**UNIT FIVE**

**5. DEBT SERVICE FUND**

**5.1 INTRODUCTION:**

When long-term debt has been incurred for capital or other purposes, revenues must be raised in future years to make debt service payments. Debt service payments include both periodic interest payments and the repayment of debt principal when due. Revenues from taxes that are restricted for debt service purposes are usually recorded in a *debt service fund,* as are subsequent expenditures for payments of interest and principal. A debt service fund is used only for debt service activities related to *general* long-term liabilities—those reported in the Governmental Activities column of the government-wide statement of net assets. Debt service related to long-term liabilities reported in proprietary and fiduciary funds is reported in those funds, not in a debt service fund.

**5.2 General outline of Debt Service Fund**

Debt service fund is used to account for both the repayment of the principal and payment of interest of the long-term debt when they are due. Often debt service funds are legally mandated. Other times, the government administrator might think a debt service fund is useful for management of resources being accumulated for debt service.

DSF are governmental funds and therefore are Expendable. Debt service funds are for general long-term debt (GLTD), which has been used to provide resources for one of the other governmental fund types. Often they arise from the Capital projects. Proprietary funds also borrow on a long term basis, but their repayment is accounted for in the proprietary fund itself rather than a separate debt service fund.

As expendable funds, DSF use the modified accrual basis of accounting. An application of modified accrual, which is of special interest to DSF, has to do with interest payable. Interest payable is not accrued in the DSF. It is only recorded as a liability in the period when it becomes due. For example, interest due on January 31, 20x1 would not be accrued and recorded on December 31, 20 x 0 Balance Sheet.

**5.3 Number of Debt Service Funds**

In addition to debt service for bond liabilities, debt service funds may be required to service debt arising from the use of notes or warrants having a maturity more than one year after date of issue. Debt service funds may also be used to make periodic payments required by capital lease agreements. Although each issue of long-term or intermediate-term debt is a separate obligation and may have legal restrictions and servicing requirements that differ from other issues, GASB standards provide that, if legally permissible, a single debt service fund may be used to account for the service of all issues of tax-supported and special assessment debt. Subsidiary records of that fund can provide needed assurance that budgeting and accounting meet the restrictions and requirements relating to each issue. If legal restrictions do not allow for the debt service of all issues of tax-supported and special assessment debt to be accounted for by a single debt service fund, as few additional debt service funds as is consistent with applicable laws should be created.

**5.4 source of finance to debt service fund**

Typical source of financing includes:

* Special taxes
* Investment
* Re financing
* Bond premium
* Residual equity transfer
* A combination of more than one of the above

**5.5 Types of Long TERM DEBTS**

**Bond-** A written promises to pay a specified principal sum at a specified future date with interest. They are typically issued in 1000 and 5000 denominations. All long term debts of governmental units consist of one of the following two basic types of bonds.

**Term Bonds**- term bonds are bonds whose principal is repaid in lump-sum at their maturity date. Such lump-sum payment is usually made possible through accumulation of money in the DSF on an actuarial basis over the life of the bond issue in a sinking fund.

**Serial Bonds** - this are bonds, which have periodic maturities**.** The principal of a serial bond so repaid at various ore determined dates over the life of the issue. There are four types of serial bonds;

1. **Regular Serial Bonds-** The total Principal amount of an issue is repayable in a specified number of equal annual instalments over the life of the issue.

2. **Differed Serial Bond-** The total principal amount of the issue is repaid in equal annual instalments, but the first instalment is delayed for a period more than one year.

3. **Annuity Serial Bond-** if the amount of annual principal repayment is scheduled to increase each year by approximately the same amount that interest payments decrease (Interest decrease of course, because the amount of outstanding bond decreases). In case of annuity serial bonds, Principal and Interest payments are uniform throughout the life of the bond.

4. **Irregular Serial Bonds-** these types of serial bonds may have pattern of repayment that does not fit the other three categories.

