United States Department of the Interior

NATIONAL PARK SERVICE
P.O. BOX 37127
WASHINGTON, D.C. 20013-7127

IN REPLY REFER TO:

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JUNE 20, 1985

Annual Review

SPECIAL DIRECTIVE 83-2 (Revised)

To: Directorate, Field Directorate, WASO Division Chiefs and Park Superintendents

From: Director William Penn Mott, Jr.

Subject: Rates for NPS-Produced Utilities

Special Directive 83-2, dated May 9, 1983, "New Policy on NPS-Produced Utility Rates," is superseded by this revision. All copies of that directive should be removed from the files and destroyed. Attached are guidelines for implementing the National Park Service's policy on utility rates.

Two significant changes in the guidelines were initially made by the Director in a memorandum dated May 14, 1984 to the Regional Directors. These changes are incorporated in this revised Special Directive:

1. The only indirect costs (overhead) to be included in the determination of operating cost will be those directly related to park administrative costs; a flat percentage will be used Servicewide. These costs will be recovered in the utility rates by adding 15 percent of direct costs onto the direct park utility operating costs. WASO, Service Center, and Regional Office overhead costs are not included but an appropriate proportion of those park costs paid out of WASO or Regional accounts for postage, FTS, etc., are included in the calculation of the 15 percent and amount to one percent.

2. Where operating costs are increased significantly by resource management and protection practices and would, therefore, have an impact on the utility rates, an adjustment should be made which deletes those costs attributable to resource management or protection from the operating cost calculations.

In addition to these changes, in response to the Inspector General's recommendation that the NPS require inflationary factors be applied to historical cost and comparability data when developing new utility rates, the guidelines now allow for the application of inflationary factors when appropriate.

It is the policy of the National Park Service to:

1. Charge rates for NPS-produced utilities based on operating costs (not including existing capital investments) or comparability, whichever is greater, to all users except NPS employees. Concessioners will be permitted to pass through costs exceeding comparability.

2. Continue to charge NPS employees on the basis of comparability in accordance with current law and implementing guidance, including OMB Circular A-45 (Policy governing charges for rental quarters and related facilities), the Departmental Quarters Handbook, and NPS-36 (Government Furnished Quarters Guideline).

3. Permit charges to be adjusted (no lower than comparability) where operating costs are extraordinarily high and cannot practicably be passed through in total to the visitor through price increases, i.e., allow adjustments to rates where passing through the excess of operating costs over comparability would jeopardize the economic viability of the concessioner.

This policy applies to all water, sewer, solid waste, electricity, and heating services produced or provided by the National Park Service to non-NPS users.

The current policy is based on a study of NPS-produced utilities and is supported by a formal opinion issued by the Office of the Solicitor (attached). The policy has been approved by the Director of the National Park Service and concurred in by the Secretary of the Interior and the Director of the Office of Management and Budget.

The National Park Service is required by law to recover the costs of utilities provided to non-NPS users. The Office of Management and Budget and the Inspector General were recommending that the National Park Service charge rates for utilities based on full costs including operating costs, capital investment cost or value, and imputed interest on the capital investment.

The National Park Service mission involves making parks available for the use and enjoyment of the public and the utility infrastructure is necessary to support appropriate visitor use. Park utilities, however, are often more expensive to construct and operate for environmental, physical and public policy reasons. Accordingly, because of the generally higher inherent costs in providing utilities within the National Park System and because NPS has the responsibility to provide for the public use and enjoyment of the parks to which utility services are basic, this policy does not establish rates to recover the capital costs of the existing physical plant and represents a compromise between charging full costs and the previous practice of charging comparability.

It is the intent of this policy to foster an equitable balance of three factors: a reasonable level of cost recovery by the National Park Service; reasonably priced visitor services; and a reasonable opportunity for the concessioner to realize a profit. This policy on utilities was adopted because of its equity to the parties involved--the visitors, the concessioners and other users, the Park Service, NPS employees, and the taxpayers.

While utility charges will not include the installation and other capital costs of the physical plant for existing utility systems, the National Park Service will continue to explore the possibility of cost-sharing or other means of recovering the costs of future capital investments. The Service has in the past participated in cost-sharing with municipalities where a park unit uses the municipal sytem and has had concessioners provide or share the cost of utility systems where the concessioner was the major user. Cost-sharing and other means of capital cost recovery should be pursued in the planning and financing of new or expanded utility systems and when major rehabilitation or replacement occurs.

