

Financing Alternatives Comparison Tool (FACT) and FACT Lite

User Guide

Financing Option-> Financing Source->	Option 1 Direct Loan	Option 1 Leveraged Loan	Option 1 Total	Option 2 Rev Bond
Amount Financed - New Costs	3,337,787			3,333,333
Amount Financed - Refinance Costs	0	3,000,000	3,000,000	0
Amount Funded from Grants	0	0	0	0
Total Amount Funded	3,337,787			3,333,333
Total Principal	3,337,787	3,000,000	6,337,787	3,333,333
Total Interest	804,120	669,403	1,473,523	2,849,506
Total Repayment Fees	0	0	0	0
Total Recurring Costs	0	0	0	0
Total Other Costs/(Earnings)	-3,494,284	0	-3,494,284	-827,083
Total Costs	647,622	3,669,403	4,317,025	5,355,756
Years of Repayment	6.0	20.0	25.0	25.0
Average Cost per Year	107,937	183,470	172,681	214,230
Net Present Value of Total Costs	531,865	1,182,558	1,714,423	2,076,392
Comparison to Lowest NPV Cost Option:				
Net Difference			0	361,969
Percent Difference			0.0%	21.1%
Preview Detailed Reports-->				
<input checked="" type="radio"/> Summary Level Report				
<input type="radio"/> Detail Level Report				

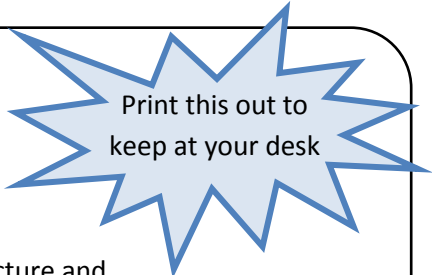
Disclaimer: FACT was developed for the U.S. Environmental Protection Agency (EPA) by Northbridge Environmental Management Consultants. This financial tool is based on user assumptions and estimations that may or may not materialize. The U.S. EPA does not claim to provide any legal, financial, or other advice. The U.S. EPA shall not be liable and is not responsible for any loss or damage that results from the use of this tool.

Version 3.1 (March 2011)

Financing Alternatives Comparison Tool (FACT) and FACT Lite

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Print this out to
keep at your desk

FACT Cheat Sheet

FACT (Financing Alternatives Comparison Tool) is a financial analysis tool that compares the costs associated with various financing options for water infrastructure and water quality projects.

FACT (Standard)	FACT Lite
A detailed analysis of the financing options using a full range of inputs	A simplified analysis using only the most basic information about your project
Compare as many as 15 different financing options and sources	Compare as many as 15 different financing options and sources
More detailed cost inputs about the project	Uses average values to minimize cost inputs
Most project data is available	Minimal project data available (e.g., only estimated construction cost)
The user is able to set the frequency of principal and interest payments	Interest rates, principal and interest costs are all annualized
More precise cost comparison to aid in decision-making	Quick cost comparison provides good starting point

Step 1: Set Up the Financing Scenarios

- Begin creating your analysis by selecting Add/Change Analyses
- Select the type of analysis (FACT (Standard)/FACT Lite)
- Select a discount rate
- Add Financing Options
- For each Financing Option, Add the Financing Source(s)

Step 2: Enter your Financing Assumptions

- **FACT (Standard):** Enter all of the inputs. Depending on the Financing Source selected, some may not apply and will therefore be grayed out. To work effectively, all of the inputs should be used.
- **FACT Lite:** Enter all of the inputs. Remember that the interest rates, principal and interest costs are all *annualized*; adjust your entries accordingly.
- **Interest and Principal Payment dates:** The first interest payment cannot occur after the first principal payment date. To change the year or month for the first interest payment, you may be required to first change the first principal payment date.
- **Disbursements:** Disbursements are assumed to begin in the third month after loan closing.

Step 3: Enter the Project Costs

- **FACT (Standard):** Enter all your known Planning, Design, Construction, Financing and Recurring Costs. All of the entries do not need to be filled out for FACT to work.
- **FACT Lite:** Enter the project and financing costs. At least one of these needs to be filled out.
- **Typical Values:** Typical values can be used instead of entering your own data for several of the financing and recurring costs.
- FACT includes all construction and financing costs in its analysis. Recurring Costs (FACT (Standard)) are assumed to be paid out-of-pocket.
- Any of the entries can be changed to better suit your needs and terminology.

Step 4: View Results

- View which Financing Option is the lowest cost, and download reports and graphs.

What are FACT and FACT Lite?

Communities have many options for financing their water quality projects. The Financing Alternatives Comparison Tool (FACT) was created to help communities select the most cost effective method to fund these projects. This financial analysis tool allows communities to quickly and easily compare financing options by calculating total and annual costs, so that they can select the appropriate funding method with the best outcome for the community and rate-payers.

Users can choose between two different analysis options – FACT (Standard) and FACT Lite. FACT Lite is exactly what its name implies – a “light” version of FACT. FACT Lite eliminates a large number of the data entry requirements included in FACT (Standard). FACT Lite is ideal for a very quick initial review of the comparative costs of financing a project with different sources, or for users who are less acquainted with project financing or have little data about their project. FACT (Standard) allows for a more extensive analysis and is ideal when there is more project information available. Both FACT (Standard) and FACT Lite allow the user to compare over a dozen different financing options.

Refer to the diagram on page 7 for a side-by-side comparison of FACT (Standard) and FACT Lite.

FACT is a software program that contains two different analysis options:

- a. **FACT (Standard)**, which allows for a thorough analysis of the financing options, and
- b. **FACT Lite**, which streamlines the analysis to the smallest number of inputs possible

What are the Benefits of FACT and FACT Lite?

FACT and FACT Lite can be valuable tools in any community’s decision-making process. A few of the benefits are:

- ✓ **Apples-to-apples comparison of funding options.** FACT has the ability to do accurate side-by-side comparisons of your financing options. It allows you to do an apples-to-apples assessment of the costs associated with all of the financing options you are considering, from an SRF loan to bonds to more complex arrangements. FACT can also account for the time value of money by allowing you to convert future cash flows into today’s dollars by using a discount rate; this allows for a more precise comparison of costs.
- ✓ **Flexible.** FACT allows you to compare multiple financing options, including scenarios where funding comes from multiple sources, such as a grant/loan combination. In addition, in FACT (Standard), you can change and customize the cost categories throughout any scenario, as well as add uncategorized costs through the “Other” category input. You can also seamlessly move from FACT (Standard) to FACT Lite (and vice versa), depending on how much information you have available and the type of analysis you would like to do.
- ✓ **Comprehensive.** FACT (Standard) allows you to include all of the appropriate regulatory, financing, and other costs associated with a project. If you do not have all of those costs available, you may leave them blank or use the “typical values” provided. “Typical values” are based on national surveys and provide a good guideline, though your project’s specific costs may differ.

- ✓ **Easy to use.** You do not have to be a finance professional to use FACT. Entering data is easy and the results are designed to tell the story without much additional explanation. FACT produces “bottom-line” analyses on the financing options selected, and there are graphs which also help tell the story. For those that wish for additional data, there are expanded financial analyses, which can be printed and analyzed. FACT Lite further simplifies the program by minimizing the number of data entry requirements to do an analysis.
- ✓ **Fast.** FACT allows you to compare financing options in only minutes. If the input information is easily accessible, entering data will take less than 5 minutes. As a result, FACT is not only an easy way to compare financing options but it is also fast.

Installing FACT

FACT and FACT Lite are packaged into a single program, so this process will install both FACT and FACT Lite on to your computer.

Installing and using FACT requires Microsoft Access 2000 or higher. **If you do not have Microsoft Access 2000 or higher**, you can still install and use FACT if you first install the runtime version of Access. The following explains how to install FACT *with* or *without* Microsoft Access 2000 or higher.

Please note that in order for FACT to work properly, you must have read and write access to your computer. Please check with your IT department if you are unsure whether you have this capability.

A. With Microsoft Access 2000 or higher

1. **Click on the FACT.exe file/link** on the CD or EPA’s website. Choose **Save** to begin downloading FACT.exe on your computer (Figure 1).

FIGURE 1: "SAVE" OR "RUN" FACT.EXE



2. **Double-click on the FACT icon** in your designated folder to begin installation of the program.

3. **If you see the security warning** (Figure 2), disregard it and click on **Run**.
4. **Select the Typical installation.**
5. **Notice** the FACT folder on your computer's hard drive and the shortcut icon on your desktop.
6. **Click on the icon** and start using FACT

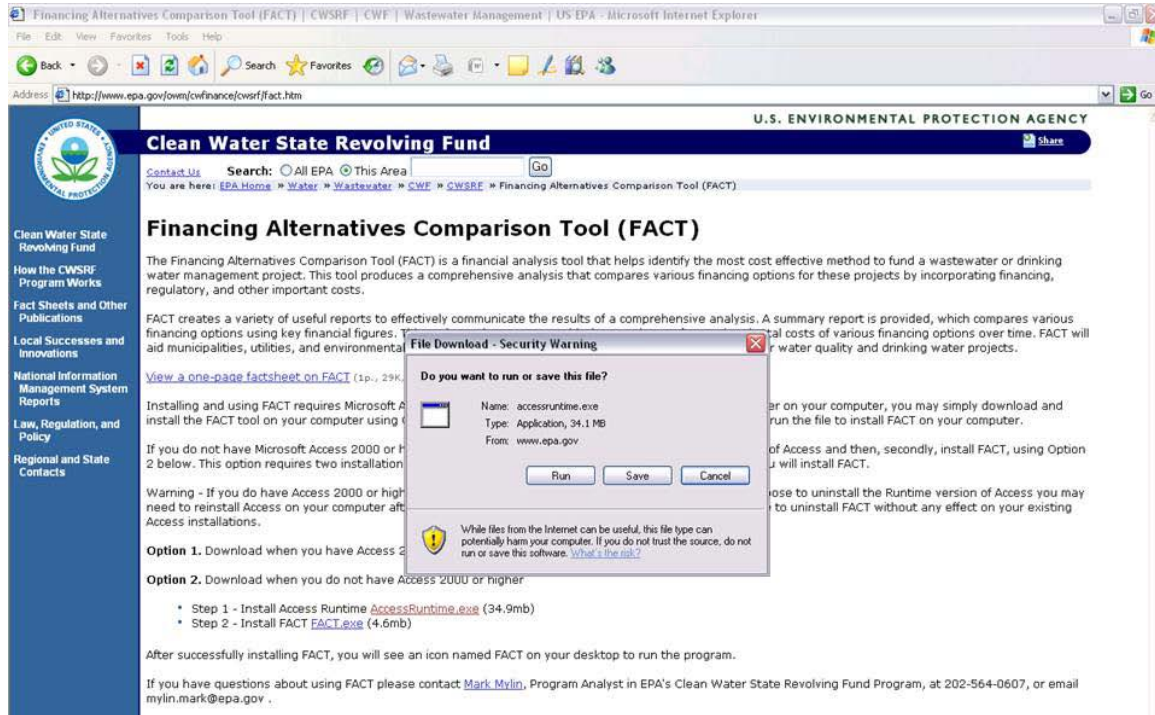
Note that you can uninstall FACT at any point without affecting Microsoft Access.

B. Without Microsoft Access 2000 or higher

If you do not have Access, you will still be able to use FACT. However, you will first have to install the runtime version of Access. When that is completed, you can install FACT.

1. From the CD or website, click on **accessruntime.exe**.
2. Click **Save** or **Run** on the pop-up box (Figure 3).

FIGURE 3: INSTALL ACCESSRUNTIME.EXE IF YOU DO NOT HAVE MICROSOFT ACCESS ON YOUR COMPUTER



3. When the application has finished downloading, open the program, **Accessruntime**, and select **Run**. This will install the program. Select the **Typical** setup.

Once Accessruntime has finished installing, follow the FACT installation outlined in part A.

Warning: If you already have Microsoft Access on your computer and you choose to install the runtime version, you may have to reinstall Access after you uninstall the runtime version.

FIGURE 2: IGNORE THIS SECURITY WARNING AND PRESS "CANCEL"

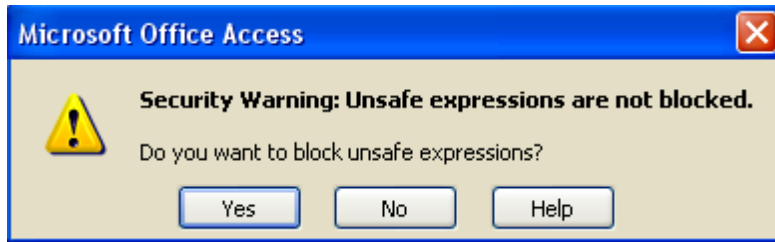


Opening FACT

When you open FACT on your computer, you may see two or more security warnings, depending on how your computer is set up. Proceed through the warnings as shown:

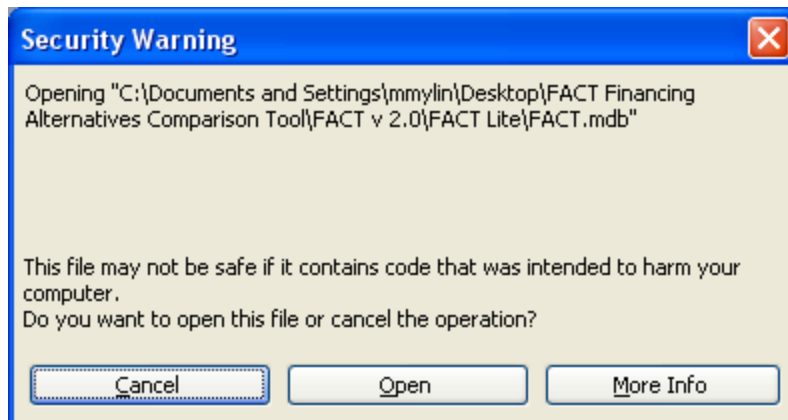
- If you are asked, “Do you want to block unsafe expressions?” select “No” (Figure 4).

FIGURE 4: SELECT **NO** IF YOU ENCOUNTER THIS WARNING



- If you have a warning that says, “This file may not be safe if it contains code that was intended to harm your computer. Do you want to open this file or cancel the operation?” select “Open” (Figure 5).

FIGURE 5: SELECT **OPEN** IF YOU ENCOUNTER THIS WARNING



- You may also be required to “Enable This Content” in Microsoft Access to enable the use of Macros.

Can't see the entire FACT workspace? Make sure that your screen resolution is set to 1024x768 pixels or higher.

To check for this, go to your computer's **Display Properties** (you will find this in your computer's Control Panel, under “Display”). Under “Settings,” look for the “Screen Resolution.” The resolution should be at least 1024x768 pixels.

To make sure you have the right resolution, see if the tabs in FACT come into full view on each page.

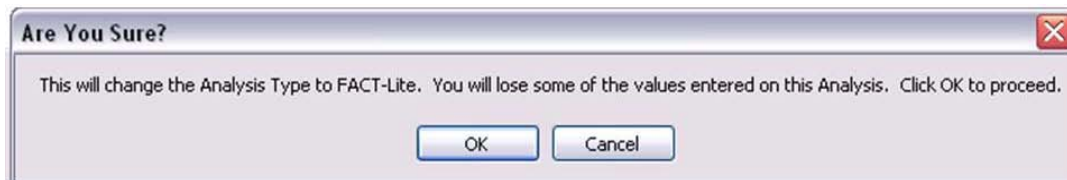
Choosing between FACT (Standard) and FACT Lite

Like its name implies, FACT Lite is a simplified version of FACT. FACT Lite is recommended when you would like to get a very quick, initial picture of your financing options, or when the additional data is not available. The following chart outlines some of the similarities and differences between FACT (Standard) and FACT Lite.

FACT (Standard)	FACT Lite
Compare as many as 15 different financing options and sources	Compare as many as 15 different financing options and sources
More detailed cost inputs about the project	Uses average values to minimize cost inputs
Most project data is available	Minimal project data available (e.g., only estimated construction cost)
More precise cost comparison to aid in decision-making	Quick cost comparison provides good starting point

Switching between FACT (Standard) and FACT Lite. While it is possible to transfer some of your data between the two versions, some data may be lost during the transition. Please make sure to keep notes on the data to avoid any problems. FACT will warn you (see Figure 6) before making the transition to make sure that you do not unintentionally lose any data.

