

MAP OF SUNSHINE CITY AND SURROUNDING AREA



Cabbagetown
(population 58)

Proposed Reservoir

Proposed Site - Hydroelectric Dam
(Hillman Hydro)

Fish Spawning Grounds

Proposed Site
Nuclear Generating Station
(Acme Atomic)

← pig

Sunshine City
(population 122 000)

1 kilometer

Farwood Forest

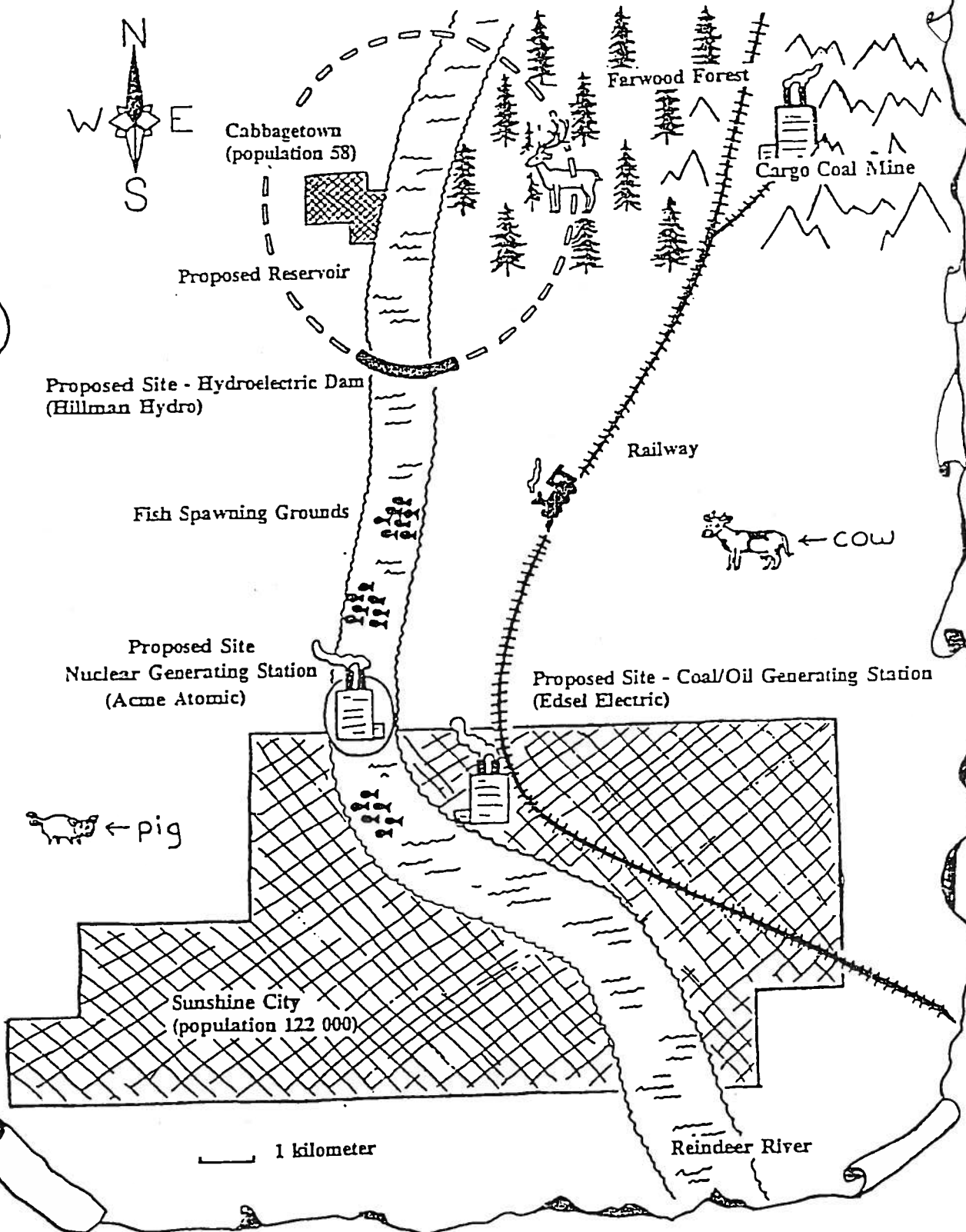
