

requests a hearing in writing within 60 days after the mailing of the notification, the department shall, prior to using the funds, hold a hearing under s. 227.064, Stats., for the purpose of determining whether or not the closure or long-term care requirements of the approved plan of operation have been carried out.

**Note:** These forms may be obtained from the Department of Natural Resources, Bureau of Solid Waste Management, P.O. Box 7921, Madison, Wisconsin 53707.

(3) **COST ESTIMATES.** (a) For the purpose of determining the amount of proof of financial responsibility that is required in sub. (1), the owner shall estimate the total cost of closure for the point in time in the site's operation when the extent and manner of its operation make closure most expensive, estimate the annual cost of long-term care of the site for the period of owner responsibility and submit the estimated closure and long-term costs together with all necessary justification to the department for approval as part of the plan of operation submittal. The costs shall be reported on a per unit basis. The source of estimates shall be indicated.

(b) At a minimum, closure costs shall include cover material, topsoil, seeding, fertilizing, mulching and labor.

(c) At a minimum, long-term care costs shall include land surface care; gas monitoring; leachate pumping, transportation, monitoring and treatment; and groundwater monitoring, collection and analysis.

(d) The estimated rate of inflation shall be the latest percent change in the annual gross national product implicit price deflator published in the survey of current business of the bureau of economic analysis, U.S. department of commerce.

(e) The estimated annual rate of interest shall be the rate specified by the financial institution managing the fund or deposit.

(4) **FORMULAS FOR CALCULATING THE AMOUNT OF THE PROOF OF FINANCIAL RESPONSIBILITY.** (a) *Deposits in escrow, trust or department accounts.* 1. 'Deposits for closure.' The formula for closure shall be:

$$D = C \frac{(1 + f)}{(1 + i)}$$

in which:

D = the unknown deposit for closure

C = the estimated cost of closure in today's dollars for the maximum area to be open at any point in time

f = the estimated annual rate of inflation

i = the estimated annual rate of interest

2. 'Deposits for long-term care.' a. The following statistics used in calculating the amounts deposited to the long-term care account shall be specified in the plan of operation: the rate of outpayment during the period of long-term care, expressed in equal or unequal annual amounts, and the equal annual rate of inpayment, expressed as either "real" or "actual" dollars.

b. The following general formula shall be used in the calculation.

$$A = R$$

When equal annual outpayments are used, R shall be expressed as:

$$R(1 + f)^{SL} \left( \frac{1 + f}{1 + i} \right)^0 \left[ \frac{1 - \left( \frac{1 + f}{1 + i} \right)^{LTC}}{\left( \frac{1 + i}{1 + f} \right) - 1} \right]$$

When unequal annual outpayments are used, R shall be expressed as:

$$R_x (1 + f)^{SL} \left( \frac{1 + f}{1 + i} \right)^{x+c}$$

When equal "actual" dollar inpayments are used, A shall be expressed as:

$$A(1 + i) \left[ \frac{(1 + i)^{SL} - 1}{i} \right]$$

When equal "real" dollar inpayments are used, A shall be expressed as:

$$A(1 + i)^{SL+1} \left[ \frac{1 - \left( \frac{1 + f}{1 + i} \right)^{SL}}{i - f} \right]$$

in which:

- A = the unknown annual inpayment for long-term care
- i = the estimated annual rate of interest
- f = the estimated annual rate of inflation
- SL = the estimated active life of the site in years
- R = the estimated annual costs
- x = the year of long-term care
- LTC = the period of long-term care
- c = the period of closure

(b) *Performance or forfeiture bonds.* 1. 'Bonds for closure.' The formula for closure shall be:

$$CB = C(1 + f)$$

in which:

- CB = the unknown amount of the closure bond
- C = the estimated closure cost
- f = the estimated annual rate of inflation

2. 'Bond for long-term care.' a. The rate of outpayment shall be as specified in sub. (4) (a) 2., the rate of inpayment shall be in equal "actual" dollars as specified in the plan of operation.