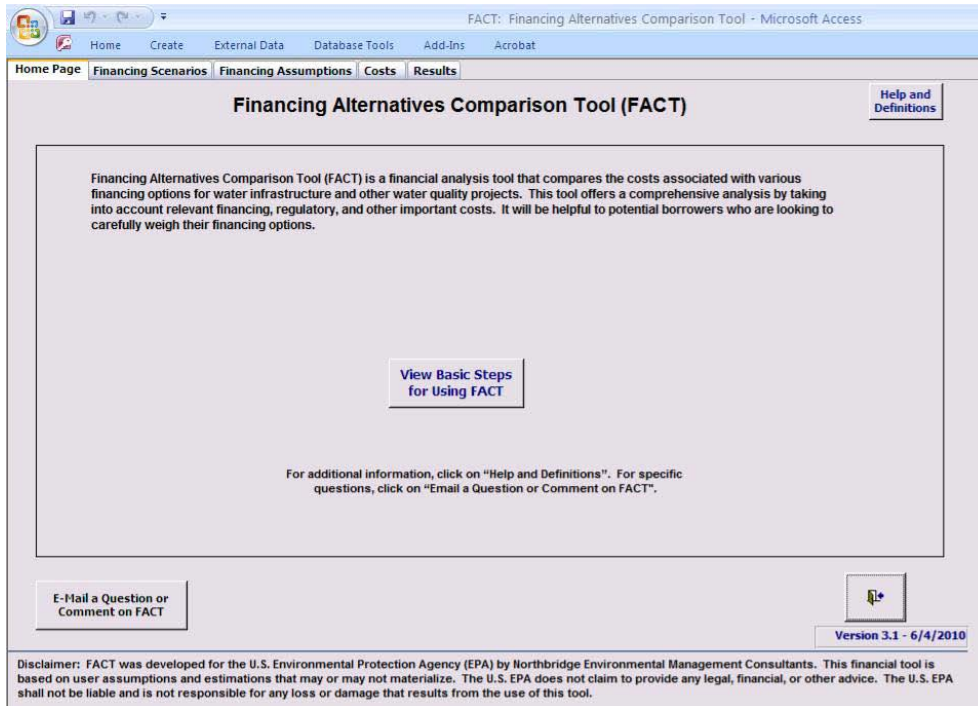
FIGURE 6: WARNING MESSAGE WHEN TRANSITIONING BETWEEN FACT AND FACT LITE



FACT: A Step-By-Step Guide

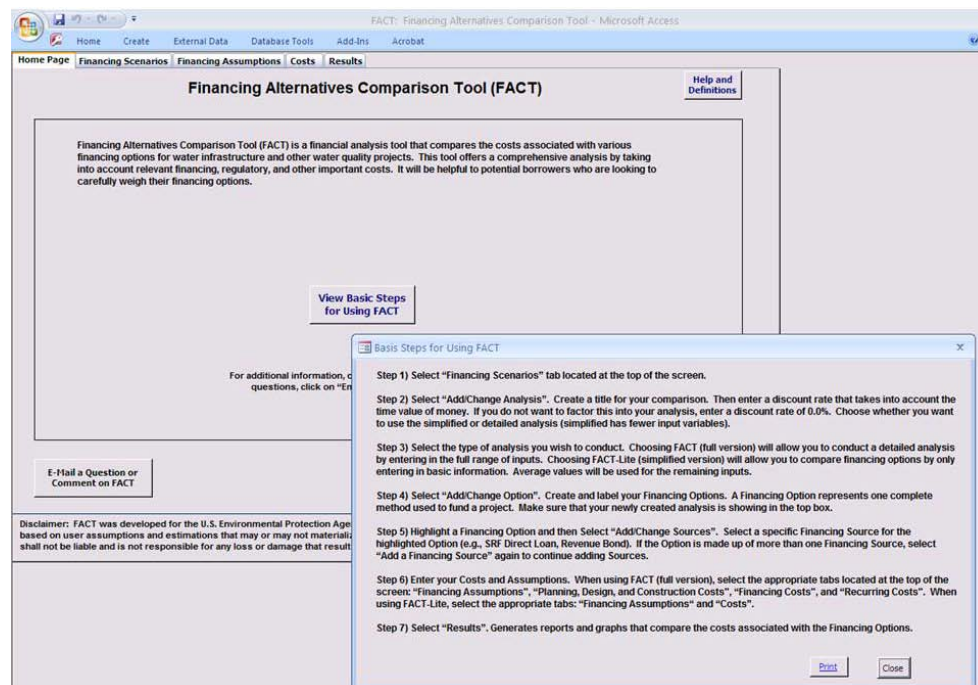
When you open FACT, you will see the following home page (Figure 7).

FIGURE 7: FACT HOME PAGE



If you select "View Basic Steps for Using FACT," you will see a pop-up box with basic instructions on using FACT and FACT Lite (Figure 8).

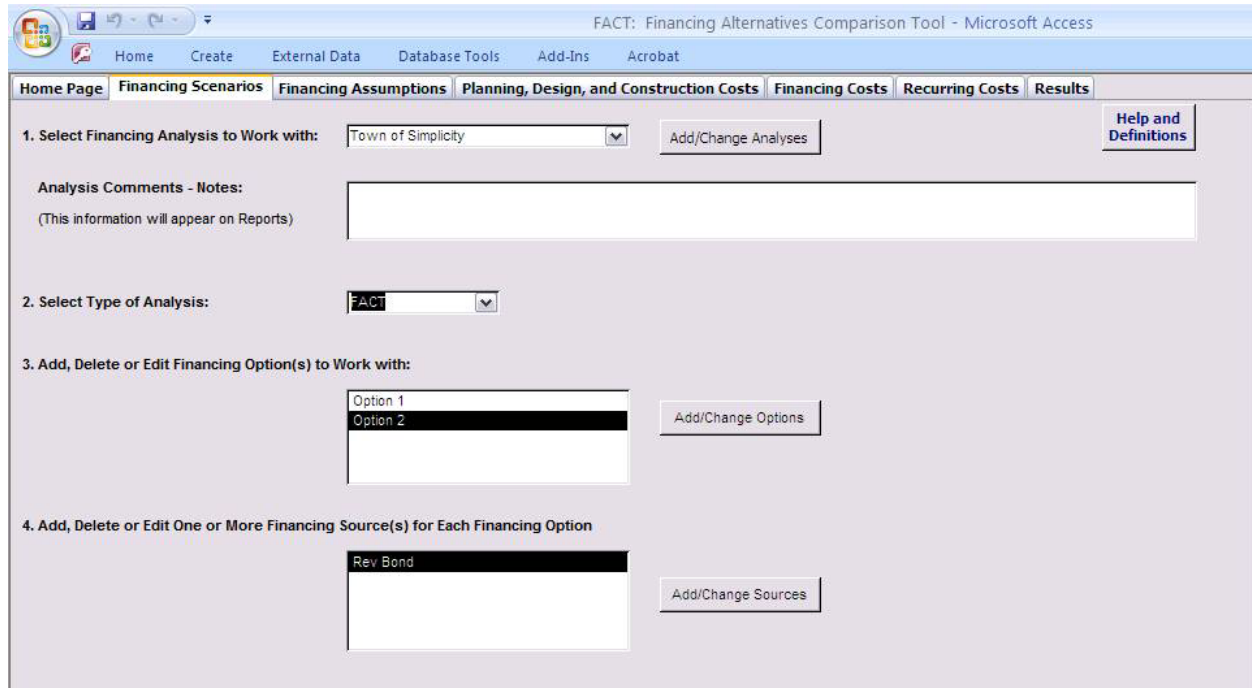
FIGURE 8: BASIC STEPS FOR USING FACT



Financing Scenarios

Click on **Financing Scenarios** to begin using FACT (Figure 9). During this stage, you will establish the basic information on the financing choices you are attempting to make, including the name of the project and the types of financing that you are considering.

FIGURE 9: FINANCING SCENARIOS PAGE



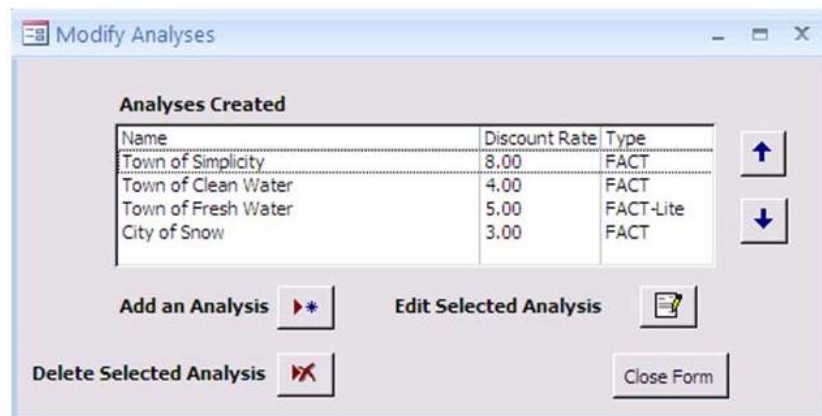
Step 1: Select a Financing Analysis to Work with

The first step is to name your analysis by selecting **Add/Change Analyses**. Several analyses came pre-loaded with FACT. A new analysis can be added by selecting “Add an Analysis.”

If you are adding an analysis, create a name for it, select a discount rate and choose whether it will be a FACT (Standard) or a FACT Lite analysis (Figure 10). A discount rate is the Interest rate used to convert future cash flows into present value (today’s dollars) (see pages 40 and 45 for a definition).

You can also add/change the discount rate on the **Results** page.

FIGURE 10: FINANCING SCENARIOS: SELECT A FINANCING ANALYSIS



Name	Discount Rate	Type
Town of Simplicity	8.00	FACT
Town of Clean Water	4.00	FACT
Town of Fresh Water	5.00	FACT-Lite
City of Snow	3.00	FACT

There is a limited amount of space to add comments or notes about your financing analysis in the **Analysis Comments - Notes** text box. These notes are included on any reports generated with FACT and can serve to clarify the analysis or the project for readers.

Step 2. Select Type of Analysis

If you did not already choose an analysis type – FACT Lite or FACT (Standard) - in the first step, or would like to change it, it is possible to make these changes here.

Step 3. Add, Delete, or Edit Financing Option(s) to Work With

Make sure that the correct Financing Analysis (from Step 1) is selected. Select **Add/Change Options** to describe a financing option. A financing option represents one complete method used to fund a project. You may type in any name you like for your financing option, such as “CWSRF loan,” “Option 1” or “grant/loan combination.” Because of space limitations, you may consider keeping the name short. In the next step, you will determine which Financing Sources will be included in each Option.

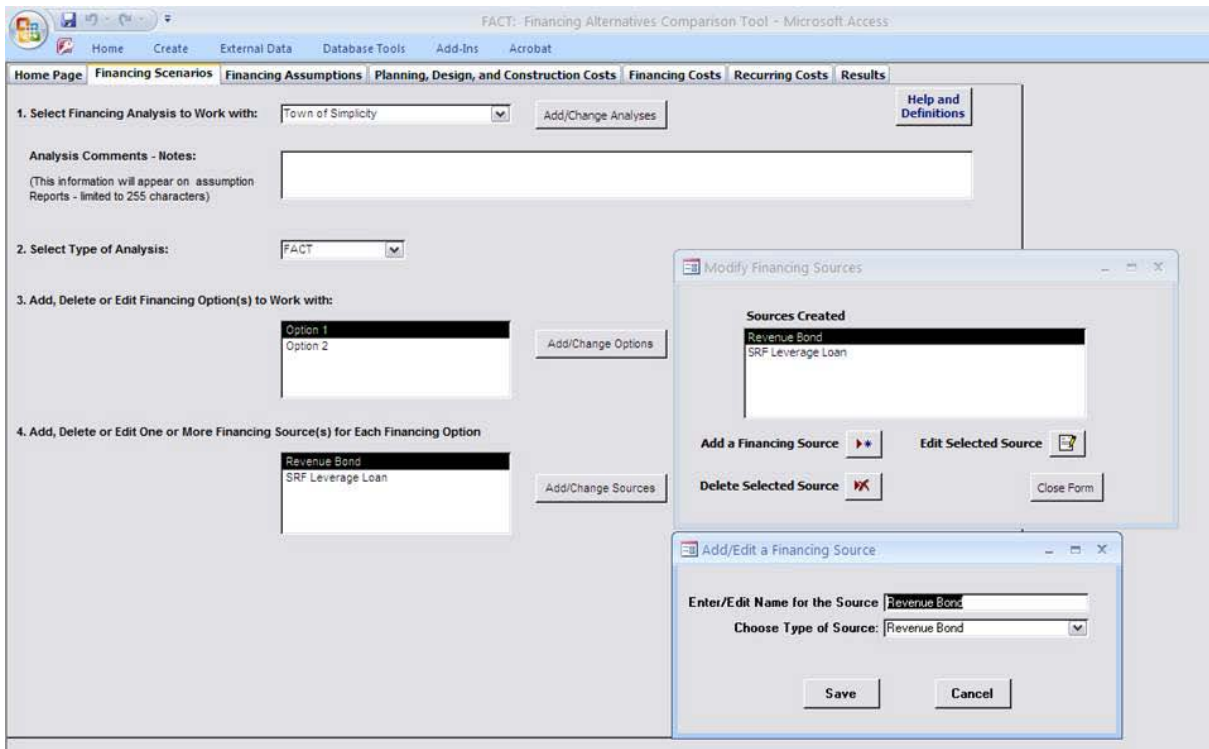
Step 4. Add, Delete, or Edit One or More Financing Source(s) for Each Financing Option

For each financing option, enter the sources of financing. First, make sure that the correct Financing Option (from Step 3) is selected. Then, select **Add/Change Sources** to enter the types of financing that you are considering for that option. As Figure 11 shows, it is possible to have more than one Financing Source for each Financing Option. In this example, the Town of Simplicity is considering 2 Financing Options: Option 1 and Option 2. Option 1 consists of two Financing Sources: a Revenue Bond and an SRF Leveraged Loan. Make sure that you enter a name for your Financing Sources in this step.

Note: FACT automatically saves all of your work.

So don't worry about losing all of your inputs!

FIGURE 11: FINANCING SCENARIOS: ADD A FINANCING SOURCE



For each Financing Source, you will select the **Type of Source** from a drop-down box. FACT comes pre-loaded with eight different sources of financing, which represent the most common methods of funding water infrastructure projects. There is also an “Other” category for other financing sources. Each Financing Source has different assumptions and will result in different treatment of the funds. You will notice that certain inputs will be “grayed out” if they do not apply to the specific financing source that you have selected. For additional information and definitions, refer to page 43.

- **SRF Direct Loan:** A direct loan from an SRF program does not require a reserve fund. Loan interest is typically charged on the amount disbursed.
- **SRF Leveraged Loan:** A loan from an SRF program where the assistance recipient puts a certain amount of the loan principal into a reserve fund and it remains fixed throughout the loan amortization period. The assistance recipient’s repayment amount is subsidized by interest earnings on the entire SRF and the interest earnings on its debt service reserve. Loan interest is typically charged on the amount disbursed (although you may change this setting in FACT). Contact your state SRF program to find out what type of loans they provide to determine whether you will have a Leveraged or Reserve Leveraged Loan.
- **SRF Reserve Leveraged Loan:** An SRF loan where the SRF program provides the reserve, which released as the loan is repaid. The assistance recipient’s repayment amount is subsidized by interest earnings on the debt service reserve. Loan interest is charged on the amount borrowed. Contact your state SRF program to find out what type of loans they provide to determine whether you will have a Leveraged or Reserve Leveraged Loan.
- **Grant:** A grant does not require any repayment or a reserve.
- **Revenue Bond:** A community can issue municipal bonds secured by the utility’s revenues. Bond interest is charged on the amount issued. Revenue bonds generally require a reserve fund.
- **General Obligation Bond:** A community can issue municipal bonds secured by its taxing authority. Bond interest is charged on the amount issued and a reserve fund is not required.
- **Bond Anticipation Note (BAN):** BANs are short-term bonds issued to provide financing in anticipation of another funding source, such as an SRF loan, a municipal bond issue or a grant. Bond interest is charged on the amount issued and a reserve fund is not required.
- **Bank Loan:** A loan from a commercial or other bank. Loan interest is typically charged on the amount issued and a reserve fund is not required.

FACT can work with up to 15 different Financing Sources in total. That means that you can model 15 different Financing Options with one Financing Source each, 5 Financing Options with 3 Financing Sources each, one Financing Option with 15 Sources, and everything in between.

You can create an unlimited number of Financing Analyses.

Note that each project’s Financing Options may consist of multiple Financing Sources. For example, one option for funding a project could include a partial SRF Direct Loan and a USDA Grant. When you are finished entering the Financing Sources, move on the **Financing Assumptions** tab.

Depending on whether you selected FACT (Standard) or FACT Lite, you will be taken to a more detailed or simpler program interface. Step-by-step instructions for FACT Lite begin on page 20, while instructions for FACT (Standard) continue below.

FACT (Standard)

Financing Assumptions

Home Page | Financing Scenarios | **Financing Assumptions** | Planning, Design, and Construction Costs | Financing Costs | Recurring Costs | Results

If you have selected FACT (Standard), you will notice several different tabs – Financing Assumptions; Planning, Design, and Construction Costs; Financing Costs; Recurring Costs; and Results.