**5.6 Accounting for serial bonds**

Accounts recommended for use by a serial bond debt service fund is similar with that of general fund and special revenue fund. Even if it is not exactly the same, budgetary accounts such as (estimated revenue, estimated other financing sources, appropriations, estimated other financing uses) and operating statement accounts (revenues, OFS, expenditures, OFU) are used in DSF.

The operations of DSF do not involve the use of purchase orders and contracts for goods and services. So the encumbrance accounting is not needed.

The ledger accounts of a serial bond debt service fund include liquid assets and current liabilities and fund balance accounts. liquid assets of serial bond debt service funds are held for the purpose of paying interest or outstanding bonds and retiring the principal instalments as they fall due; for the convenience of the bond holders, the payment of interest and the and the redemption of matured bonds is ordinarily handled through the banking system. Usually the government designate a bank as a “paying agent” or a “fiscal agent” to handle interest and principal payments for each issue. The assets of a debt service fund may therefore include cash with paying agent and the appropriations, expenditures and liabilities may include amounts for the services and charges for paying agents.

Investment management may be performed by governmental employees or by banks, brokers or others who charge for the service, investment management fees are legitimate charges against investment revenues.

Example

The total face value of the issue was $1,200,000 maturing in equal annual amounts over 20 years; all bonds in the issue bear interest of 6 percent per year, payable semiannually on June 15 and December 15. The bonds were dated June 15, 2011, and sold on that date at par.

During 2011 the only expenditure the debt service fund will be required to make will be the interest payment due December 15, 2011, in the amount of $36,000 ($1,200,000 \_ 0.06 \_1/2 year).

Assuming that revenues to pay the first installment of bonds due on June 15, 2012, and both interest payments due in 2012 will be raised in 2012 from a special sales tax,

The budget for 2011 need only provide resources in the amount of the 2011 interest expenditure.

* The entry to record the budget for the year ended December 31, 2011, including $6,000 residual equity to be transferred from the Fire Station Capital Projects Fund, is:
* *Serial Bond Debt Service Fund:*

 1. Estimated Revenues . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 30,000

 Estimated Other Financing Sources . . . . . . . . . . . . . . . . . . . . . 6,000

 Appropriations . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .… . . . . . . . . . . . . . 36,000

2. If sales tax revenues in the amount of $31,200 are collected in cash for debt service, the entry is:

* *Serial Bond Debt Service Fund:*

 Cash . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . 31,200

 Revenues . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . . . . . . . 31,200

3. The $6,000 residual equity of the Fire Station Capital Projects Fund was transferred to the debt service fund. The entry is:

* *Serial Bond Debt Service Fund:*

 Cash . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 6,000

 Other Financing Sources—Inter fund Transfers In . . . . ……. . . . . . . . . . . 6,000

4. On December 15, 2011, when the first interest payment is legally due, the debt service fund records the expenditure of the appropriation

* *Serial Bond Debt Service Fund:*

 Expenditures—Bond Interest . . . . . . . . . . . . . . . . 36,000

 Interest Payable . . . . . . . . . . . . . . . . . . . . . . . . . . . …… . . . . . . . 36,000

5. Checks totaling $36,000 are written to the registered owners of these bonds. The entries to record the payment in the debt service fund is:

* *Serial Bond Debt Service Fund*

 Interest Payable . . . . . . . . . . . . . . . . . . . . . 36,000

 Cash . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 36,000

6. All budgetary and operating statement accounts are closed by the following entries:

* *Serial Bond Debt Service Fund:*

 Appropriations . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 36,000

 Estimated Revenues . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 30,000

 Estimated Other Financing Sources . . ………………...... 6,000

 Revenues . . . . . . . . ….. . . . . . . . . . . . . . . . . . . . . . . . . . . . . 31,200

 Other Financing Sources- Inter fund Transfers In . . . . … . . . . 6,000

 Expenditures- Bond Interest . . . . . . . . . . . . . . . . . ………… . . . 36,000

 Fund Balance . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . . . ………..... 1,200

**Second Year Transaction**

* In the second year of the Serial Bond Debt Service Fund, the fiscal year ending December 31, 2012, the following journal entries would be required.
* The special sales tax for debt service is estimated to produce revenues of $135,000 for the year. From these revenues, two interest payments (the interest due on June 15, 2012, and December 15, 2012) of $36,000 and $34,200, respectively, and a principal redemption payment of $60,000 due on June 15, 2012, must be paid.