When equal annual outpayments are used, the formula shall be:

$$PB (SL) = R (1 + f)^{SL+1+c} \left[ \frac{(1 + f)^{LTC} - 1}{f} \right]$$

When unequal annual outpayments are used, the formula shall be:

$$PB(SL) = R_x (1 + f)^{SL+x+c}$$

in which:

- PB = the unknown annual performance bond amount for long-term care
- f = the estimated annual rate of inflation
- SL = the estimated active life of the site in years
- R = the estimated annual costs
- LTC = the long-term care period
- x = the year of long-term care
- c = the period of closure

(5) ADJUSTMENT OF FINANCIAL RESPONSIBILITY. The owner of a site for the land disposal of solid waste shall prepare a new closure cost estimate whenever a substantial change in the closure plan affects the cost of closure and a new long-term care cost estimate whenever a substantial change in the long-term care requirements of the plan of operation affects the cost of long-term care. Proof of the increase in value of all bonds, escrow accounts and trust accounts established under this section shall be submitted annually to the department. The department may adjust the amount of the required proof of financial responsibility for closure or long-term care based upon prevailing or projected interest and inflation rates and the latest cost estimates, and may annually require the owner to increase or decrease the amount of proof of financial responsibility accordingly.

(6) ACCESS AND DEFAULT. Whenever on the basis of any reliable information and after opportunity for a hearing, the department determines that an owner or operator of a solid waste site is in violation of any of the requirements for closure or long-term care specified in the approved plan of operation, the department shall have the right to enter upon the facility and carry out the closure or long-term care requirements. The department may use part or all of the money deposited with it, or the money deposited in the escrow or trust accounts, or the performance or forfeiture bonds to carry out these requirements.

(7) AUTHORIZATION TO RELEASE FUNDS. (a) 'Closure.' When an owner or operator has completed closure, the owner may apply to the department for release of the bond or return of the money held on deposit, in escrow, or in trust for closure of the site. Such application shall be accompanied by an itemized list of costs incurred. Upon determination by the department that complete closure has been accomplished, the department shall authorize release and return of all funds accumulated in

such accounts or give written permission for cancellation of a bond. Such determinations shall be concluded within 90 days of the application.

(b) "Long-term care." One year after closure, and annually thereafter for the period of owner responsibility, the owner, who has carried out all necessary long-term care during the preceding year, may make application to the department for reimbursement from an escrow account, trust account, or deposit with the department, or for reduction in a bond equal to the estimated costs for long-term care for that year. Such application shall be accompanied by an itemized list of costs incurred. Upon determination that the expenditures incurred are in accordance with the long-term care requirements anticipated in the approved plan of operation, the department may authorize release of the funds or approve a reduction in a bond. Prior to authorizing a release of funds or bond reduction, the department shall determine that adequate funds exist to complete required long-term care work for the remaining period of owner responsibility. Such determination shall be concluded within 90 days of the application. Any funds remaining in an escrow account, trust account, or on deposit with the department at the termination of owner responsibility shall be released to the owner.

History: Cr. Register, February, 1980, No. 290, eff. 3-1-80; r. and recr. Register, September, 1981, No. 309, eff. 10-1-81; reprinted to correct formulas in sub. (4), Register, November, 1981, No. 311; am. (3) (d), (4) (a) 1., (4) (b) 1., Register, June, 1982, No. 318, eff. 7-1-82.

**NR 180.16 Waste management fund.** (1) All owners or operators of licensed land disposal sites shall contribute to the waste management fund established by s. 25.45, Stats., for each ton of solid waste received and disposed of at the site from May 21, 1978, until the site is closed and no longer receives waste, except as otherwise provided in s. 144.441 (3), Stats.

(2) The owner or operator of a licensed land disposal site shall certify on a form provided by the department the amount of solid waste received and disposed of during the preceding reporting period. The department shall specify the term of the reporting period on the certification form. The certification form shall be completed and returned to the department with the appropriate fee within 30 days after mailing of the form by the department to the owner or operator.

(3) (a) For all sites with an approved plan of operation under s. 144.44 (3), Stats., the owner may choose to be responsible for the long-term care of the site for either 20 years or 30 years after site closure. The fees to be paid into the fund shall be as follows for specific waste types:

Waste type	Rate of payment	
	20 Years	30 Years
1. Municipal solid waste	3.5¢/ton	1.5¢/ton
2. Ashes and sludges from electric and process steam generating facilities	3.5¢/ton	1.5¢/ton
3. Pulp or paper mill sludges produced by waste treatment or manufacturing processes	3.5¢/ton	1.5¢/ton
4. Manufacturing process solid waste from foundries	3.5¢/ton	1.5¢/ton
5. Sludges produced by municipal wastewater treatment plants	3.5¢/ton	1.5¢/ton
6. All other solid wastes not designated as hazardous	3.5¢/ton	1.5¢/ton