The Financing Assumptions area is where you will have the opportunity to enter specific details about each Financing Option and Source selected for the analysis. You will enter the specific costs and amounts of financing for your project in the next three tabs: Planning, Design and Construction Costs; Financing Costs; and Recurring Costs.

Figure 12 displays sample data for the Town of Simplicity, which is considering financing its project in two ways: a Revenue Bond that is refinanced with an SRF Leveraged Loan (Option 1) or a Revenue Bond (Option 2).

Hint: Click on the blue links in FACT to obtain definitions for any of the inputs.

In order for FACT to work correctly, you should enter all of the relevant information in the Financing Assumptions tab. The following provides an explanation of the assumptions in this tab. Additional definitions can be found on page 43.

- **Type of Source:** This is the Financing Source that you selected under the Financing Scenarios tab. You may change your Financing Source here; this may change some of the other parameters on this tab, as they may or may not be applicable to the new Financing Source.
- **Percent to be Repaid:** A project may receive a full or partial grant or have some or all of its loan principal forgiven. For example, for a grant, the percent to be repaid will be 0. For a revenue bond, it would be 100 and for an SRF loan with 20 percent principal forgiveness, this number would be 80.
- **Closing Date** and **Date Interest Charged From:** The Closing Date is the month and year in which the Financing Source is entered into or executed, such as the month in which loan papers are signed. In many cases, the Closing Date is also the same date that interest will be charged from. However, in some cases, the Financing Source may not begin accruing interest until a later date.
- **Construction Interest Based On** and **Construction Period Interest Rate:** Different Financing Sources have different ways of treating interest during the period of construction. For instance, SRF programs might only charge interest on the amount disbursed, while bond issuers must pay interest on the entire amount borrowed. There are no principal payments during this time.
The construction interest rate will be used until one principal payment before principal payments begin. For example, if principal payments occur every 6 months starting on January 1, 2011, the construction interest rate will apply until July 1, 2010. Starting on July 1, 2010, principal begins to accrue, as well as the repayment period interest rate.

Don't want to forget your data?

FACT automatically saves all of your entries!

You can also select **Preview/Print Financing Assumptions** to print a summary of your entries.

FIGURE 12: FINANCING ASSUMPTIONS IN FACT (STANDARD)

FACT: Financing Alternatives Comparison Tool - Microsoft Access

Home Page | Financing Scenarios | **Financing Assumptions** | Planning, Design, and Construction Costs | Financing Costs | Recurring Costs | Results

1. Select Financing Analysis to Work with: Preview/Print Financing Assumptions Help and Definitions

2. Enter Assumptions:

	Option 1 Revenue Bond	Option 1 SRF Leveraged Loan	Option 2 Rev Bond
Type of Source	Revenue Bond	SRF Leverage Loan	Revenue Bond
Percent to be Repaid	100	100	100
Closing Date (month and year)	2 2010	2 2015	2 2010
Date Interest Charged From (mo and yr)	2 2010	2 2015	2 2010
Construction Interest Based On	Amount Borrowed	Amount Disbursed	Amount Borrowed
Construction Period Interest Rate (%)	5.00000	2.00000	5.00000
Length of Disbursement (months)	12	1	12
Repayment Period Interest Rate (%)	5.00000	2.00000	5.00000
First Interest Payment Date (mo and yr)	2 2011	2 2016	2 2011
Interest Frequency (every x months)	12	12	12
Repayment Fee Based on	No Fee	No Fee	No Fee
Repayment Period Fee % or amount	0.00	0.00	0.00
Fee Frequency (every x months)	12	12	12
Amortization Method	Level Debt Service	Level Debt Service	Level Debt Service
First Principal Payment Date (mo and yr)	2 2012	2 2016	2 2012
Principal Frequency (every x months)	12	12	12
Number of Principal Payments (calc yrs)	20 20.0 years	20 20.0 years	24 24.0 years
Reserve Basis	Amount Borrowed	Amount Borrowed	Amount Borrowed
Reserve Percentage	10	10	10
Reserve Duration (years)	20	20	20
Reserve Interest Rate (%)	5.00000	2.00000	5.00000
Amount Refinanced by this Source	0	3,000,000	0
Amount of this Source Refinanced by Another Source	3,000,000	0	0

- **Length of Disbursement:** Disbursements (i.e., payments for construction from loan or grant proceeds) are assumed to start in the third month after closing. At that point, the disbursements will continue for the number of months specified in this entry. In most cases, disbursement is completed when construction ends.
- **Repayment Period Interest Rate:** The interest rate (as a percentage) that will be charged during the repayment period (after construction). This is usually the same as the construction period interest rate but may not always be the case.
- **First Interest Payment Date** and **Interest Frequency:** Interest payments must begin before or at the same time as principal payments. The principal payment dates (see below) and the interest frequency selected will impact your options for the interest payment date. Therefore, if a later date is needed than is displayed in the drop-down box, adjust the Principal Payment Date, and then you will be able to adjust the First Interest Payment Date. The Interest Frequency is the number of months between interest payments; enter 12 for annual, 6 for semi-annual and 3 for quarterly payments.
FACT assumes a *fixed or average* interest rate. If the loan or debt has a *variable* interest rate, please use an *average* annual interest rate.

- **Repayment Fee Based On:** Some Financing Sources charge a fee. It could be a flat fee, such as \$100 a year. The fee can also be a percentage of the remaining balance on a loan, such as a 1% annual fee on the outstanding loan balance. Finally, fees could be based on the debt service.
- **Repayment Period Fee % or Amount and Free Frequency:** The fee percentage or the amount to use with the Repayment Fee type chosen in the previous entry. The Fee Frequency is the frequency in months that fees will be paid, such as 6 for semi-annual and 12 for annual fees. If you selected “No Fee” in the previous entry, you will not be able to enter data for these two entries.
- **Amortization Period:** The debt can be paid off in a number of ways for your Financing Source. The three most common methods are given here:
 - **Level Debt Service:** The payments (principal plus interest) are the same throughout the life of the financing.
 - **Level Principal:** The principal payments are the same throughout the life of the financing. Interest payments will vary by period.
 - **Balloon payment:** One payment of principal at the end of the loan term. Interest payments occur throughout the life of the financing, however.
- **First Principal Payment Date and Principal Frequency:** The First Principal Payment Date is the month and year in which principal payments begin. Your choice here will affect when interest payments can begin (see above). The Principal Frequency is the frequency in which principal payments are made, such as 6 for semi-annual. Interest payments and fees (if applicable) must be paid *at least* as frequently as principal payments, so your choice here may affect the interest and fee payment frequency.
- **Number of Principal Payments:** The number of principal payments. FACT will use this number and the Principal Frequency to calculate the life of the loan in years, which is provided. For example, a loan with monthly principal payments (payment frequency = 1) and 240 payments will result in a 20 year loan term.
- **Reserve Basis and Reserve Percentage:** Some Financing Sources require a Debt Service Reserve, which can be based on the Amount Borrowed or the Balance Outstanding. Revenue bonds typically have a reserve based on the amount borrowed, while a SRF Reserve Leveraged Loan will have a reserve based on the outstanding balance. The Reserve Percentage is the size of the reserve compared to the loan size; it is often 10%.
- **Reserve Duration and Reserve Interest Rate:** The Reserve Duration is the number of years in which the reserve is held. Reserves typically earn interest, which is entered into the Reserve Interest Rate box.
- **Amount Refinanced by this Source and Amount of this Source Refinanced by Another Source:** These entries are used if your Financing Source will be refinanced by another source at a later date. For example, in Figure 12, a \$3 million Revenue Bond is being refinanced with SRF Loan. Make sure that you enter the data in *both* Financing Sources.

Note: If you are missing a significant amount of the information on this tab, it may be more appropriate to use FACT Lite initially and then move on to FACT (Standard) as you learn more about the different financing options.

Planning, Design, and Construction Costs

Home Page Financing Scenarios Financing Assumptions **Planning, Design, and Construction Costs** Financing Costs Recurring Costs Results

The Planning, Design and Construction Costs tab is where you can enter the specific costs related to the actual design and construction of the project. You can also include costs associated with specialized requirements such as conducting an environmental review. All of the costs entered under this tab are financed with the associated Financing Source (at the top of the column). Definitions for each of the standard entries can be found on Page 44.

For each Financing Source, enter the specific costs that will be financed using that source. Some of these costs may differ based on the Financing Source selected; for example, a more extensive environmental review for an SRF loan could result in higher costs in that category. FACT allows you to differentiate costs among Financing Sources.

FIGURE 13: PLANNING, DESIGN, AND CONSTRUCTION COSTS IN FACT (STANDARD)

FACT: Financing Alternatives Comparison Tool - Microsoft Access

Home Create External Data Database Tools Add-Ins Acrobat

Home Page Financing Scenarios Financing Assumptions **Planning, Design, and Construction Costs** Financing Costs Recurring Costs Results

1. Select Financing Analysis to Work with:

2. Enter Applicable Costs for Each Line Item and Financing Source

Financing Option-> Financing Source->	Option 1 Revenue Bond	Option 1 SRF Leveraged	Option 1 Total	Option 2 Rev Bond
Construction	3,000,000	0	3,000,000	3,000,000
Engineering/Technical	70,000	0	70,000	70,000
Environmental Review	5,000	0	5,000	3,000
Bidding and Contracts	5,000	0	5,000	5,000
Legal Fees	1,000	0	1,000	1,000
Land and Right-of-Way	0	0	0	0
Construction Management	30,000	0	30,000	30,000
Other	0	0	0	0
Other	0	0	0	0
	3,111,000	0	3,111,000	3,109,000

Input the costs that are associated with the planning, design, and construction of a project. It can also include costs associated with specialized requirements such as conducting an environment review. It is important to note that these costs should only be input under the financing sources that are providing the proceeds to pay for these costs.

Things to remember when entering information about your project's planning, design and construction costs into FACT (Standard) are:

- **Leaving entries blank:** FACT allows you to leave cost categories blank if they are not relevant to your project. For example, your project may not require land purchase. At minimum, it is recommended that the construction cost is filled in.
- **Editing cost categories:** You may edit the cost categories in FACT to better suit your needs.
- **One-time costs:** Planning, Design and Construction Costs are treated as one-time costs that are financed using the Financing Source. They are not out-of-pocket costs.

Financing Costs

Home Page | Financing Scenarios | Financing Assumptions | Planning, Design, and Construction Costs | **Financing Costs** | Recurring Costs | Results

The Financing Costs tab allows you to include the costs associated with obtaining and managing a specific Financing Source. If the Financing Source is a revenue bond, your financing costs may include bond insurance premiums, underwriter fees, and other expenses. These costs will be included in the amount that is financed using the applicable Financing Source. Refer to Page 45 for definitions for each of the entries.

Similar to the Planning, Design, and Construction Costs, the Financing Costs can be entered as needed for each Financing Source. Here, the cost categories can also be edited or left blank as needed based on the project.

FIGURE 14: FINANCING COSTS IN FACT (STANDARD)

Financing Option-> Financing Source->	Option 1 Revenue Bond	Option 1 SRF Leveraged	Option 1 Total	Option 2 Rev Bond
Financial Advisor Check to Use Typical Values, if listed <input checked="" type="checkbox"/>	15,633 \$5 per 1000	6,012 \$2 per 1000	21,645	15,545 \$5 per 1000
Bond Counsel Check to Use Typical Values, if listed <input type="checkbox"/>	10,000 \$3 per 1000	10,000 \$3 per 1000	20,000	10,000 \$3 per 1000
Underwriter Check to Use Typical Values, if listed <input type="checkbox"/>	13,000 \$5 per 1000	0 \$0 per 1000	13,000	13,000 \$5 per 1000
Rating Agency Fee Check to Use Typical Values, if listed <input checked="" type="checkbox"/>	3,000 \$3000	0 \$0	3,000	3,000 \$3000
Official Statement Check to Use Typical Values, if listed <input checked="" type="checkbox"/>	1,000 \$1000	0 \$0	1,000	1,000 \$1000
Closing Costs/Fees Check to Use Typical Values, if listed <input type="checkbox"/>	5,000	5,000	10,000	5,000
Bond Insurance Check to Use Typical Values, if listed <input type="checkbox"/>	0 \$5 per 1000	0 \$0 per 1000	0	0 \$5 per 1000
Other Check to Use Typical Values, if listed <input type="checkbox"/>	0	0	0	0
	47,633	21,012	68,645	47,545

Input one time upfront costs associated with obtaining and managing a specific financing source. For some of these costs, a user can have the model input a "typical value". This is done by "checking" the box that can be found directly under the cost in question.

Important notes about entering Financing Costs are:

- **Typical Values:** "Typical Values" have been provided for several Financing Sources. These have been based on broad national surveys and may not reflect the project's actual costs. Check the box if you wish to use the "Typical Value." As Figure 14 indicates, there is no requirement to use these "Typical Values" or you may choose to use them for some entries and not others.
- **One-time costs:** Financing Costs are treated as one-time costs that are financed using the Financing Source. They are not out-of-pocket costs.

Did you forget something?

You can go back and forth between tabs without losing any data

Recurring Costs

Home Page | Financing Scenarios | Financing Assumptions | Planning, Design, and Construction Costs | Financing Costs | Recurring Costs | Results

Recurring Costs are those costs that occur regularly throughout the life of the project, such as administrative costs or reporting requirements for an SRF loan. Like the other tabs, any of the cost categories can be edited or left blank. These costs are not included in the financing cost calculations – they are considered out-of-pocket costs.

FIGURE 15: RECURRING (OUT-OF-POCKET) COSTS IN FACT (STANDARD)

Financing Option-> Financing Source->	Option 1 Revenue Bond	Option 1 SRF Leveraged	Option 1 Total	Option 2 Rev Bond
Reporting	500	1,000	1,500	500
Check to Use Typical Values, if listed	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Accounting	1,000	0	1,000	1,000
Check to Use Typical Values, if listed	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
General Administrative	0	0	0	0
Check to Use Typical Values, if listed	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Paying Agent Fee	500	0	500	500
Check to Use Typical Values, if listed	<input checked="" type="checkbox"/> \$500 per yr	<input type="checkbox"/> \$0 per yr		<input checked="" type="checkbox"/> \$500 per yr
SEC Disclosure	400	0	400	400
Check to Use Typical Values, if listed	<input checked="" type="checkbox"/> \$400 per yr	<input type="checkbox"/> \$0 per yr		<input checked="" type="checkbox"/> \$400 per yr
Other	0	0	0	0
Check to Use Typical Values, if listed	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Other	0	0	0	0
Check to Use Typical Values, if listed	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
	2,400	1,000	3,400	2,400

Input the costs that occur on an annual basis throughout the life of the financing source. For some of these costs, a user can have the model input a "typical value". This is done by "checking" the box that can be found directly under the cost in question.

Important items to remember when entering Recurring Costs are:

- **Annual costs:** All Recurring Costs are treated as annual costs. If the cost is incurred more or less than once per year, calculate the figure on an annual basis. For example, if it is a quarterly expense, multiply it by four to obtain the annual cost.
- **Recurring Costs are not including in financing:** These costs are considered out of pocket expenses associated with each financing source.

Definitions can be found on Page 46.

Results

Home Page | Financing Scenarios | Financing Assumptions | Planning, Design, and Construction Costs | Financing Costs | Recurring Costs | Results

When all the information about your project has been entered, proceed to the Results tab (Figure 16). In this tab, you will find a summary of the project costs for each Financing Source and Financing Option,

including the Total Amount Funded and the Total Costs of the project. In addition to providing the total cost of the project for each financing option, this tab will also provide the Average Cost per Year, allowing you to consider which option is most advantageous from both a lifetime and annual perspective. FACT also calculates the Net Present Value of the Total Costs. The results allow you to see which Financing Option is the least costly, and by how much. In addition, you can access reports, which provide additional details, such as when each payment occurs.