Cargo Coal Mine

Railway

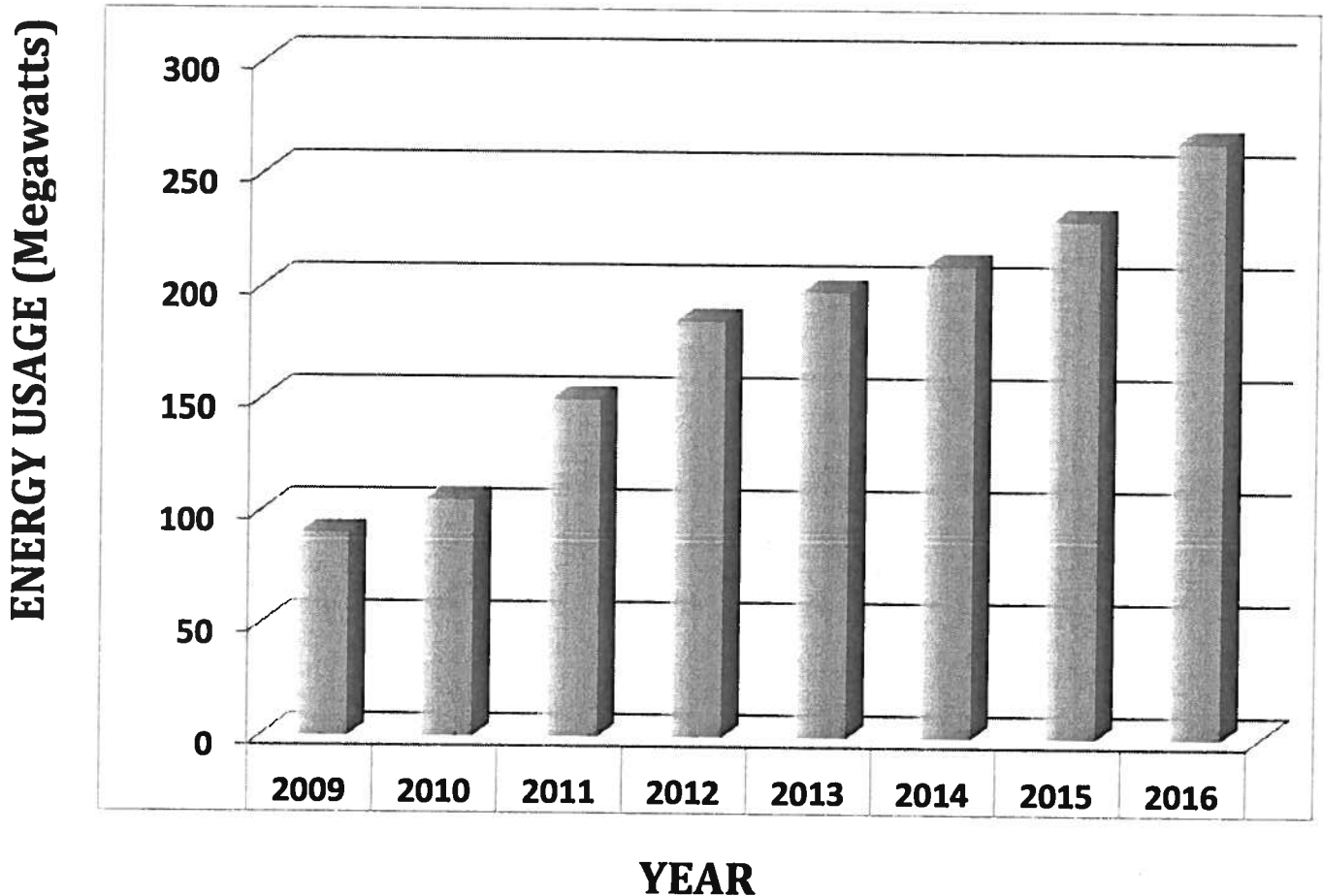
← COW

Proposed Site - Coal/Oil Generating Station
(Edsel Electric)

Reindeer River



ELECTRICAL USAGE AND PRODUCTION



Maximum Electrical Capacity

The maximum electrical capacity of Sunshine City's present generating station is 200 megawatts.

