

MFLP to be conservative. To be more conservative, EPA identified any company with a ratio exceeding 80 percent of MFLP being impacted under this test (*i.e.*, the test threshold is actually 64 percent of the after-tax cash flow).

ii. *Economic Topics Raised in Comments to the Proposed Rule.* Commenters raised several issues about assumptions for closure analysis including (1) the definition of what constitutes earnings for the discounted cash flow analysis (including questions about how to incorporate depreciation, cash flow, net income, sunk costs, capital replacement, and unpaid labor), (2) forecasting methods used to project earnings, and (3) assumptions EPA makes to address trade impacts.

*Cash Flow.* In projecting closures, EPA estimated earnings using (1) cash flow and (2) net income. We calculated the difference between gross revenues and total expenses reported in the detailed questionnaire and reduced the value by the estimated federal and State taxes to calculate net income. We then added the non-cash expense of depreciation (when it was reported in the questionnaire) to net income to calculate cash flow. The difference between cash flow and net income is, therefore, depreciation, consistent with the guidance from the Farm Financial Standards Council (FFSC; *Financial Guidelines for Agricultural Producers*, DCN 20095) and several business financial references (DCNs, 20378, 20382, and 20388).

Some commenters were concerned about using cash flow analysis because of how earnings are calculated, the extent of the fixed costs, and, in older facilities, sunk costs. These comments are covered in the following discussions of: (1) Depreciation, (2) sunk costs, (3) capital replacement, and (4) unpaid family labor and management.

*Depreciation.* Depreciation is an annual allowance for the exhaustion, wear, and tear of a firm's fixed assets. Depreciation reflects a previous expenditure for a fixed asset to which the entity makes no payments in the current period. Although depreciation theoretically reflects wear and tear spread out evenly over the useful life of an asset, depreciation (as calculated for tax purposes) does not. First, the recovery period for costs is shorter than the asset lifetime and, second, accelerated recovery factors are skewed to the initial years of useful life. EPA identified information (*e.g.*, Financial Accounting Standards Board, DCN 20382, DCN 20378, DCN 20388) suggesting that cash flow may be appropriate for some types of economic

analyses. EPA seeks comment on the appropriateness of cash flow and net income analyses as they apply to this rulemaking. Because depreciation reported on an accounting statement may or may not correspond to true "economic" depreciation, EPA estimated closure impacts with depreciation as an expense (*i.e.*, net income analysis) and without depreciation (*i.e.*, cash flow).

*Sunk costs.* Some commenters argued that the analysis should consider sunk costs. Comments characterized cash flow analysis as inappropriate because it does not account for sunk costs, particularly in older facilities. Sunk costs paid out of capital (as opposed to financing) already occurred and, therefore, are not incremental cash flows. They should not affect future investment or the economic viability of the firm. Therefore, EPA excludes this category of sunk costs from the closure analysis. Sunk costs that are financed have interest, and this interest is included in interest payments reported in the income statements. Unpaid principle from previously financed sunk costs is reflected in a farm's debt/asset ratio, and EPA will include it in our evaluation of farm financial health and the ability of facilities (or companies) to carry additional debt (*see* Section V.C.3.b.i).

*Capital replacement.* EPA received comments that the facility financial analysis should include an allowance for capital replacement. EPA evaluated data on capital expenditures and capital replacement. The Census Bureau collects data on annual capital expenditures including forestry, fishing, and agricultural services (U.S. Census Bureau, Annual Capital Expenditures Survey 1999, DCN 20384). However, Census Bureau capital expenditure data includes intra-company transfers of capital equipment and ownership changes (*see* DCN 20384, Appendix D-10, Instructions, Definitions, and Codes List).

As a consequence, it is difficult to know whether capital expenditures help maintain existing production or whether they support expanded production. Capital expenditures for an industry undergoing consolidation, such as salmon, include acquisitions reflecting transfers of capital rather than purchases of new or replacement capital. Further, the Census data includes expansion in productive capacity, whether in new plants or in existing plants. Aggregate industry data on capital expenditures cannot be used to specify the level of capital expenditure that is necessary to

maintain productive capacity at an individual facility.

EPA includes costs for capital replacement as they occur within the depreciation and interest payments reported on income statement. When EPA relies on net income calculations, capital replacement costs (as approximated by financial depreciation, in addition to interest payments captured in cash flow) are considered in the closure analysis. Capital replacement costs that are capitalized and not expensed are reflected in the asset, debt, and equity components of the balance sheet as appropriate. Past capital replacement costs are represented in the farm financial health measures and credit tests that are based on balance sheet data. When estimating compliance costs, EPA includes replacement costs for pollution control capital. EPA's cost estimates include all capital expenditures (whether initial or replacement) that are projected to occur within the 10-year analytical time frame.

*Unpaid family labor and management.* EPA received suggestions that the financial analysis of aquatic animal production should include a "proxy" cost to reflect unpaid family labor and management. Unpaid family labor and management is "unpaid" only with respect to the income statement. Distributions from the business to cover family living and other personal expenses are generally referred to as "family living withdrawals" or "owner withdrawals." These withdrawals are shown in the statement of owner equity in the balance sheet and not the income statement. As a consequence, the financial health and credit tests incorporate any withdrawals from equity for unpaid labor and management, because these tests are based on balance sheet data. Note that EPA includes estimates for labor costs when estimating compliance costs in order to include the effects of the additional labor and management in closure analysis. EPA also includes unpaid labor and management as lost jobs in the total count of lost employment from facilities projected to close as a result of the rule.

EPA reviewed USDA Economic Research Service data on off-farm income by farm category (USDA, 2003. Economic Research Service. Agriculture Income and Finance Outlook. AIS-80. March, DCN 20396). USDA data indicate that farm operation's contribution to total household income ranges from a substantial amount for "Very Large Farms" to a negative contribution that is subsidized by off-farm income for limited resource and