FIGURE 16: RESULTS IN FACT (STANDARD)

Financing Option-> Financing Source->	Option 1 Revenue Bond	Option 1 SRF Leveraged	Option 1 Total	Option 2 Rev Bond
Amount Financed - New Costs	3,509,592	356,680	3,866,272	3,507,272
Amount Financed - Refinance Costs	0	3,000,000	3,000,000	0
Amount Funded from Grants	0	0	0	0
Total Amount Funded	3,509,592	3,356,680	6,866,272	3,507,272
Total Principal	3,509,592	3,356,680	6,866,272	3,507,272
Total Interest	853,231	748,991	1,602,222	2,768,296
Total Repayment Fees	0	0	0	0
Total Recurring Costs	12,000	20,000	32,000	60,000
Total Other Costs/(Earnings)	-3,518,370	-463,222	-3,981,592	-798,611
Total Costs	856,453	3,662,449	4,518,902	5,536,957
Years of Repayment	6.0	20.0	25.0	26.0
Average Cost per Year	142,742	183,122	180,756	212,960
Net Present Value of Total Costs	670,550	1,241,359	1,911,910	2,268,656
Comparison to Lowest NPV Cost Option:				
Net Difference			0	356,747
Percent Difference			0.0%	18.7%

The main elements of the Results tab are:

- **Total Amount Funded:** The total amount that will be financed by the Financing Source. This excludes the Recurring Costs, which are funded out of pocket. This is the nominal amount that will be funded (i.e., not discounted to today's dollars).
- **Total Costs:** The Total Costs are the sum of all the costs (principal, interest, fees, earnings and out-of-pocket recurring costs) that will be incurred over the life of the financing. This is the nominal amount that will be paid and is not discounted to today's dollars.
- **Net Present Value:** The cost of the financing represented in today's dollars. This is achieved by discounting the total cost by the discount rate. If the discount rate is 0 percent, the Net Present Value will equal the Total Costs of the project. Figure 16 uses a discount rate of 8 percent.
- **Net Difference and Percent Difference:** These outputs illustrate the additional cost of each financing option relative to the lowest-cost option. For example, as Figure 16 indicates, Option

The amount financed by a Financing Source includes:

✓ Planning, Design and Construction Costs

✓ Financing Costs

It does not include:

✓ Recurring Costs

1 has the lowest Total Cost and Net Present Value of Total Costs. Option 2 is 18.7 percent more expensive than Option 1.

Additional definitions can be found on Page 46.


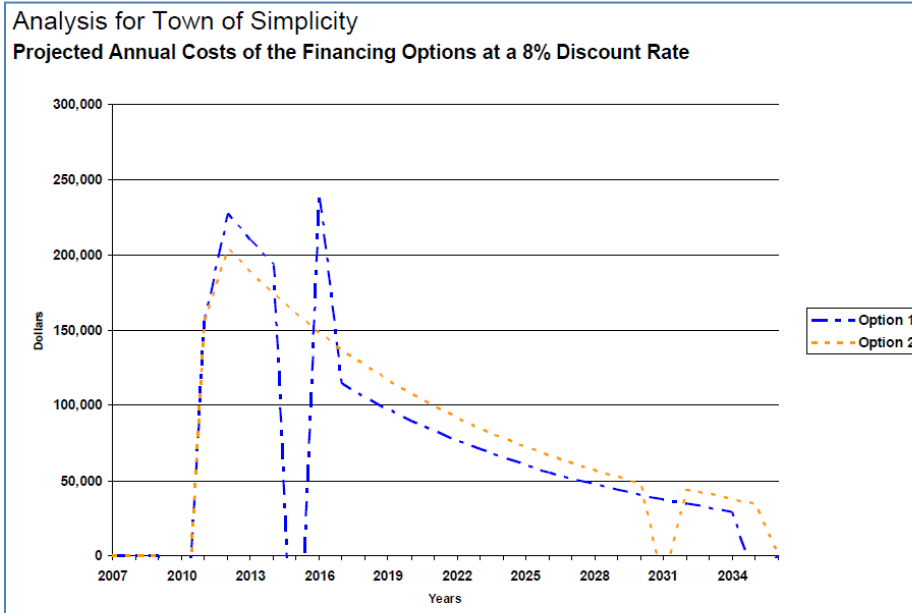
For a more in-depth analysis of each Financing Source and Option, click on the  button next to **Preview Detailed Reports**. These reports outline the disbursements, expenses, income, and payments. For example, Figure 17 shows the Summary Level Report for Option 1 from the example used throughout this section. It provides monthly information on disbursements, payments and earnings. The Detail Level Report provides even more detail on the transactions. FACT also generates charts, such as the one in Figure 18; there is additional information on the charts produced by FACT starting on page 24.

FIGURE 17: SUMMARY LEVEL REPORT FOR THE TOWN OF SIMPLICITY

Analysis for Town of Simplicity											
Option - Option 1, All Financing Sources Combined											
Debt Service Schedule											
Date	Disbursements	Debt Begin Bal	Interest	Principal	Fees	Debt Payment	Debt Ending Bal	Reserve Interest	Recurring Costs	Net Payment	Discounted Payment
2/15/2010	0	0	0	0	0	0	3,509,592	0	0	0	0
3/15/2010	0	3,509,592	0	0	0	0	3,509,592	1,462	0	-14,425	-14,329
4/15/2010	0	3,509,592	0	0	0	0	3,509,592	1,462	0	-14,425	-14,234
5/15/2010	259,250	3,509,592	0	0	0	0	3,509,592	1,462	0	-13,345	-13,081
6/15/2010	259,250	3,509,592	0	0	0	0	3,509,592	1,462	0	-12,264	-11,943
7/15/2010	259,250	3,509,592	0	0	0	0	3,509,592	1,462	0	-11,184	-10,819
8/15/2010	259,250	3,509,592	0	0	0	0	3,509,592	1,462	0	-10,104	-9,709
9/15/2010	259,250	3,509,592	0	0	0	0	3,509,592	1,462	0	-9,024	-8,614
10/15/2010	259,250	3,509,592	0	0	0	0	3,509,592	1,462	0	-7,944	-7,532
11/15/2010	259,250	3,509,592	0	0	0	0	3,509,592	1,462	0	-6,863	-6,465
12/15/2010	259,250	3,509,592	0	0	0	0	3,509,592	1,462	0	-5,783	-5,411
1/15/2011	259,250	3,509,592	0	0	0	0	3,509,592	1,462	0	-4,703	-4,371
2/15/2011	259,250	3,509,592	175,480	0	0	175,480	3,509,592	1,462	2,400	174,257	160,902
3/15/2011	259,250	3,509,592	0	0	0	0	3,509,592	0	0	-1,080	-991
4/15/2011	259,250	3,509,592	0	0	0	0	3,509,592	0	0	0	0
2/15/2012	0	3,509,592	175,480	106,139	0	281,619	3,403,453	17,548	2,400	266,471	227,192
2/15/2013	0	3,403,453	170,173	111,446	0	281,619	3,292,007	17,548	2,400	266,471	209,780

FIGURE 18: ANNUAL DISCOUNTED COST GRAPH



FACT Lite

When you choose to do an analysis in FACT Lite, as opposed to FACT (Standard), you will notice immediately that the number of data entry points decreases significantly. The tabs at the top of the page in Microsoft Access show that all of the cost entries have been combined into a single Costs tab, and the Financing Assumptions are also simplified.

FACT Lite uses a number of assumptions to allow for the simplified analysis compared to FACT (Standard). These assumptions are laid out in the table below (Figure 19).

FIGURE 19: FACT LITE ASSUMPTIONS SUMMARY

	SRF Direct Loan	SRF Leverage Loan	SRF Reserve Leverage Loan	Revenue Bond	GO Bond	BAN	Bank Loan
Date Interest Charged From (mo and year)	Interest begins accruing on the date of loan closing						
Construction Interest Based On	Amount disbursed		Amount borrowed				
Construction Interest Rate (%)	Equal to repayment period interest rate						
Interest Frequency (Every X Months)	12 (Annual)						
Principal Frequency (Every X Months)	12 (Annual)						
Repayment Fees	FACT Lite assumes there are no fees on the financing						
Amortization Method	Level Debt Service (repayments throughout the life of the loan are for the same amount)						
Debt Service Reserve	No reserve	10% of amount borrowed	50% of amount outstanding	10% of amount borrowed	No reserve		
		Reserve accrues interest at the repayment period interest rate					
Costs	Costs are rolled up into All Project Costs and Upfront Financing Costs. FACT Lite does not incorporate Recurring Costs						

Financing Assumptions

Home Page Financing Scenarios **Financing Assumptions** Costs Results

In the Financing Assumptions area, you will be asked to enter some details about each Financing Option and Financing Source selected for the Analysis. In this tab, the specific financing parameters are entered for each Option and Source. Under the Costs tab, you will have the opportunity to enter all of the costs associated with the project. As Figure 20 indicates, the number of Financing Assumptions has decreased to only seven.

FIGURE 20: FINANCING ASSUMPTIONS IN FACT LITE

2. Enter Assumptions:	Option 1 Revenue Bond	Option 1 SRF Leveraged Loan	Option 2 Rev Bond
Type of Source	Revenue Bond	SRF Leverage Loan	Revenue Bond
Closing Date (month and year)	2 2010	2 2015	2 2010
Repayment Period Interest Rate (%)	5.00000	2.00000	5.00000
Length of Disbursement (months)	12	1	12
First Interest Payment Date (mo and yr)	2 2011	2 2016	2 2011
First Principal Payment Date (mo and yr)	2 2012	2 2016	2 2012
Number of Principal Payments (years)	20	20	24

While most of the entries are identical to those in FACT (Standard), there are distinctions with a few of the entries, which are explained below. Definitions can also be found on Page 43.

- **Repayment Period Interest Rate:** This interest rate will be charged during both construction and repayment. Debt service reserves are assumed to earn interest at the same rate.
- **First Interest Payment Date and First Principal Payment Date:** Interest payments must begin at the same time or before principal payments begin. FACT Lite assumes that both payments occur in the same month and that they occur once a year. If a later interest payment date is needed than the drop-down menu allows, you can adjust the principal payment first, which will then allow you to change the interest payment dates.
- **Number of Principal Payments:** Unlike in FACT (Standard), when payments can occur more than once a year, FACT Lite assumes payments occur only once a year. The term of the loan in years is therefore the same as the number of principal payments.

FACT Lite makes a number of additional assumptions in order to simplify data entry.

- **Fees:** FACT Lite does not incorporate fees into the analysis.
- **Amortization:** FACT Lite assumes that loans are amortized according to level debt service, where payments (principal plus interest) are the same throughout the loan period.
- **Reserves:** FACT Lite assumes that SRF Leveraged Loans and Revenue and General Obligation Bonds have a reserve that is 10 percent of the loan principal. SRF Reserve Leveraged Loans have a 50% reserve. (These are typical values, though in FACT (Standard) you would be able to adjust these percentages) This reserve fund earns interest at the same rate as the bond or SRF loan.
- **Refinancing:** FACT Lite does not include loan refinancing.

Costs

[Home Page](#) [Financing Scenarios](#) [Financing Assumptions](#) [Costs](#) [Results](#)

The Costs tab allows you to enter the costs associated with the project and financing. FACT Lite summarizes all of the planning, design and construction costs into a single entry, All Project Costs. In addition, all financing costs are summarized into a single entry, Upfront Financing Costs. Unlike FACT (Standard), FACT Lite does not incorporate recurring out-of-pocket costs – all of the costs entered into FACT Lite are included in financing.

FIGURE 21: COSTS IN FACT LITE

Financing Option-> Financing Source->	Option 1 Revenue Bond	Option 1 SRF Leveraged	Option 1 Total	Option 2 Rev Bond
All Project Costs	3,111,000	0	3,111,000	3,109,000
Upfront Financing Costs	47,633	21,012	68,645	47,545
	3,158,633	21,012	3,179,645	3,156,545

There are two main categories of costs in FACT Lite:

- **All Project Costs:** Project costs include all construction, planning and design, environmental review and reporting costs.
- **Upfront Financing Costs:** Financing costs include fees for bond counsel, underwriters, financial advisors and other costs associated with obtaining a grant or loan.

Results

Home Page Financing Scenarios Financing Assumptions Costs Results

When all the information has been entered, proceed to the Results tab, which will summarize the project costs for each Financing Source and Financing Option (Figure 21). The information in this tab is the same as in FACT (Standard). In this tab, you will see the Principal, Interest and other costs associated with each Financing Source. This tab will also show the Total Costs, Average Cost per Year and Net Present Value of Total Costs for each Financing Source and Financing Option, allowing you to consider which option is most advantageous from a lifetime and annual perspective. Figure 22 indicates that Option 1 is 3.9 percent more costly than Option 2. You can also access reports, which provide additional details such as when each payment occurs. Refer to Page 45 for definitions of each of the items.

Refer to the Results section on FACT (Standard) in this User Guide (page 17) for an explanation of each of the outputs on this tab.

FIGURE 22: RESULTS IN FACT (LITE)

FACT: Financing Alternatives Comparison Tool - Microsoft Access

Home Create External Data Database Tools Add-Ins Acrobat

Home Page Financing Scenarios Financing Assumptions Costs Results

Choose Summary Report/Graph: Snapshot Report

Preview/Print Selection Help and Definitions

1. Select Financing Analysis to Work with: Town of Simplicity


2. Select Discount Rate: 8.00 %

Financing Option-> Financing Source->	Option 1 Revenue Bond	Option 1 SRF Leveraged	Option 1 Total	Option 2 Rev Bond
Amount Financed - New Costs	3,509,592	23,347	3,532,939	3,507,272
Amount Financed - Refinance Costs	0	0	0	0
Amount Funded from Grants	0	0	0	0
Total Amount Funded	3,509,592	23,347	3,532,939	3,507,272
Total Principal	3,509,592	23,347	3,532,939	3,507,272
Total Interest	2,298,263	5,209	2,303,472	2,768,296
Total Repayment Fees	0	0	0	0
Total Recurring Costs	0	0	0	0
Total Other Costs/(Earnings)	-799,137	-3,222	-802,359	-868,756
Total Costs	5,008,718	25,334	5,034,052	5,406,812
Years of Repayment	21.0	20.0	25.0	26.0
Average Cost per Year	238,510	1,267	201,362	207,954
Net Present Value of Total Costs	2,330,180	8,589	2,338,769	2,249,919
Comparison to Lowest NPV Cost Option:				
Net Difference			88,850	0
Percent Difference			3.9%	0.0%

Preview Detailed Reports-->>

Summary Level Report
Detail Level Report

Reports and Graphs in FACT (Standard) and FACT Lite

FACT can generate a number of different reports and graphs. On the Results tab, under each Financing Source and Financing Option, you will see two types of reports that can be generated by clicking on the  button:

- **Summary Level Report:** This report provides a summary report of all transactions associated with the Financing Source and Financing Option, which can be printed on a 8.5x11 page (Figure 23).

FACT will ask whether you want to open the file in Print Preview, if you would like to Print to the Default Printer, or Save to Excel. If you elect to save the file to Excel, FACT will automatically create a "Reports" folder in the same folder where you have saved FACT. You will then be able to open the file in Excel and edit it as needed.

FIGURE 23: SUMMARY LEVEL REPORT

Analysis for Town of Simplicity											
Option - Option 1, All Financing Sources Combined											
Debt Service Schedule											
Date	Disbursements	Debt Begin Bal	Interest	Principal	Fees	Debt Payment	Debt Ending Bal	Reserve Interest	Recurring Costs	Net Payment	Discounted Payment
2/15/2010	0	0	0	0	0	0	3,509,592	0	0	0	0
3/15/2010	0	3,509,592	0	0	0	0	3,509,592	1,462	0	-14,425	-14,329
4/15/2010	0	3,509,592	0	0	0	0	3,509,592	1,462	0	-14,425	-14,234
5/15/2010	259,250	3,509,592	0	0	0	0	3,509,592	1,462	0	-13,345	-13,081
6/15/2010	259,250	3,509,592	0	0	0	0	3,509,592	1,462	0	-12,264	-11,943
7/15/2010	259,250	3,509,592	0	0	0	0	3,509,592	1,462	0	-11,184	-10,819
8/15/2010	259,250	3,509,592	0	0	0	0	3,509,592	1,462	0	-10,104	-9,709
9/15/2010	259,250	3,509,592	0	0	0	0	3,509,592	1,462	0	-9,024	-8,614

- **Detail Level Report:** This report provides more detailed information on the transactions. This can be printed on an 11x17 page (Figure 24). The same print or save options will be asked as with the Summary Level Report above.

FIGURE 24: DETAIL LEVEL REPORT

Analysis for Town of Simplicity																					
Option - Option 2, Financing Source - Rev Bond (Revenue Bond)																					
Construction Fund							Debt Service Schedule							Debt Service Reserve							
Date	CF Begin Bal	Loan or Bond Proceeds	Reserve Deposits	Financing Costs	Disbursements	Interest Earnings	CF Ending Bal	Debt Begin Bal	Interest	Principal	Fees	Debt Payment	Debt Ending Bal	Reserve Begin Bal	Reserve Withdrawals	Reserve Interest	Reserve Ending Bal	Amount Refinanced	Recurring Costs	Net Payment	Discounted Payment
2/15/2010	0	3,507,272	350,727	47,545	0	0	3,109,000	0	0	0	0	0	3,507,272	0	0	0	350,727	0	0	0	0
3/15/2010	3,109,000	0	0	0	0	12,954	3,109,000	3,507,272	0	0	0	0	3,507,272	350,727	0	1,461	350,727	0	0	-14,416	-14,320
4/15/2010	3,109,000	0	0	0	0	12,954	3,109,000	3,507,272	0	0	0	0	3,507,272	350,727	0	1,461	350,727	0	0	-14,416	-14,225
5/15/2010	3,109,000	0	0	0	259,083	11,875	2,849,917	3,507,272	0	0	0	0	3,507,272	350,727	0	1,461	350,727	0	0	-13,336	-13,073
6/15/2010	2,849,917	0	0	0	259,083	10,795	2,590,833	3,507,272	0	0	0	0	3,507,272	350,727	0	1,461	350,727	0	0	-12,257	-11,935
7/15/2010	2,590,833	0	0	0	259,083	9,716	2,331,750	3,507,272	0	0	0	0	3,507,272	350,727	0	1,461	350,727	0	0	-11,177	-10,812
8/15/2010	2,331,750	0	0	0	259,083	8,636	2,072,667	3,507,272	0	0	0	0	3,507,272	350,727	0	1,461	350,727	0	0	-10,097	-9,703
9/15/2010	2,072,667	0	0	0	259,083	7,557	1,813,583	3,507,272	0	0	0	0	3,507,272	350,727	0	1,461	350,727	0	0	-9,018	-8,608
10/15/2010	1,813,583	0	0	0	259,083	6,477	1,554,500	3,507,272	0	0	0	0	3,507,272	350,727	0	1,461	350,727	0	0	-7,938	-7,527
11/15/2010	1,554,500	0	0	0	259,083	5,398	1,295,417	3,507,272	0	0	0	0	3,507,272	350,727	0	1,461	350,727	0	0	-6,859	-6,461

FACT and FACT Lite

Financ

FACT can also generate graphs based on the results.