Future Electrical Usage (Estimated)

The electrical usage for Sunshine City has been estimated for 2013, 2014, 2015 and 2016.

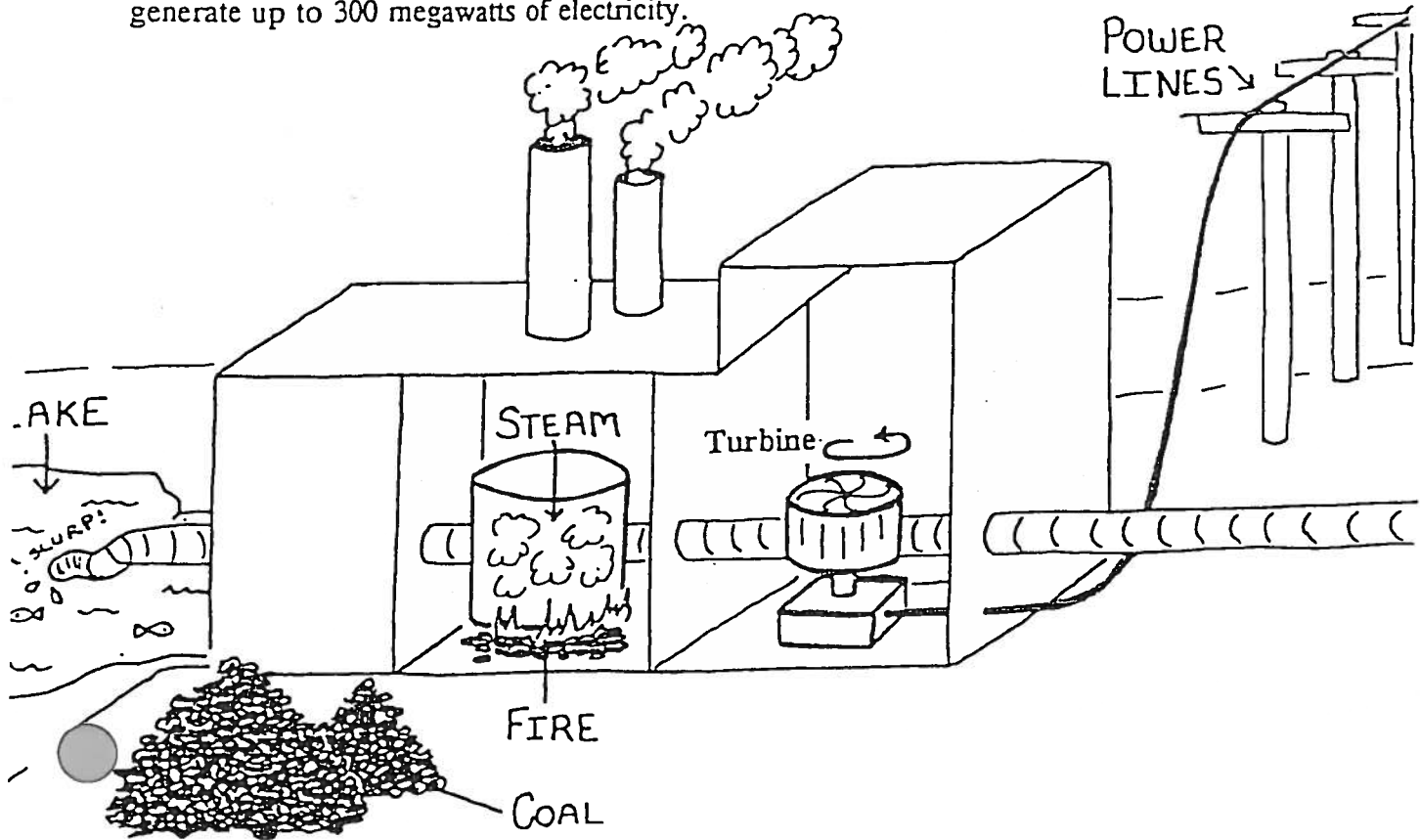
2013.....	195 megawatts
2014.....	215 megawatts
2015.....	230 megawatts
2016.....	265 megawatts

Outlook For the Future

By 2014 Sunshine City will use more electricity than it can produce. A solution must be found for this problem!

