. **Manage golf playing surfaces for optimal performance and desired conditions through the maintenance of healthy and functional turfgrass while minimizing environmental impacts.**
 - a. **Select optimal turfgrass species**
 - b. **Maximize plant health**
 - c. **Optimize performance and desired conditions**
 - d. **Minimize potential for negative environmental impacts**
- f. **Manage turfgrass for water conservation.**
 - a. **Evaluate height of cut**
 - b. **Practice proper soil cultivation techniques to promote root depth for efficiency and conservation**
 - c. **Evaluate irrigation scheduling methods, including evapotranspiration, plant-based, soil-based, budget approach, deficit, atmosphere-based**
 - d. **Use an on-site weather station where feasible**
 - e. **Select and install drought-resistant landscape plants, including turfgrass. Use species and cultivars adapted to climatic/soil conditions, being mindful of water-use characteristics**
 - f. **Evaluate turfgrass areas for appropriate acreage, functional/playable turfgrass versus non-playable areas, and consider the water consumption characteristics of the facility's turfgrass versus other vegetation, such as trees, etc.**
 - g. **Promote the implementation of natural vegetation areas**
 - h. **Incorporate fertilization practices that minimize water use**
 - i. **Utilize pest management and develop Integrated Pest Management protocols**
 - j. **Evaluate soil moisture and wetting characteristics and the use of wetting agents**
 - k. **Evaluate the use of plant growth regulators**
 - l. **Control traffic (cart, player, equipment) to relieve stress**
 - m. **Perform a cultural practice analysis; hand-watering, managing disease pressure- times, evaluate time of day, etc.**
 - n. **Evaluate the business value of dormant / winter overseeding**
 - o. **Monitor irrigation for proper water application**
 - p. **Evaluate soil amendments to improve soil properties and water holding capacity**
- g. **Manage buildings, amenities, golf course practices and other operations for water conservation and to eliminate waste.**
- h. **Evaluate new technology for application to:**
 - a. **Buildings**
 - b. **Amenities**
 - c. **Operations**
 - d. **Landscape**
 - e. **Irrigation**
 - f. **Turfgrass**

- i. Evaluate infrastructure improvements and install upgrades/technology where feasible, including:**
 - a. Irrigation system design and devices that will advance water-use efficiency**
 - b. Irrigation design, equipment and control improvements**
 - c. Soil, plant and environmental sensors (weather stations, remote sensing and similar technologies)**
 - d. Subsurface irrigation and surface drip systems**
 - e. Building and operations for technological improvements**

- j. Ensure overall performance of the irrigation system.**
 - a. Optimize irrigation scheduling/operation for efficient water-use**
 - b. Ensure maintenance of the irrigation system for optimum performance**
 - c. Use the irrigation audit process and results**

- k. Educate facility staff, officials, members and community related to water conservation.**
 - a. Consider linkages with the region's universities, research and Extension programs, etc.**

- l. Actively monitor, review and modify conservation strategies and goals for continuous improvement.**