FIGURE 25: SUMMARY GRAPH MENU

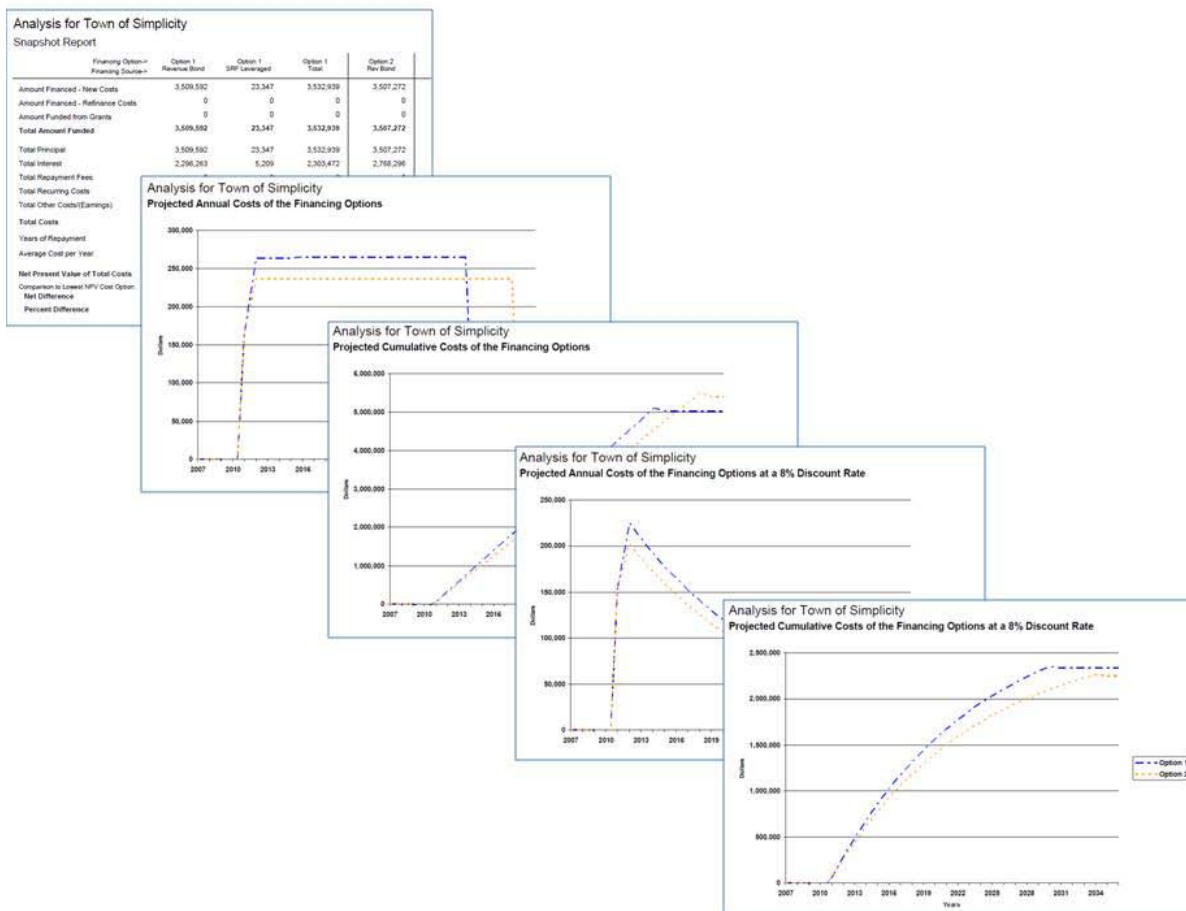


The five options are:

- **Snapshot Report:** A printable copy of the Results summary.
- **Annual Cost Graph:** A graph that compares, over time, the total annual cost for each financing option.
- **Cumulative Cost Graph:** A graph that compares, over time, the cumulative costs for each financing option.
- **Annual Discounted Cost Graph:** A graph that compares, over time, the discounted annual cost for each financing option. The discount rate is the interest rate used to convert future cash flows into present value (today's dollars); it therefore takes the effect of inflation into account. This is further explained on pages 40 and 45.
- **Cumulative Discounted Cost Graph:** A graph that compares, over time, the discounted cumulative costs for each financing option.

Figure 26 arrays the various reports and graphs produced by FACT.

FIGURE 26: REPORTS AND GRAPHS



Case Studies

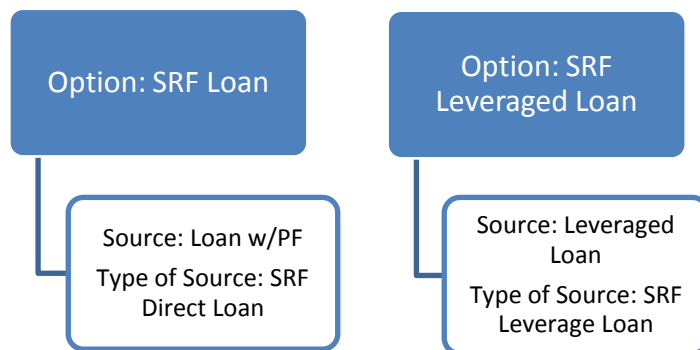
FACT (Standard): City of Snow

The City of Snow is seeking financing for a \$10 million project. It is considering two options: an SRF Leveraged Loan with a 2% interest rate and an SRF Direct Loan at 2.5% interest for which 30% of the principal is forgiven (i.e., 30% of the \$10 million loan does not need to be paid back). The City is using FACT to understand what its total costs will be under each option.

Step 1: Financing Scenarios

The City Manager for the City of Snow first sets up a new Financing Analysis, called City of Snow, chooses to do the analysis in FACT (Standard) and sets the discount rate at 3.0 percent.

FIGURE 27: SETTING UP FINANCING SCENARIOS, CITY OF SNOW



The Source is named "Loan with PF" (Principal Forgiveness) and the Type of Source is an "SRF Direct Loan." She will be able to enter the percentage of principal forgiven in the Financing Assumptions page. She enters the remaining sources as indicated in Figure 27.

Step 2: Financing Assumptions

Next, the City Manager goes to the Financing Assumptions tab. The first thing to notice is that by having selected a Grant as one of the Financing Sources, most of the data entry areas have been grayed out because they do not apply to a grant.

Each of the Financing Sources would close in February 2010, and repayment on the loans would be based on the Amount Disbursed. The interest rates (construction and repayment) are 2.5% for the SRF Direct Loan with Principal Forgiveness and 2% for the SRF Leveraged Loan. Construction is expected to be completed in one year; however, because FACT assumes disbursements begin in the third month after loan closing, a disbursement period of 9 months is entered. Interest and principal payments begin

Remember:

Definitions can be found by following the blue links in FACT and by referring to pages 43-47 of this User Guide

Next, ensuring that the correct Financing Analysis is displayed, she establishes two Financing Options and the associated Financing Sources.

First, in the Financing Options section, she enters the two options being considered by clicking on Add/Change Options and then Add an Option. The two options are: "SRF Loan" and "SRF Leveraged".

Next, she highlights SRF PF Loan and clicks on Add/Change Sources and then Add a Source.

Note: Before you start entering Financing Options, make sure that the correct Financing Analysis is showing!

one year after loan closing, with interest payments occurring semi-annually and principal payments annually. There are no fees and the SRF Leveraged Loan has a 10% debt service reserve.

The data is entered for each Financing Source as follows:

FIGURE 28: FINANCING ASSUMPTIONS FOR THE CITY OF SNOW

Financing Option	SRF Loan	SRF Leveraged
Financing Source	Loan w/PF	SRF Leveraged Loan
Type of Source	SRF Direct Loan	SRF Leverage Loan
Percent to be Repaid	70	100
Closing Date (month and year)	2 - 2010	2 - 2010
Date Interest Charged From (mo and yr)	2 - 2010	2 - 2010
Construction Interest Based On	Amount Disbursed	Amount Disbursed
Construction Period Interest Rate (%)	2.5	2.0
Length of Disbursement (months)	9	9
Repayment Period Interest Rate (%)	2.5	2.0
First Interest Payment Date (mo and yr)	2 - 2011	2 - 2011
Interest Frequency (every x months)	6	6
Repayment Fee Based On	No Fee	No Fee
Repayment Period Fee % or Amount	--	--
Fee Frequency (every x months)	--	--
Amortization Period	Level Debt Service	Level Debt Service
First Principal Payment Date (mo and yr)	2 - 2012	2 - 2012
Principal Frequency (every x months)	12	12
Number of Principal Payments (calc. yrs)	20 (20 years)	20 (20 years)
Reserve Basis	No Reserve	Amount Borrowed
Reserve Percentage	--	10
Reserve Duration (years)	--	20
Reserve Interest Rate (%)	--	2.0
Amount Refinanced by this Source	0	0
Amount of this Source Refinanced by Another Source	0	0

Step 3: Planning, Design and Construction Costs

With the Financing Assumptions established, the City Manager moves on to the Planning, Design and Construction Costs tab and enters the following costs:

FIGURE 29: PLANNING, DESIGN AND CONSTRUCTION COSTS FOR CITY OF SNOW

Financing Option	SRF Loan	SRF Leveraged
Financing Source	Loan w/PF	SRF Leveraged Loan
Construction	\$10,000,000	\$10,000,000
Engineering/Technical	\$400,000	\$400,000
Environmental Review	\$2,000	\$2,000
Construction Management	\$200,000	\$200,000
Total	\$10,602,000	\$10,602,000

As you will see, FACT automatically adds up the totals for the first Financing Option, SRF ARRA Financing, so you can ensure that the totals are accurate.

Step 4: Financing Costs

The City of Snow does not plan on including any financing costs in its SRF loan, and does not enter any data into this page.

Step 5: Recurring Costs

Both loan options are expected to have annual reporting costs of \$1,000 per year.

Step 6: Results

After entering this data, proceed to the Results tab (Figure 30). This shows that the total costs for the SRF Loan option with Principal Forgiveness is \$9,619,536 or \$458,073 per year. The Net Present Value (with a 3% discount rate) is \$6,949,919. The SRF Leveraged Loan Option has a total cost of \$12,880,453 and annual cost of \$631,355. The Net Present Value is \$9,515,116. This option is 36.9 percent more costly than the SRF Loan option with Principal Forgiveness.

FIGURE 30: CITY OF SNOW FACT (STANDARD) RESULTS

FACT: Financing Alternatives Comparison Tool - Microsoft Access

Home Create External Data Database Tools Add-Ins Acrobat

Home Page Financing Scenarios Financing Assumptions Planning, Design, and Construction Costs Financing Costs Recurring Costs Results

1. Select Financing Analysis to Work with: City of Snow Choose Summary Report/Graph Snapshot Report Preview/Print Selection Help and Definitions

2. Select Discount Rate: 3.00%

Financing Option-> Financing Source->	SRF Loan Loan w/PP	SRF Leveraged Leveraged Loan
Amount Financed - New Costs	7,421,400	11,780,000
Amount Financed - Refinance Costs	0	0
Amount Funded from Grants	3,180,600	0
Total Amount Funded	10,602,000	11,780,000
Total Principal	7,421,400	11,780,000
Total Interest	2,177,136	2,740,433
Total Repayment Fees	0	0
Total Recurring Costs	21,000	21,000
Total Other Costs/(Earnings)	0	-1,660,980
Total Costs	9,619,536	12,880,453
Years of Repayment	21.0	21.0
Average Cost per Year	458,073	613,355
Net Present Value of Total Costs	6,949,919	9,515,116
Comparison to Lowest NPV Cost Option:		
Net Difference	0	2,565,197
Percent Difference	0.0%	36.9%

Preview Detailed Reports-->>

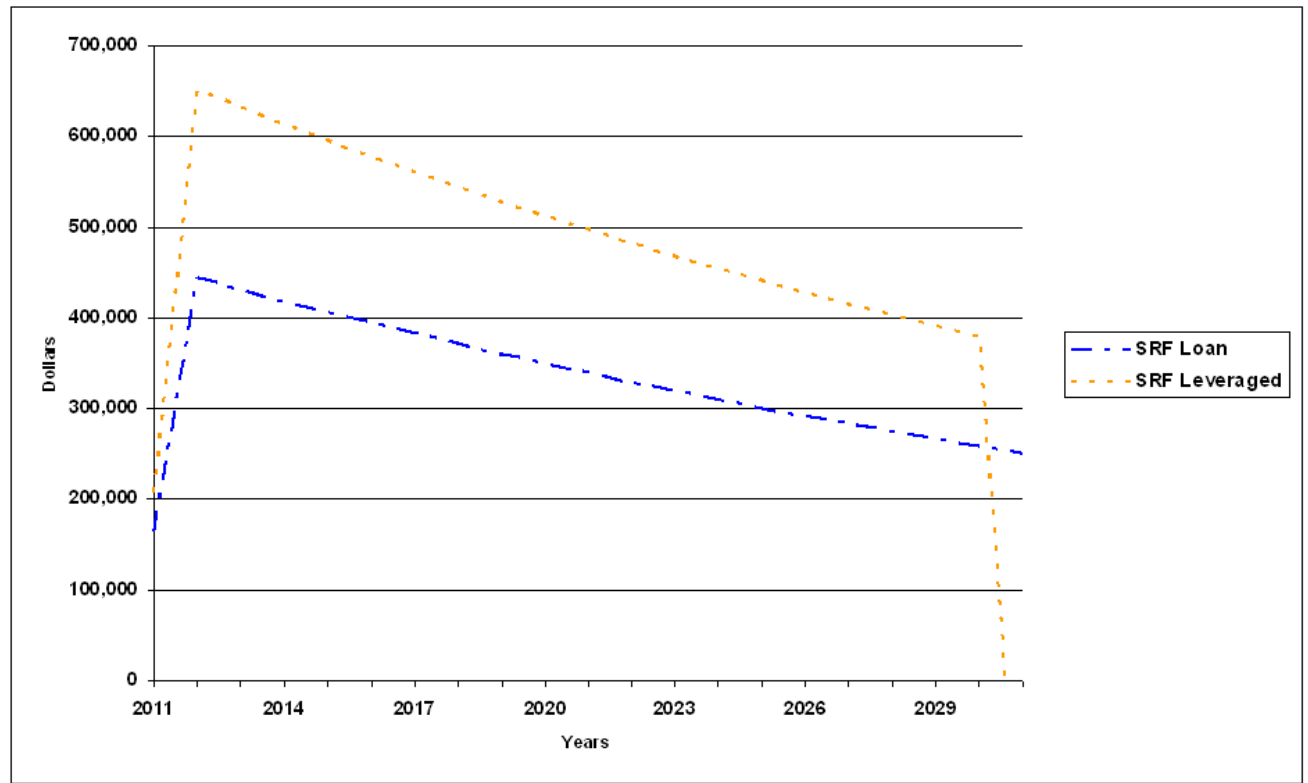
Summary Level Report
 Detail Level Report

The charts produced by FACT, such as the Discounted Annual Cost graph (Figure 31), also illustrate that the costs are significantly lower for the SRF Loan option with Principal Forgiveness.