Utility operations are funded from a park unit's annual base ONPS allocation and utility charges are reimbursed to the park. Therefore, to the extent that operational costs attibutable to non-NPS users have not in the past been covered by utility charges, the park unit has been "subsidizing" those users. Further, such unreimbursed costs limit the park unit's ability to fund other operation and maintenance needs, e.g., seasonal rangers, trail repairs, and wildlife management. This policy will result in parks being reimbursed for a larger portion of the operating costs of utilities.

In what are expected to be rare instances, the new policy has a mechanism for exceptions when additional utility costs will cause the prices of visitors goods and services to be so high as to impair their marketability and seriously jeopardize the economic viability of the concessioner.

Any waiver of this policy may only be granted by the Director, National Park Service.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON, D.C. 20240

APR 05 1983

MEMORANDUM

TO: Director, National Park Service

FROM: Associate Solicitor, Conservation and Wildlife

SUBJECT: National Park Service Utility Charges

This responds to your request for our opinion as to whether in special circumstances the National Park Service ("NPS") may charge concessioners and other non-governmental entities operating in areas of the national park system less than actual cost for utility services provided to them by NPS.

You have advised us that NPS constructs and operates utility facilities and services (sewer, water, solid waste, electricity) in many of the larger or more remote areas of the national park system. In addition, NPS, in some instances, purchases utility services from utility companies and makes the service (e.g. electricity and water) available to non-governmental entities operating in a park area (such as concessioners, inholders, and permittees). NPS and the Department are now reviewing the charges NPS makes for these utility services in order to assure that at least the costs of providing the services are recovered, except as discussed further below.

The specific authority under which NPS makes such utility services available is found in paragraph 4 of Section 1 of the Act of August 8, 1953, 16 U.S.C. 1b4 which states as follows:

> "4. Furnishing [by NPS], on a reimbursement of appropriations basis, all types of utility services to concessioners, contractors, permittees, or other users of such services, within the National Park System: Provided, that reimbursements for cost of such utility services may be credited to the appropriation current at the time reimbursements are received".

In addition, provision of such utility services is subject to the Independent Offices Appropriations Act, 1952, Pub. L. No. 82-137, § 501, 31 U.S.C. § 483a ("IOAA") which states as follows in pertinent part:

> It is the sense of the Congress that any work, service, publication, report, document, benefit, privilege, authority, use, franchise, license, permit, certificate, registration or similar thing of value or utility performed, furnished, provided, granted, prepared, or issued by any Federal agency * * * to or for any person groups, associations, organizations, partnerships, corporations, or businesses * * * shall be selfsustaining to the full extent possible, and the head of each Federal agency is authorized by regulation (which, in the case of agencies in the executive branch, shall be as uniform as practicable and subject to such policies as the President may prescribe) to prescribe therefor such fee, charge, or price, if any, as he shall determine, in case none exists, or redetermine, in case of any existing one, to be fair and equitable taking into consideration direct and indirect cost to the Government, value to the recipient, public policy or interest served, and other pertinent facts, and any amount so determined or redetermined shall be collected and paid into the Treasury as miscellaneous receipts * * *.

Finally, Bureau of the Budget Circular No. A-25, issued under the authority of the IOAA, articulates a Government-wide policy with respect to charges for "all Federal activities which convey special benefits to recipients above and beyond those accruing to the public at large".

These authorities generally contemplate the recovery of costs to the government when providing specialized services to third parties. However, we understand that in making your review of NPS utility pricing practices in this regard, you have concluded that, in certain circumstances, charging actual costs for utility services to third parties may frustrate the ability of NPS to carry out its statutory responsibilities to preserve and protect areas of the national park system and to provide for their enjoyment by the public. 16 U.S.C. 1. In some instances, the cost of producing electricity by diesel generator in a remote area of a national park may be so high as to price lodging units beyond what park visitors can reasonably be expected to pay, thereby frustrating the ability of NPS to make public accommodations available in that area of the park. For example, several small NPS concessioners with respective gross receipts of $250,000 or less would have their utility bills raised by approximately $15,000 annually if actual costs had to be charged. The concessioners would have great difficulty in absorbing or passing along this price increase to visitors. In some instances, marginal operations could be forced out of business.