OPTION 1 - COAL/OIL BURNING STATION

The fossil fuel burning plant is being proposed by Edsel Electric. This type of station burns coal and oil to produce steam that drives a turbine. The spinning turbines will be able to generate up to 300 megawatts of electricity.



This station will be located on the outskirts of the city on the Reindeer River and will cost 575 million dollars. Most of the coal and oil for the plant will be supplied by the Cargo Coal and Oil Company providing numerous local jobs.

Pros

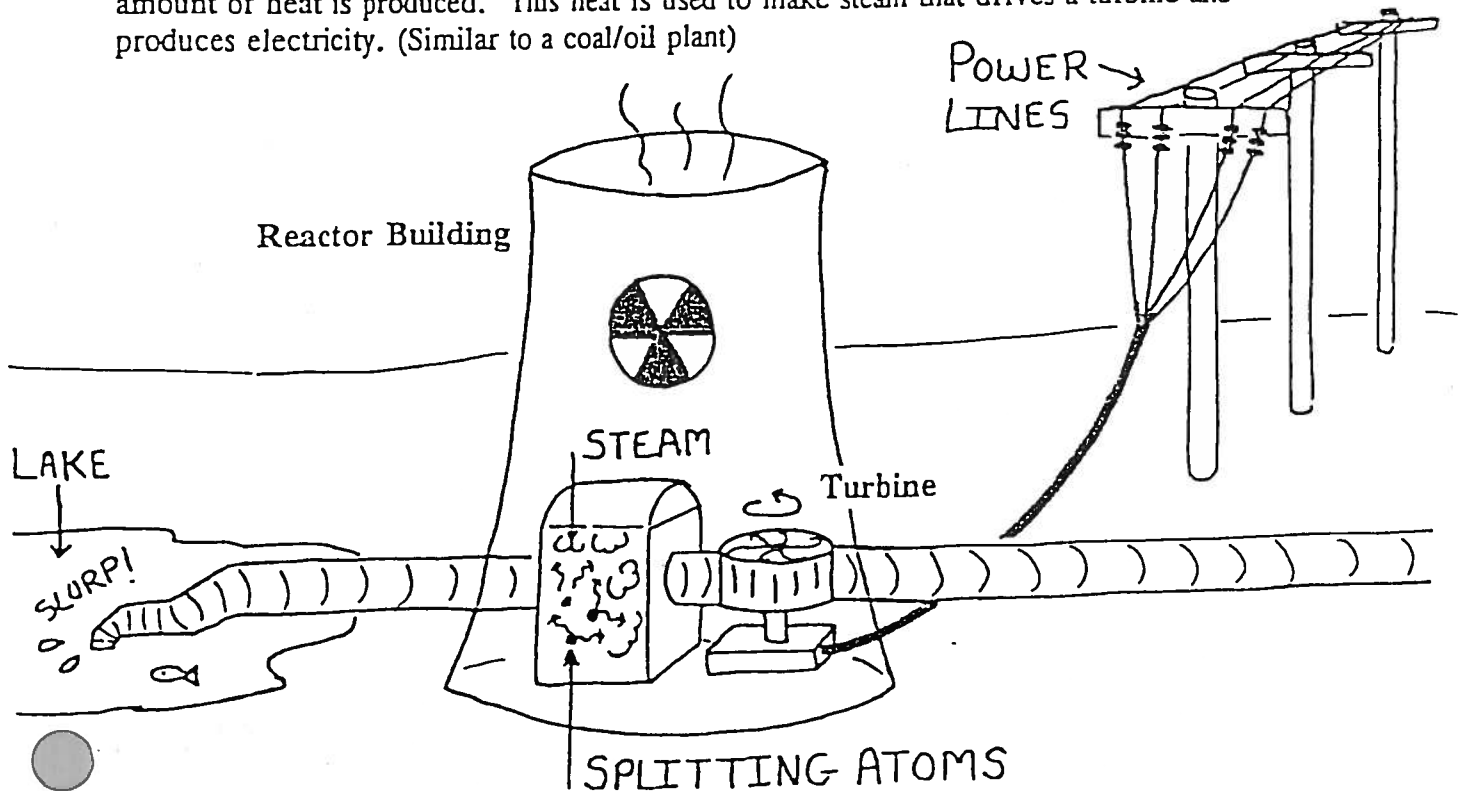
- cheapest of the three plants at 575 million dollars
- provides local employment
- able to be built in one year
- does not use a large amount of land

