TABLE 14-6

SUMMARY OF DISINFECTION TECHNOLOGIES

TECHNOLOGY	REGULATORY REQUIREMENTS	EFFLUENT QUALITY	FLEXIBILITY	ENERGY USE	LAND REQUIREMENTS	POTENTIAL FOR AIR EMISSIONS	ANTICIPATED PUBLIC ACCEPTANCE	EASE OF IMPLEMENTATION	MAINTENANCE REQUIREMENTS AND COMPLEXITY OF OPERATION	RELATIVE CAPITAL COSTS	RELATIVE O&M COSTS
Chlorination using sodium hypochlorite	Chemical storage requirements.	Fecal coliform of <200/100 ml. Potential production of THM in effluent.	Process control will vary the chemical feed rate with variable effluent flows.	Low energy use for chemical feed only.	Highest for chlorine contact tank.	Minimal for stored liquid chlorine solutions.	High, with sufficient precautions in case of chemical release.	Requires the construction of a large contact tank.	Well proven technology, with proven reliability. Minimal maintenance.	Moderate cost for new contact tanks and feed equipment.	Moderate due to costs for NaOCl.
Disinfection with ozone	Chemical storage requirements.	Fecal coliform of <200/100 ml.	Process control will vary the chemical feed rate with variable effluent flows.	High electricity use for generation of ozone.	Low.	Potential release of ozone gas. Off-gas is normally treated to remove (and destroy) ozone.	High, with sufficient precautions in case of chemical release.	Easy.	More complicated equipment with maintenance.	High costs for ozone equipment.	High electrical cost for generation of ozone.
Disinfection with ultraviolet (UV) light	None.	Fecal coliform of <200/100 ml.	Good process control, all PLC controlled.	Moderate electricity use to power UV bulbs.	Low.	Minimal potential because no gases are used.	High public acceptance, well proven technology.	Easy.	UV disinfection is an accepted technology, with proven reliability. UV bulbs must be cleaned.	Moderate costs for UV disinfection equipment.	Moderate electrical cost to power bulbs and maintenance costs to clean and replace bulbs.