FIGURE 31: DISCOUNTED ANNUAL COSTS FOR THE CITY OF SNOW

Analysis for City of Snow

Projected Annual Costs of the Financing Options at a 3% Discount Rate



FACT (Standard): Water Town

Water Town is preparing a \$4 million project. The Town is considering two options for financing the project:

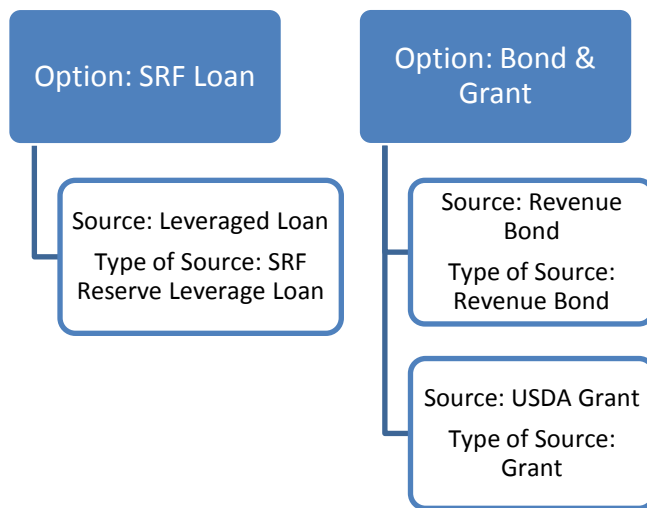
- SRF Reserve Leveraged Loan.
- Revenue Bond, of which \$2 million is paid off with a USDA grant after almost 2 years.

The Town will pursue the lowest-cost option.

Remember: FACT automatically saves your work

Step 1: Financing Scenarios

FIGURE 32: FINANCING SCENARIOS FOR WATER TOWN



Water Town's Utility Director creates a new Financing Analysis in FACT, selecting to do the analysis in FACT (Standard) and setting a discount rate of 4.0 percent.

The next step is to enter the two Financing Options: SRF Loan and Bond & Grant. For each option, he then adds the appropriate Financing Source (Figure 32).

Step 2: Financing Assumptions

Next, the Utility Director goes to the Financing Assumptions tab and enters additional information about the project.

The utility is planning on closing either the SRF Reserve Leveraged Loan or the Revenue Bond in January 2011. However, the USDA Grant would not be available until August 2012. The SRF Loan does not begin charging interest until 1 year after loan closing. The SRF financing has an interest rate of 2.5% while the Revenue Bond is expected to have an interest rate of 5.2%. Construction is expected to be completed in July 2012, and accounting for the 3 month delay incorporated by FACT, the Utility Director sets the disbursement period at 15 months for the SRF loan. The Utility Director enters the data as summarized in Figure 33.

FIGURE 33: FINANCING ASSUMPTIONS FOR WATER TOWN

Financing Option	SRF Loan	Bond & Grant	
Financing Source	SRF Reserve Leveraged Loan	Revenue Bond	USDA Grant
Type of Source	SRF Reserve Leverage Loan	Revenue Bond	Grant
Percent to be Repaid	100	100	--
Closing Date (month and year)	1 - 2011	1 - 2011	8 - 2012
Date Interest Charged From (mo and yr)	1 - 2012	1 - 2011	--
Construction Interest Based On	Amount Disbursed	Amount Borrowed	--
Construction Period Interest Rate (%)	2.5	5.2	--
Length of Disbursement (months)	15	15	1
Repayment Period Interest Rate (%)	2.5	5.2	--
First Interest Payment Date (mo and yr)	7 - 2012	7 - 2011	--

Interest Frequency (every x months)	6	6	--
Repayment Fee Based On	% of Balance	No Fee	--
Repayment Period Fee % or Amount	0.50	--	--
Fee Frequency (every x months)	6	--	--
Amortization Period	Level Debt Service	Level Debt Service	--
First Principal Payment Date (mo and yr)	7 – 2012	7 – 2011	--
Principal Frequency (every x months)	6	6	--
Number of Principal Payments (calc. yrs)	40 (20 years)	40 (20 years)	--
Reserve Basis	Balance Outstanding	Amount Borrowed	--
Reserve Percentage	50	10	--
Reserve Duration (years)	20	20	--
Reserve Interest Rate (%)	2.0	5.2	--
Amount Refinanced by this Source	0	0	\$2,000,000
Amount of this Source Refinanced by Another Source	0	\$2,000,000	0

Step 3-5: Construction, Financing and Recurring Costs

Next, the Utility Director enters the construction, financing and recurring costs associated with the project. Because he does not know how much the Financial Advisor, Underwriter, Official Statement and Rating Agency Fee will be, he has selected to use the Typical Values built into FACT (Standard) by checking the box below those options (Figure 34).

FIGURE 34: CONSTRUCTION, FINANCING AND RECURRING COSTS FOR WATER TOWN

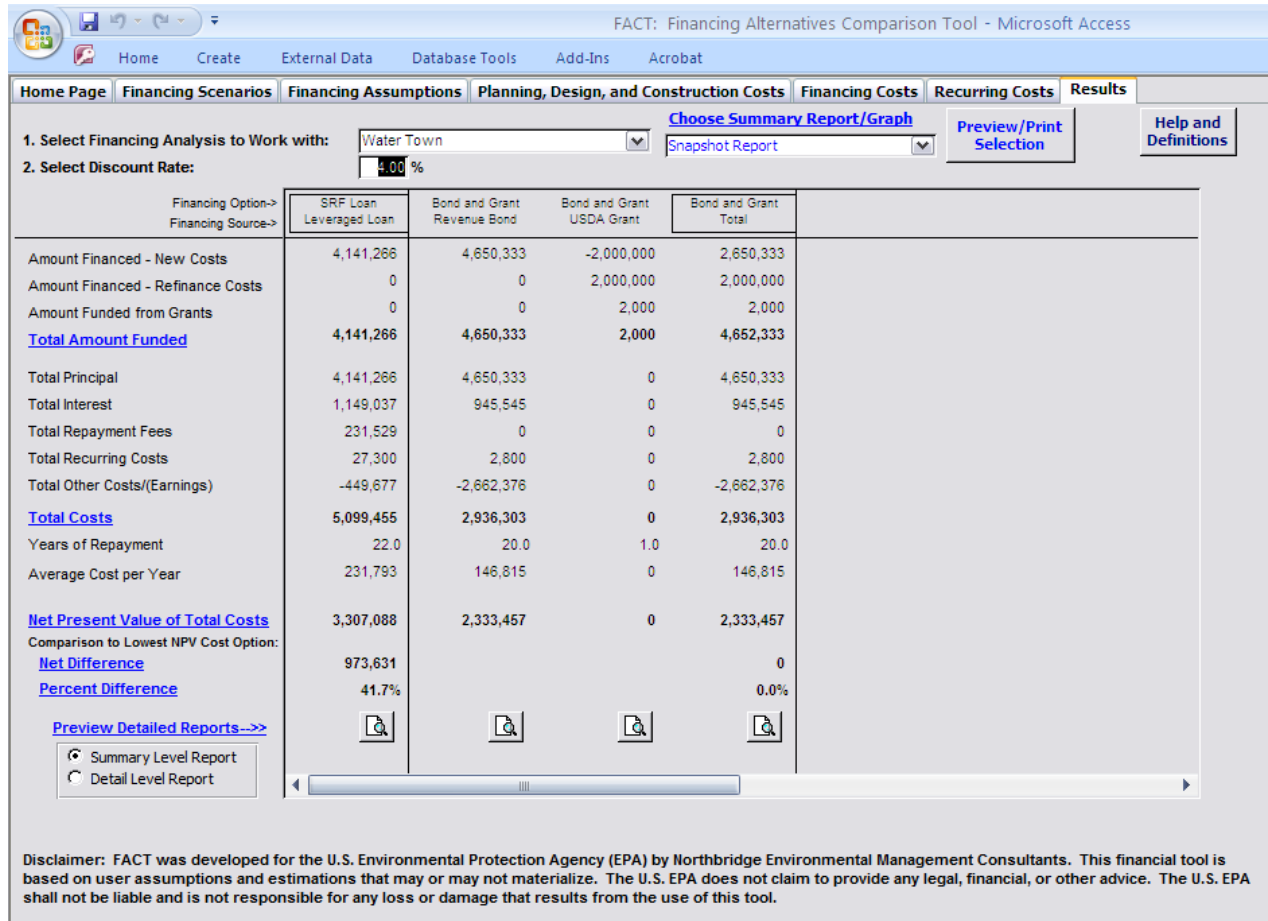
Financing Option	SRF Loan	Bond & Grant	
Financing Source	SRF Reserve Leveraged Loan	Revenue Bond	USDA Grant
Construction Costs			
Construction	\$4,000,000	\$4,000,000	--
Engineering/Technical	\$50,000	\$50,000	--
Environmental Review	\$3,000	--	\$2,000
Construction Management	\$80,000	\$80,000	--
<i>Total Construction Costs</i>	<i>\$4,133,000</i>	<i>\$4,130,000</i>	<i>\$2,000</i>
Financing Costs			
Financial Advisor	\$8,266*	\$20,650*	--
Bond Counsel	--	\$10,000	--
Underwriter	--	\$20,650*	--
Rating Agency Fee	--	\$3,000*	--
Official Statement	--	\$1,000*	--
<i>Total Financing Costs</i>	<i>\$8,266</i>	<i>\$55,300</i>	<i>--</i>
Recurring Costs			
Reporting	\$1,000	--	\$1,000
Accounting	\$300	\$500	\$300
Paying Agent Fee	--	\$500	--
SEC Disclosure	--	\$400	--
<i>Total Recurring Costs</i>	<i>\$1,300</i>	<i>\$1,400</i>	<i>\$1,300</i>

* These are "Typical Values"

Step 6: Results

When the Utility Director goes to the Results tab, he learns that the Revenue Bond and USDA grant option is the lowest cost option over the life of the financing by almost 42 percent (Figure 35). The Net Present Value of the Total Costs for the SRF Loan Option is \$2,207,088 while the Bond & Grant Option has a total cost of \$2,333,457.

FIGURE 35: RESULTS FOR WATER TOWN



Viewing the Detail Level Report for the Revenue Bond Financing Source also shows that due to the \$2 million grant, it becomes possible to pay off the revenue bond in only 10 years, rather than 20 years.

Charts can also be used to illustrate the annual and cumulative costs of this project. The Annual Discounted Cost Graph shows that the SRF Loan option has lower annual costs for the first several years, but that the costs are stretched over a longer time span, resulting in higher total costs (Figure 36). At the same time, the Cumulative Discounted Cost Graph shows that the Bond & Grant Option has significantly lower total costs (Figure 37).

FIGURE 36: DISCOUNTED CUMULATIVE COSTS FOR WATER TOWN

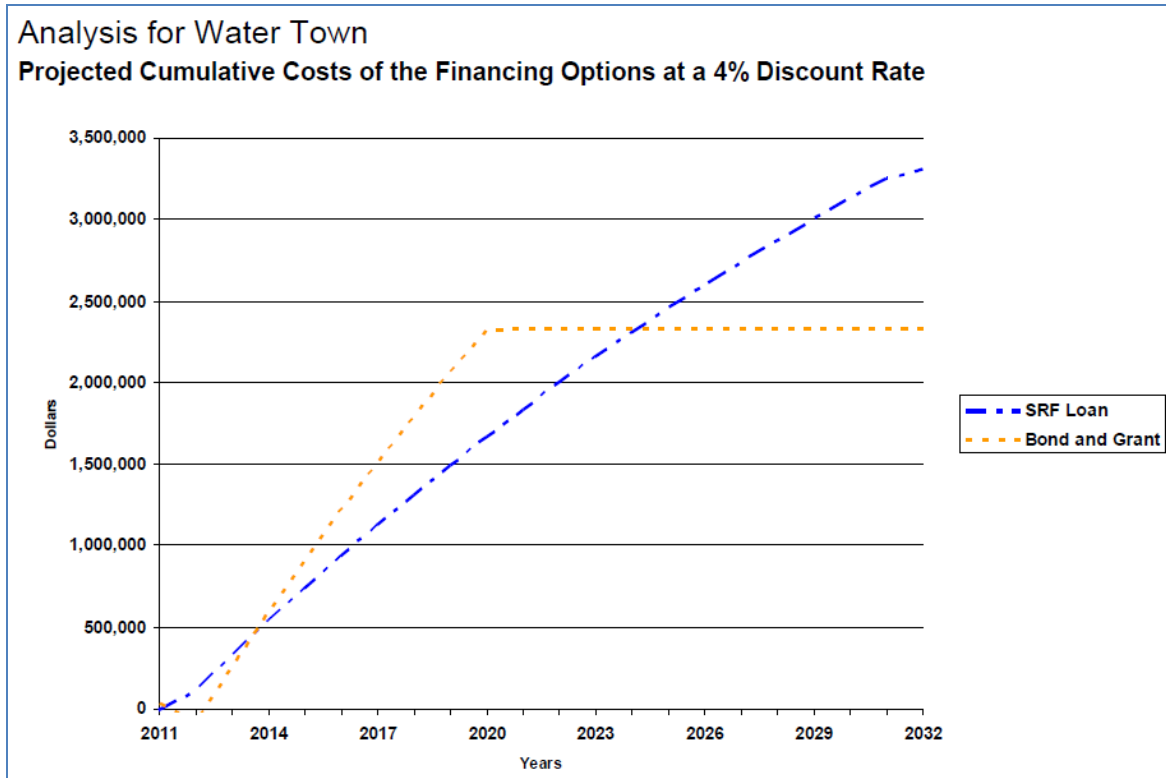
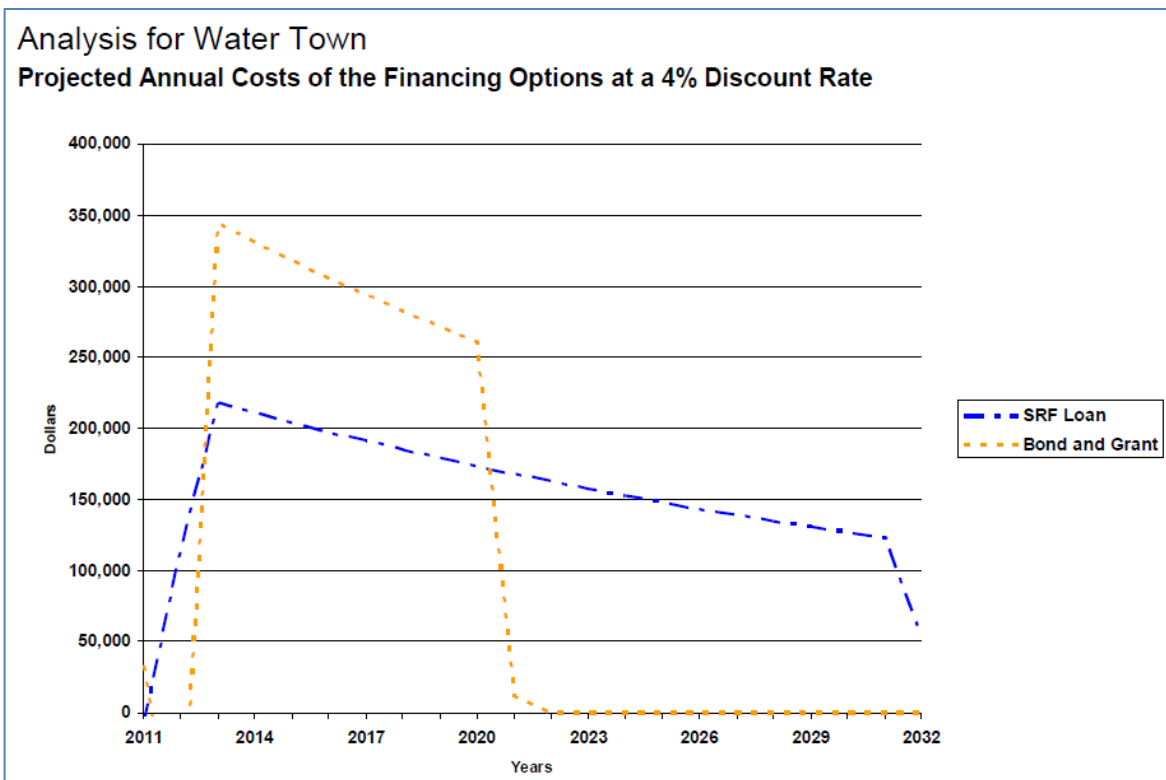


FIGURE 37: DISCOUNTED ANNUAL COSTS FOR WATER TOWN



FACT Lite: City of Epaville

The City of Epaville needs \$1.5 million to upgrade its wastewater treatment system. It has been notified that it could receive an SRF Direct Loan for up to \$1 million; it would finance the remaining \$500,000 with a bank loan. The other option is a \$1.5 million revenue bond. Because the Mayor does not have many of the financing and project specifics worked out, she is using FACT Lite to help her evaluate her options.