The entry required at January 1, 2012, to record the budget for fiscal year 2012.

* *Serial Bond Debt Service Fund:*

 Estimated Revenues . . . . . . . . . . . . . . . . . . 135,000

 Appropriations . . . . . . . . . . . . . . . . . . . . . . . . . . . . 130,200

 Budgetary Fund Balance . . . . . . . . . . . . . . . . . . . . . . 4,800

During the year, actual revenues from the special sales tax were $134,100.

* *Serial Bond Debt Service Fund:*

 Cash . . . . . . . . . . . . . . . . . . . . . . . . . . 134,100

 Revenues . . . . . . . . . . . . . . . . . . . . . . . . . . . . 134,100

On June 15, 2012, interest of $36,000 and the first redemption of principal in the amount of $60,000 ($1,200,000 \_ 20 years) were paid to bondholders.

* *Serial Bond Debt Service Fund:*

 Expenditures—Bond Principal . . . . . . . . …… 60,000

 Expenditures—Bond Interest . . . . . . . . . . . . . . 36,000

 Cash . . . . . . . . . . . . . . . . . . . . . . . . . ……………… 96,000

The semiannual interest payment due on December 15, 2012, was Paid based on a remaining principal of $1,140,000 at 6 percent interest per annum.

* *Serial Bond Debt Service Fund:*

 Expenditures—Bond Interest .. . . . . . . . . 34,200

 Cash . . . . . . . . . . . . . . . . . . . . . . . . . . . . ………... 34,200

All temporary accounts of the debt service fund were closed on December 31, 2012.

*Serial Bond Debt Service Fund:*

Appropriations . . . . . . . . . . . . . . . . . . . . . . 130,200

 Budgetary Fund Balance . . . . . . . . . . .. . . . . 4,800

 Estimated Revenues . . . . . . . . . . . . . . . . . . . . 135,000

Revenues . . . . . .. . . . . . . . . . . . . . . 134,100

 Fund Balance . . . …. . ……….................. . . 3,900

 Expenditures—Bond Interest . ......................70,200

 Expenditures—Bond Principal …………… 60,000

**5.7 Accounting for term bond**

**Example**:
On January 1990, the town of X issued $1,500,000, 5% term bond maturing in 20 years. Interest on the bond is payable semiannually on January 1, and July 1. Sinking fund to be established with equal additional to be made semi annually on January 1 and July 1 each year. The sinking fund investments are expected to yield a return of 6% per annum compounded semi-annually.

* Assume that the future amount of $1 invested at the end of each period will amount to $75.4012597 at the end of 40 periods.

**Required**: **A**. Prepare a schedule showing the required addition to the sinking fund, the expected semi annual earning and the end of period balance in the sinking fund for each of the 40 periods.

**Solution:** Since the amount needed for bond repayment at the end of 40 six-month periods is $1,500,000, the tax levy for bond principal repayment must yield $1,500,000 divided by 75.4012597, i.e. $19,893.57, at the end of each six-month period throughout the life of the bonds. It can be calculated as follows:

 $1 ===75.4012597

 ? (X) ===1,500,000

 X == **$19,893.57** and it is scheduled as follows below

* Interest earning amount == Balance at end of period X interest rate
 Example: Interest for the 2nd period = 19,893.57 X 0.03 = 596.81

 Interest for the 3rd period == 40383.95 X 0.03 = 1211.52

Year Period Addition at end of Period 3% inter/period Balance at end of Period

 1990 1 $19,893.57 $ –0– $19,893.57

 2 19,893.57 596.81 40,383.95

 1991 3 19,893.57 1,211.52 61,489.04

 4 19,893.57 1,844.67 83,227.28