Cons

- burning fossil fuels which will create air pollution (smog)
- air pollution will also cause acid rain which may harm fish in the area
- burning fossil fuels will produce greenhouse gases causing global warming
- the price of coal and oil could go up in the future
- supplies of coal and oil will eventually run out

OPTION 2 - NUCLEAR GENERATING STATION

The Nuclear power station will be built by Acme Atomic on Jackfish Island. A nuclear generating station splits uranium atoms to make electricity. When an atom is split a large amount of heat is produced. This heat is used to make steam that drives a turbine and produces electricity. (Similar to a coal/oil plant)



This plant will be ready in one year and will be able to generate 600 megawatts of electricity. Total cost is 900 million dollars.

Pros

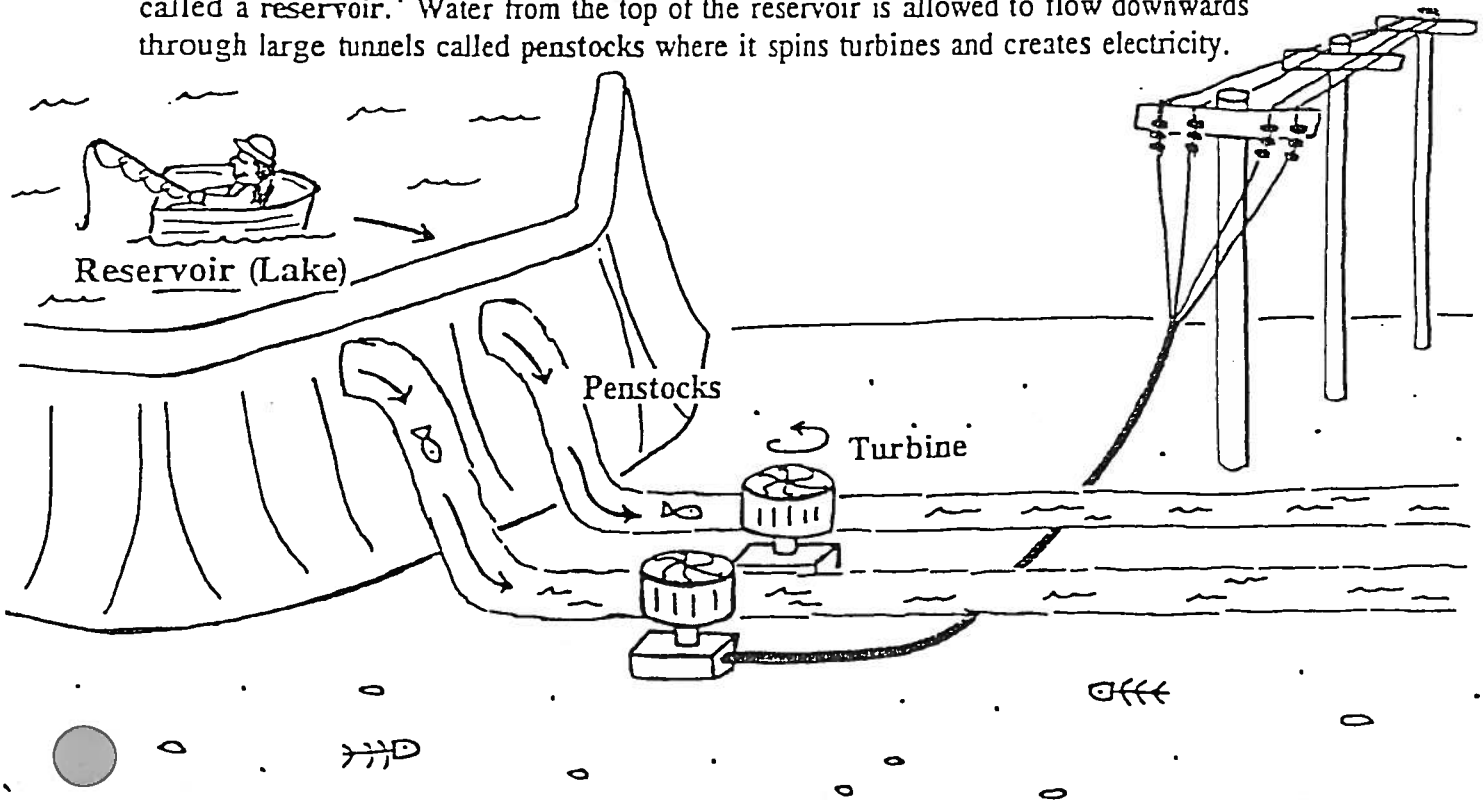
- produces almost no air pollution
- can be built in one year
- does not use a large amount of land
- will produce extra electricity that could be sold to other places