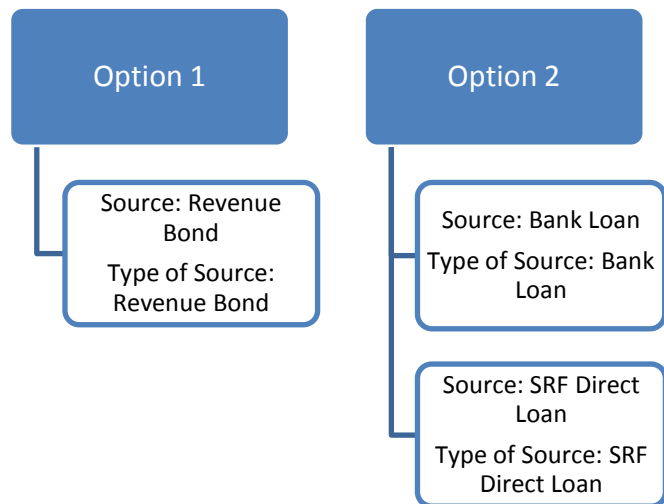
Step 1: Financing Scenarios

The Mayor of Epaville begins by adding a new Financing Analysis, calling it City of Epaville. She selects to do the analysis in FACT Lite and sets the discount rate at 3.0 percent.

Next, she makes sure that the correct Financing Analysis is displayed and proceeds to add the Financing Options. She adds two Financing Options: Option 1 and Option 2.

She then highlights Option 1 and proceeds to add a Financing Source. Option 1 has one Financing Source – Revenue Bond. She highlights Option 2 and adds two Financing Sources: Bank Loan and SRF Direct Loan (Figure 38).

FIGURE 38: SETTING UP FINANCING SCENARIOS, CITY OF EPAVILLE



Step 2: Financing Assumptions

The Mayor proceeds to the Financing Assumptions tab in FACT Lite for the Epaville analysis (Figure 39).

She expects that both of the Financing Options would close in January 2011. Construction will last one year; because FACT assumes disbursements begin in the third month after closing, she sets the disbursement period to 9 months for the Bank Loan and SRF Direct Loan.

Reminder:
FACT Lite only uses annualized interest rates and annual principal and interest payments.

The bank from which she would obtain the Bank Loan would charge interest and principal quarterly and have a 2% quarterly interest rate. Because FACT Lite uses only annualized interest rates, the Mayor enters an interest rate of 8.0% (2% * 4). FACT Lite assumes annual principal and interest payments, so the first principal and interest payment dates are set for January 2012 for the Revenue Bond and SRF Loan options (note that you must change the year of the first principal payment date before you can change the interest payment date).

FIGURE 389: FINANCING ASSUMPTIONS, CITY OF EPAVILLE

Financing Option	Option 1	Option 2	
Financing Source	Revenue Bond	Bank Loan	SRF Direct Loan
Type of Source	Revenue Bond	Bank Loan	SRF Direct Loan
Closing Date (month and year)	1 - 2011	1 - 2011	1 - 2011
Repayment Period Interest Rate (%)	5.6	8.0	2.0
Length of Disbursement (months)	9	9	9
First Interest Payment Date (mo and yr)	1 - 2012	4 - 2011	1 - 2012
First Principal Payment Date (mo and yr)	1 - 2012	4 - 2011	1 - 2012
Number of Principal Payments (years)	15	10	20

Step 3: Costs

FACT Lite simplifies costs into two categories: Project Costs, which include construction, planning and design, and Upfront Financing Costs, which includes costs such as financial advisors and bond counsel. The project is set to receive \$1 million in SRF Loan funds, and is planning on using a Bank Loan to fund the remaining \$500,000 in expected project costs. Based on previous experience, the Mayor expects the financing costs to be between \$3,000 and \$25,000, depending on the Financing Source (Figure 40).

FIGURE 40: COSTS FOR THE CITY OF EPAVILLE

Financing Option	Option 1	Option 2	
Financing Source	Revenue Bond	Bank Loan	SRF Direct Loan
All Project Costs	\$1,500,000	\$500,000	\$1,000,000
Upfront Financing Costs	\$25,000	\$7,000	\$3,000

Step 4: Results

Proceeding to the Results tab, the City of Epaville finds that based on the information available, Option 2 (Bank Loan and SRF Direct Loan) is the least costly option, with a discounted total cost of \$1,513,336. Option 1 has a total cost of \$1,765,875 after discounting to today's dollars – 16.7 percent higher than Option 2 (Figure 41).

By viewing the Summary Level Report for Option 2, the Mayor of Epaville is able to see what each annual payment would be under this Financing Option (Figure 42).

The Mayor also plans on using some of the graphs produced by FACT, such as the Cumulative Costs Graph in Figure 43 to present the options to the City Council.

FIGURE 41: RESULTS FOR THE CITY OF EPAVILLE

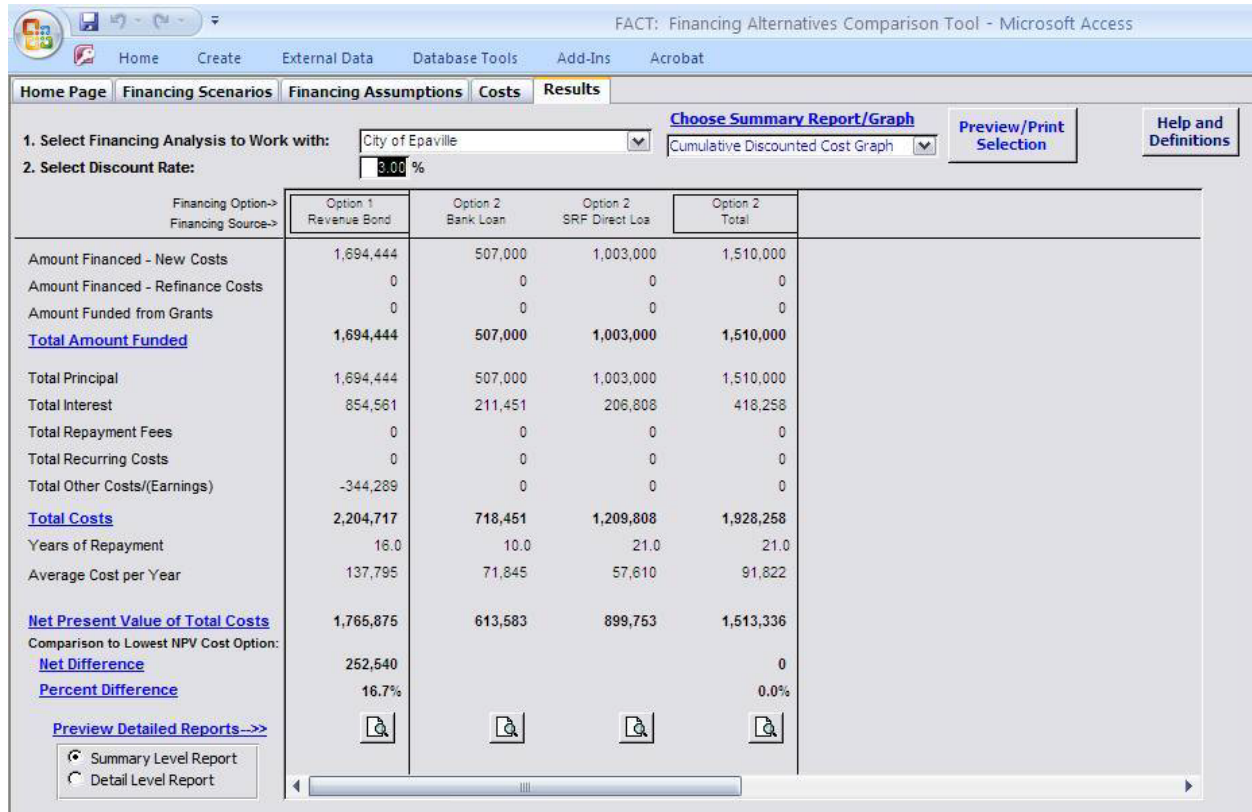


FIGURE 39: SUMMARY LEVEL REPORT FOR OPTION 2, CITY OF EPAVILLE

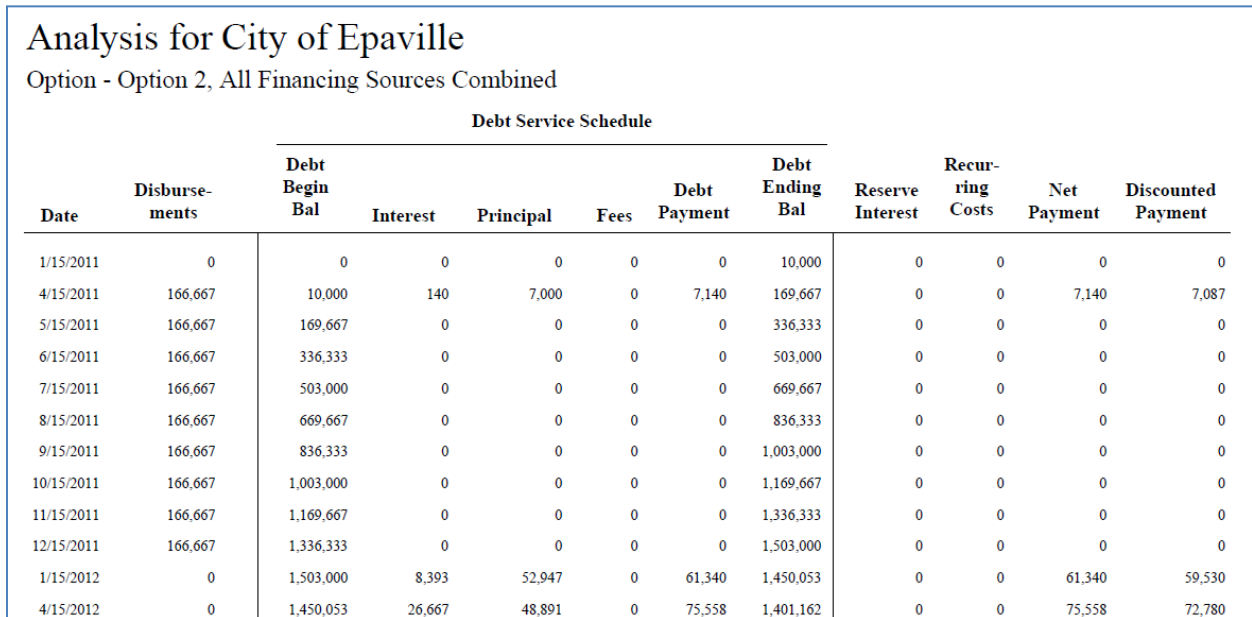
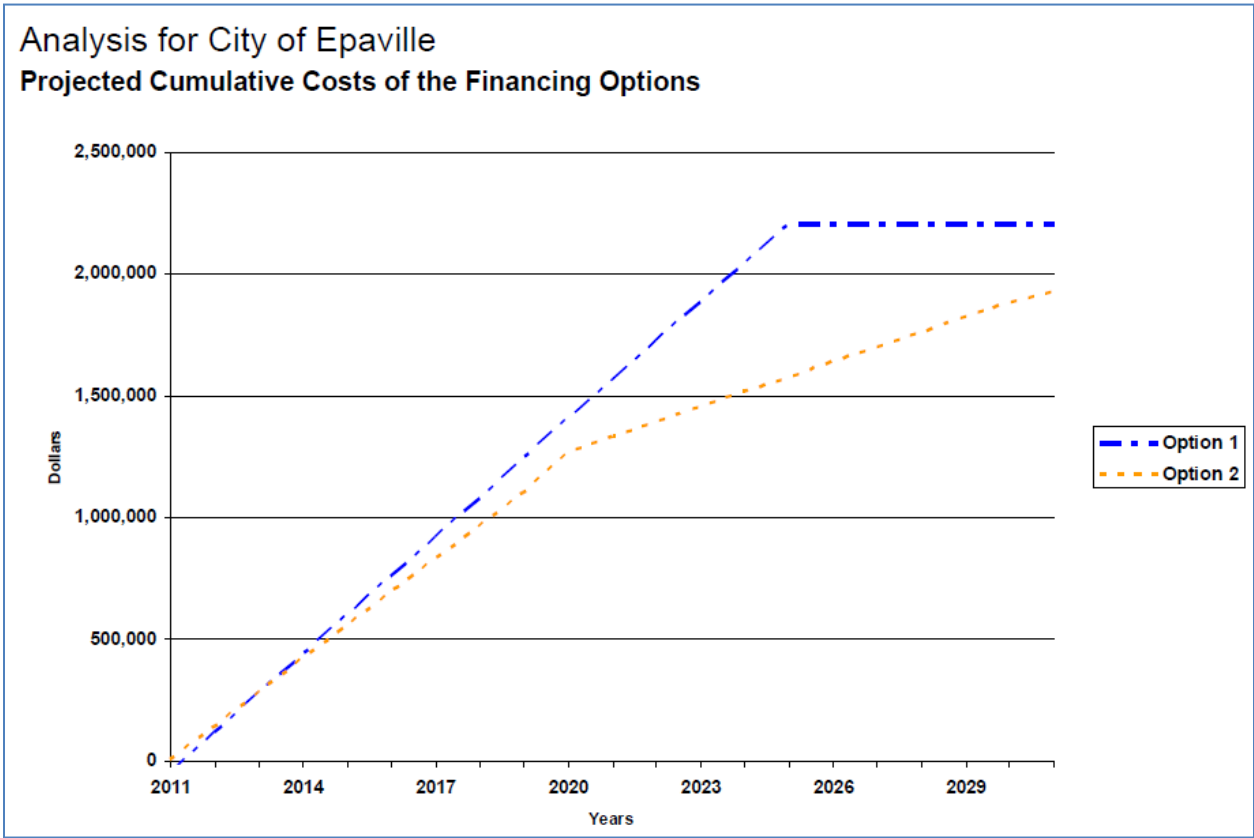


FIGURE 40: CUMULATIVE COST GRAPH FOR THE CITY OF EPAVILLE



Basic Assumptions Built Into FACT

FACT makes a number of calculations and assumptions “behind the scenes.” Below is a summary of the main calculations and assumptions.

Subject	Assumption
Length of Disbursements	The first disbursement occurs 3 months after loan closing.
Pace of Disbursements	Disbursements occur in a straight line – they are assumed to be the same for every disbursement period. For example, a \$1 million project disbursed over 4 months is assumed to disburse \$250,000 every month.
Interest Expense and Earnings	FACT assumes simple interest. That is, interest is only calculated on the principal amount.
Interest Earnings on Reserves	Interest earnings on reserves are used to reduce the payments on the loans.
Fees	Fees (if applicable) are wrapped into the debt payments on loans.
Construction Interest Rate	The construction interest rate will be used until one principal payment <u>before</u> principal payments begin. For example, if principal payments occur every 6 months starting on January 1, 2011, the construction interest rate will apply until July 1, 2010. Starting on July 1, 2010, principal begins to accrue, as well as the repayment period interest rate.
Recurring Costs	Recurring costs are paid for out-of-pocket. In the reports, they are shown to essentially increase the monthly payment on the loan. Recurring costs are shown to be paid once a year, on the same date as loan closing.
Refinancing Dates	When Financing Source A is refinanced with Financing Source B, the final payoff date for Financing Source A will be the same date as B’s closing date.

Useful Tips

How do I model project refinancing?

When a project is refinanced, include all of the Financing Sources in your model run. In the Water Town example built into FACT, a Revenue Bond is refinanced with a USDA Grant.

The act of refinancing is accounted for in the last two inputs of the **Financing Assumptions** tab. Using the Water Town example, **Amount of this Source Refinanced by Another Source** accounts for the Revenue Bond, while **Amount Refinanced by this Source** accounts for the USDA Grant.

In the example, the Revenue Bond is covering the entire project cost. Therefore, all of the **Planning, Design, and Construction Costs** are accounted for under the Revenue Bond, except for the environmental review, which is required and paid for with the USDA Grant. However, the refinancing source may also incur new **Financing Costs** and **Recurring Costs**.

How do I account for inflation due to project delays?

Sometimes a project may be delayed because the community is waiting for a specific Financing Option (e.g., it may be a year before the community learns whether it will receive a certain grant) or due to other reasons. As construction is delayed, the costs of the project may increase due to inflation.

To factor in the delay, ensure that the **Closing Date** given in the Financing Assumptions reflects the later start date. In addition, the cost of the project is likely to increase with delays. Construction inflation data may be found online at USDA's Natural Resource Conservation Service, <http://www.economics.nrcs.usda.gov/cost/priceindexes/index.html>, the Engineering News Record, www.construction.com, and other websites. For best results, the cost increases from inflation should be included in the Planning, Design, and Construction Costs.

For example, if construction inflation is 3% per year, delaying a project from June 2010 to June 2012 will increase the construction costs from \$1 million to \$1.06 million ($\$1 \text{ million} * 1.03 * 1.03$). In the Financing Assumptions tab, change the Closing Date to June 2012. Also, make sure to enter the new construction amount under the appropriate financing source in the Project, Design, and Construction Costs tab.

How do I account for situations where funding comes from multiple sources?