Cons

- will create radioactive waste which is extremely dangerous and does not disappear for thousands of years
- more expensive than a coal/oil plant
- will not produce as many local jobs with Cargo Coal and Oil
- even though it is not too likely, there is some danger of a nuclear accident similar to Chernobyl
- the price of Uranium could go up

OPTION 3 - HYDROELECTRIC DAM

The hydroelectric dam will be built by Hillman Hydro across the Reindeer River. The 30 meter high dam will raise the level of the river upstream from the dam creating a large lake called a reservoir. Water from the top of the reservoir is allowed to flow downwards through large tunnels called penstocks where it spins turbines and creates electricity.



The dam will take two years to build costing 1.5 billion dollars. (1500 million dollars)
The dam will be able to produce 800 megawatts of electricity.

Pros

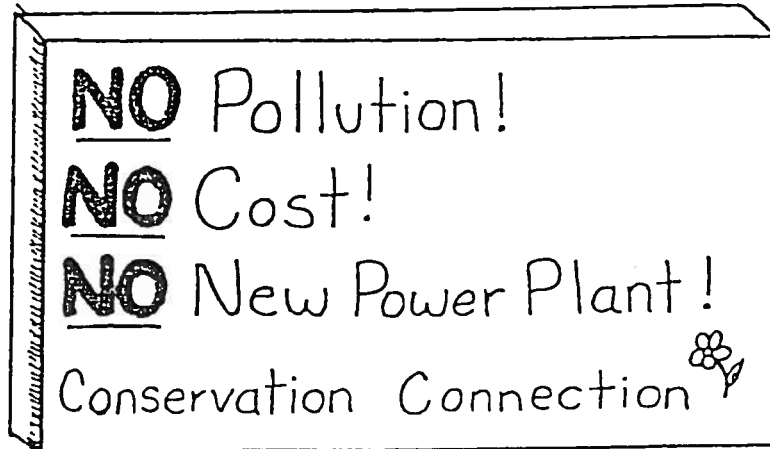
- produces no air pollution
- the dam creates a large lake or reservoir which could be used for tourism and recreation (boating, fishing)
- a renewable type of energy that will never run out
- will produce the most electricity which could be sold to other places

Cons

- will take two years to build
- most expensive of the three options
- the dam across the river will stop fish from swimming upstream to spawn
- the dam will flood a large area of land (see map) including the village of Cabbagetown and forest areas

OPTION 4 - NO NEW GENERATING STATION

The Conservation Connection is against *any* new type of power station. They argue that if people all used less electricity there would be no need for any new station. Money would be spent on ways of conserving electricity such as using less light in buildings, not using air conditioning in the summer and putting timer switches on car plug-ins in winter.



Pros

- cheaper than the first three options
- does not make pollution

Cons

- will require cooperation of all the people of Sunshine City to reduce electricity usage
- what happens to people who are "electricity hogs"