FACT is designed to enable cost comparisons when funding comes from several sources. When you are developing scenarios under the **Financing Scenarios** tab, you can enter several **Financing Sources** for each **Financing Option**. Figure 41 is an illustration of a scenario where a combination of four sources is providing the funding for a project – a CWSRF Loan, RUS Loan, RUS Grant, and a State Grant. For the Type of Source, you would enter “Other” for the RUS Loan, as this option is not already built into FACT.

In the next tabs, each Financing Source will appear individually, as well as the totals for each line item (Figure 42). This will help ensure that you are accounting for the entire project.

FIGURE 41: MULTIPLE FINANCING EXAMPLE

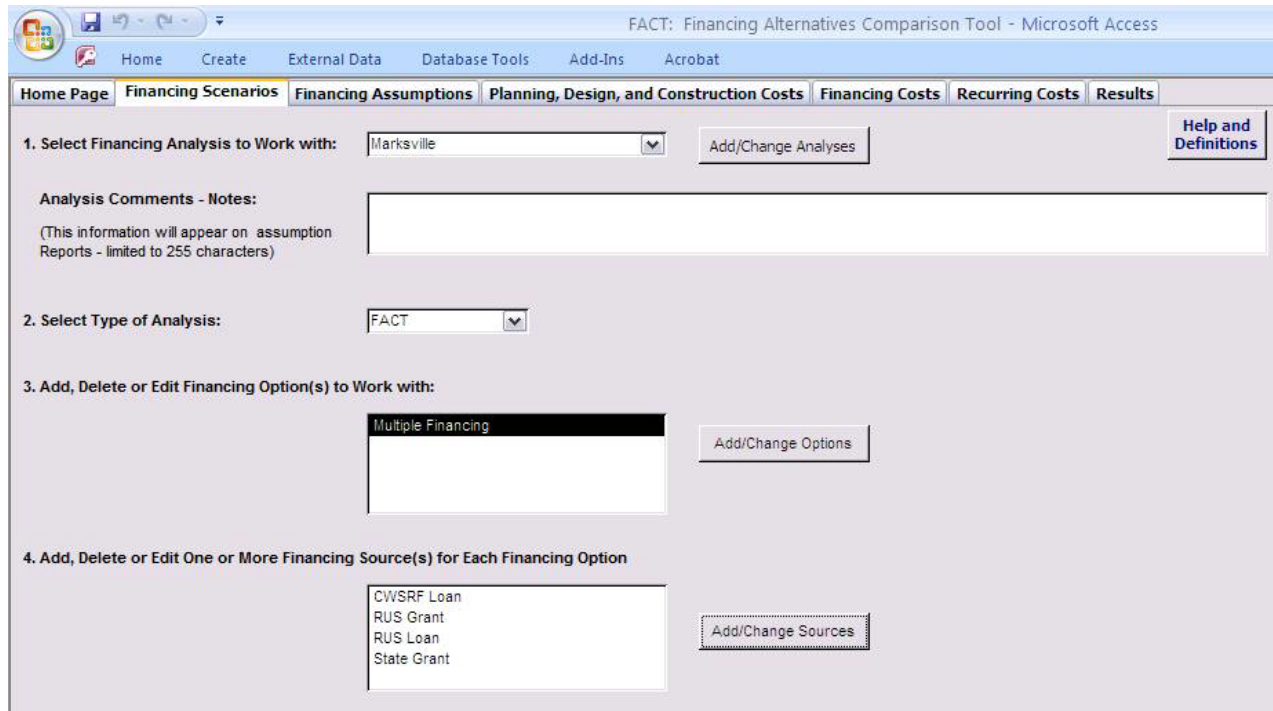
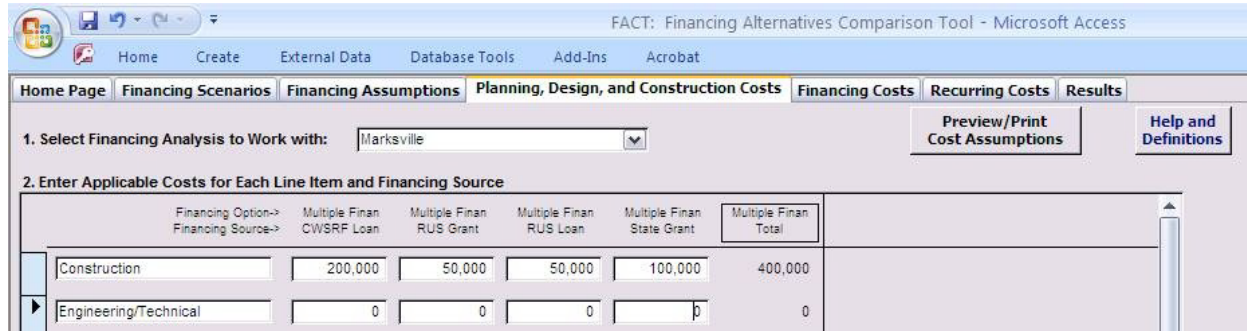


FIGURE 42: ENTER APPLICABLE COSTS FOR EACH FINANCING SOURCE



How do I select the appropriate discount rate?

The Discount Rate is the interest rate used to convert future cash flows into present dollars (today's dollars). The discount rate should generally be based on the average cost of borrowing on the open market. The Treasury Department website is one source of that kind of information (http://www.treasurydirect.gov/govt/rates/tcir/tcir_opdirannual.htm), as is the USDA's Natural Resource Conservation Service (<http://www.economics.nrcs.usda.gov/cost/priceindexes/index.html>), or you may choose to use your own local data.

If you would prefer not to convert future cash flows into present dollars, the discount rate can be set to 0 percent.

Can I incorporate customized costs?

FACT was designed to be highly customizable. In FACT (Standard), any of the cost line items, such as Construction, Environmental Review, Financial Advisor, and Reporting can be edited. Line items labeled "Other" are also provided. *Keep in mind that all of the recurring costs must be on an annual basis.* All of

the costs under the **Planning, Design and Construction Costs** tab and the **Financing Costs** tab are incorporated into the financing option, while the **Recurring Costs** are considered out-of-pocket expenses. Changing the cost entries or using the “Other” line items does not affect the calculations taking place in FACT.

In FACT Lite, all of the costs are rolled up into two categories, All Project Costs and Upfront Financing Costs. All of these costs are assumed to be included in financing, and are not out-of-pocket expenses.

Troubleshooting

What is the minimum amount of information needed for an analysis?

FACT (Standard) requires more information than FACT Lite. All of the information in the Financing Assumptions tab must be filled in for FACT Lite. In addition, FACT Lite requires that at least the project costs be filled in.

FACT (Standard) requires that all of the data in the Financing Assumptions be entered in order for the analysis to work. If there are no fees or the project is not being refinanced by another source, you may enter “No Fee” or “0” in the entries, respectively. At a minimum, some construction costs should be filled in as well.

FACT will give you a warning if you have not entered sufficient information for it to complete the analysis.

I can't see the entire FACT workspace – Why?

Your computer's screen resolution must be set to at least 1024x768 pixels in order to correctly show the FACT workspace. To check or change your screen resolution, go to your computer's Display Properties in the Control Panel. Under the Settings tab, look for the Screen Resolution bar, and make sure it is set at 1024x768 or higher.

Definitions and Explanations of Inputs

Financing Assumptions

Percent to be Repaid: The percentage of the financing that is to be repaid. Unless there is a grant component to the Financing Source, this would generally be 100%.

Closing Date: The month and year in which the Financing Source is entered into or executed, such as the month in which loan papers are signed.

Date Interest Charged From: In many cases, the Closing Date is also the same date that interest will be charged from. However, in some cases, the Financing Source may not begin accruing interest until a later date.

Construction Interest Based On: Construction interest is generally either charged on the *Amount Disbursed* or the *Amount Borrowed*. For example, with an SRF loan, you are charged interest on the money you have received (*Amount Disbursed*). Conversely, with bonds you pay interest on the entire amount of the debt (*Amount Borrowed*) as soon as it is issued.

Construction Period Interest Rate: Under some circumstances, the interest rate charged during construction can differ from the interest charged during the rest of the financing period.

Length of Disbursement: Disbursements (i.e., payments for construction from loan or grant proceeds) are assumed to start in the third month after closing. At that point, the disbursements will continue for the number of months specified in this entry. In most cases, disbursement is completed when construction ends.

Repayment Period Interest Rate: Interest rate charged during the loan repayment period. This can differ from the Construction Period Interest Rate for some Financing Sources. **Note** that the model assumes a *fixed or average* interest rate. If the loan or debt has a *variable* interest rate, please use an *average* interest rate.

First Interest Payment Date: The month in which the borrower first pays interest on its loan or bond; after this time, interest is paid at the Interest Frequency (below). Interest payments must begin before or at the same time as principal payments. If a later date is needed than is displayed in the drop-down box, adjust the Principal Payment Date, and then you will be able to adjust the First Interest Payment Date. FACT assumes a *fixed or average* interest rate.

Interest Frequency: The number of months between interest payments; enter 12 for annual, 6 for semi-annual and 3 for quarterly payments.

Repayment Fee Based On: Some Financing Sources charge a fee. It could be a flat fee, such as \$100 a year. The fee can also be a percentage of the remaining balance on a loan, such as a 1% annual fee on the outstanding loan balance. Finally, fees could be based on the debt service.

Repayment Period Fee % or Amount: The fee percentage or the amount to use with the Repayment Fee type chosen in the previous entry. If you selected “No Fee” previously, you will not be able to enter data here.

Fee Frequency: The frequency in months that fees will be paid, such as 6 for semi-annual and 12 for annual fees. If you selected “No Fee” in previously, you will not be able to enter data here.

Amortization Method: The amortization period is the number of years it takes to pay off the loan or bond in full. The debt can be paid off in a number of ways for your Financing Source, these are the Amortization Methods. The three most common methods are given here:

- **Level Debt Service:** The payments (principal plus interest) are the same throughout the life of the financing.
- **Level Principal:** The principal payments are the same throughout the life of the financing. Interest payments will vary by period.
- **Balloon payment:** One payment of principal at the end of the loan term. Interest payments occur throughout the life of the financing, however.

First Principal Payment Date: The month and year in which principal payments begin. Your choice here will affect when interest payments can begin (see above).

Principal Frequency: The frequency in months in which principal payments are made, such as 6 for semi-annual. Interest payments and fees (if applicable) must be paid *at least* as frequently as principal payments, so your choice here may affect the interest and fee payment frequency.

Number of Principal Payments: The number of principal payments. FACT will use this number and the Principal Frequency to calculate the life of the loan in years, which is provided. For example, a loan with monthly principal payments (payment frequency = 1) and 240 payments will result in a 20 year loan term.

Reserve Basis and Reserve Percentage: Some Financing Sources require a Debt Service Reserve, which can be based on the Amount Borrowed or the Balance Outstanding. Revenue bonds typically have a reserve based on the amount borrowed, while a SRF Reserve Leveraged Loan will have a reserve based on the outstanding balance. The Reserve Percentage is the size of the reserve compared to the loan size; it is often 10%.

Reserve Duration: The number of years in which the reserve is held.

Reserve Interest Rate: Debt service reserves typically earn interest. Due to federal arbitrage rules, the interest rate on the debt service cannot be higher than the interest rate on the bonds (if it is, earnings must be rebated to the federal government).

Amount Refinanced by this Source: A Financing Source may be refinanced by another source at a later date. For example, a Bond Anticipation Note (BAN) may be refinanced the following year with a Revenue Bond. The amount of the BAN that will be refinanced from the bond should be entered in this box *under the Revenue Bond column*.

Amount of this Source Refinanced by Another Source: Using the above example, the amount of the BAN that will be refinanced by the bond should be entered in this box *under the BAN column*.

Planning, Design and Construction Costs

Construction: Estimated cost of construction financed by each Financing Source, including estimated costs of materials and equipment.

Engineering/Technical: The Engineering and Technical expenses that go along with planning for construction. For example, the Preliminary Engineering Report, which proposes a course of action for the problem, and the Plans and Specifications can be included under this cost item. This does not include the review of environmental impacts.

Environmental Review: Many financing options require an environmental review to determine the environmental impact of the proposed project. For a Financing Source using federal funds, this includes a crosscutter review. In some cases, a crosscutter review is not required with an SRF loan, which can reduce the environmental review costs; please see your state SRF program for more information.

Bidding and Contracts: Some Financing Sources, such as the SRF, require that the project sponsors competitively bid their projects, including putting in a good faith effort to procure MBE/WBE subcontractors. This cost item includes only the cost of taking the project to bid (e.g., advertising, drafting the bid documents), not the financial implications of bidding the project.

Legal Fees: Legal fees associated with planning and constructing the project.

Land and Right-of-Way: Costs associated with purchasing land for the project, including appraisals, purchase negotiations, legal costs, and purchase agreements.

Construction Management: Expenses associated with managing the construction project, such as inspections and compliance with reporting requirements.

Financing Costs

Financial Advisor: Financial advisory fees. These are often based on a percentage of the debt issued. Research indicates that this averages \$5 for every \$1,000 of a bond issue and \$2 for an SRF Loan (as indicated by the “Typical Value”). However, the actual cost can vary significantly from one community to another.

Bond Counsel: Fees associated with the bond counsel in structuring a bond issue. Research indicates that this averages \$3 for every \$1,000 of a loan (as indicated by the “Typical Value”) but the actual cost can vary significantly. Check with your state SRF program to confirm whether you will need a bond counsel.

Underwriter: Investment banker(s) that purchases a new issue of securities and distributes it to investors. The fee may be a flat fee based on the debt issued, or it could be a small percentage added to the interest rate of the debt. In the former case, the amount should be added here. In the latter case, it should be included in the overall interest rate on the debt. This fee is usually only applicable for Bonds or Bond Anticipation Notes. Research indicates that this averages \$5 for every \$1,000 of the issue (as indicated by the “Typical Value”).

Rating Agency Fee: Fee charged by the credit rating agencies for their evaluation of a Bond issue’s credit worthiness. This fee averages approximately \$3,000 (“Typical Value”).

Official Statement: Costs associated printing and mailing a Bond issue’s official statement. The cost averages approximately \$1,000 (“Typical Value”).

Closing Costs/Fees: Administrative costs associated with processing a Financing Source.

Bond Insurance: Bond insurance may be required for a bond. The cost of the insurance is typically based on the size of the loan.

Recurring Costs

Reporting: Many Financing Sources require some reporting and paperwork. This input covers only the time required to prepare and submit the work – on an *annual* basis. These are out-of-pocket costs.

Accounting: The staff time required for ensuring proper accounting of the project. This includes disbursement requests. This cost should be calculated on an *annual* basis. These are out-of-pocket costs.

General Administrative: Other *annual* administrative expenses associated with managing the project. These are out-of-pocket costs.

Paying Agent Fee: Usually, a bank acts as a paying agent by receiving the funds from the bond issuer and paying principal and interest to bondholders. This will not be required for many of the financing options, and is estimated to be approximately \$500 per year (“Typical Value”). These are out-of-pocket costs and should be computed on an *annual* basis.

SEC Disclosure: The cost of complying with the Security and Exchange Commission’s disclosure requirements for securities (e.g., bonds). This cost is estimated to be approximately \$400 per year (“Typical Value”). These are out-of-pocket costs.

Results

Discount Rate: Interest rate used to convert future cash flows into present value (today’s dollars). This percentage rate may be entered here or when you create a new Financing Analysis. When the discount rate is 0%, the Net Present Value of the Total Costs will equal the Total Costs of a project.

Amount Financed – New Costs: The amount of the project financed with each Financing Source and the total for each Financing Option. This does not include grant funding.

Amount Financed – Refinance Costs: The amount of the project financed using a source of refinancing.

Amount Funded from Grants: The amount of the project financed with a grant.

Total Amount Funded: The total amount of the project funded for each Financing Source – consisting of the amounts financed and the amount funded with grants.

Total Principal: Total principal of the Financing Source. This is zero (0) for grants.

Total Interest: Total interest associated with paying off the principal over the life of the financing.

Total Repayment Fees: Total Fees charged over the life of the financing.

Total Recurring Costs: Total Recurring Costs over the life of the financing. These are out-of-pocket costs.

Total Other Costs/(Earnings): Additional costs or earnings, including any interest earnings.

Total Costs: The total cost of the project, including principal, interest, fees, earnings, and other costs associated with the Financing Source.

Years of Repayment: Total length of financing.

Average Cost per Year: Total costs averaged over the length of the financing option.

Net Present Value of Total Costs: The present and future value of the cash flows of the project, discounted back to today's dollars using the Discount Rate.

Comparison to Lowest NPV Cost Option: The tool compares the Net Present Value (NPV) of each Financing Option, and will provide the net difference in dollars and percentages compared to the lowest-cost option.

Contact Information

If you have any further questions, comments, or problems, please contact Mark Mylin at EPA's Clean Water State Revolving Fund Program – mylin.mark@epa.gov, or 202-564-0607. Or select **E-Mail a Question or Comment on FACT** from the FACT Home Page.