Because of these and similar circumstances, you are presently considering the adoption of a policy which, in general terms, would permit NPS to charge less than actual costs for utility services to non-governmental entities when the entity is performing services or providing facilities necessary to the proper preservation, protection and enjoyment of an area of the national park system and which, if actual costs were charged, would not be financially feasible to undertake. In this regard, we note that 31 U.S.C. 483a, set forth above, does contemplate that there are circumstances in which full cost recovery may not be required as it authorizes the establishment of "fair and equitable" charges, "taking into consideration direct and indirect cost to the Government, value to the recipient, public policy or interest served and other pertinent facts". (Emphasis added.) It is your view that it is in the public interest to provide utility services at less than actual cost within the meaning of 31 U.S.C. 483a when necessary to enable NPS to carry out its statutory responsibilities with respect to preservation, protection and public enjoyment of the national park system. The less than actual cost charges developed in these circumstances however, would not be less than comparable rates for public utilities in the general area of a particular park.

In our opinion, this is a valid interpretation of the authorities discussed above. In this connection, we also note that by letter c March 7, 1983, the Director, Office of Management and Budget, concurred in this interpretation in response to a February 3, 1983, letter from Secretary Watt.

If we may be of further assistance, please call Lars Hanslin of this office.

(Sgd.) J. Roy Spradley, Jr.

J. Roy Spradley, Jr.

cc: Docket
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Div. File
LHanslin: jo
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GUIDELINES FOR IMPLEMENTATION OF COST BASED UTILITY CHARGES

Utilities Included

These guidelines apply to all water, sewer, solid waste, electricity, and heating services produced or provided directly by the National Park Service to non-NPS users.

Determining Operating Costs and Comparability

Determinations of costs and rates will be made at the park level, with Regional Office review and approval of the rate structure.

Since rates are to be based on actual operating costs or comparability whichever is the greater, it will be necessary to determine both.

Comparable utility rates are determined by examining the charges for like services in areas used to determine comparability for other park activities. Generally speaking, the applicable rates will be those charged for utilities in the same locations that are used to determine comparable rates for concessioner goods and services and for employee housing. Comparable rates need not necessarily be rates for a comparable utility system but rather for a comparable utility service.

Operating costs should be determined by calculating the costs of personnel (salaries and benefits), equipment, supplies, maintenance, and other direct expenses and including indirect expenses (overhead). Cyclic maintenance and other applicable periodic costs should be calculated and an appropriate proportion costed against each year's operating costs. Information on determining direct and indirect expenses is outlined in Attachments A and B.

The indirect costs (overhead) to be included in the determination of operating cost will be those directly related to park administrative costs; a flat percentage will be used Servicewide. These costs will be recovered in the utility rates by adding 15 percent of direct costs onto the direct park utility operating costs. WASO, Service Center, and Regional Office overhead costs are not included but an appropriate proportion of park costs which are paid out of WASO or Regional accounts for postage, FTS, etc., are included in the calculation of the 15 percent and amount to one percent.

Direct costs may be calculated from accounting data, other records and supportable estimates. A more complete list of items to be included in direct costs for various types of utilities is found in Attachments A and B. Direct costs will include a leave surcharge and a proportion of cyclic costs. Capital costs are not a factor in the rate base (unless there is some form of agreement with the user on cost-sharing), nor is depreciation. Excluded capital costs include the amortization of vehicles and heavy equipment.

In determining direct operating costs, cost data should be based on a recent 12-month period. Where operating costs are increased significantly by resource management and protection practices and considerations which have an impact on operating costs (and the utility rates), an adjustment should be made which deletes those costs attributable to resource management or protection from the operating costs calculations. In addition, operating costs can be adjusted either up or down to reflect reasonably anticipated changes in costs (e.g., a known increase in electricity charges for pumping) or to take account of inflationary factors (e.g., the yearly inflation rate, or the amount of the Federal pay comparability increase where salaries are a significant component of operating costs). Known inflationary factors and anticipated costs should be applied to adjust operating cost data prior to making the comparison with comparable utility rates.

Unanticipated expenses incurred or savings realized may be factored into the following year's rates, though rates may not be set below comparability. End of year payments by users or rebates by NPS to equalize actual costs and payments will not be made.

Establishing Rates Based on Operating Costs

Under this policy rates will normally be set and applied parkwide for each type of utility system, i.e., a single park rate for water, sewer, etc.. There may, however, be some instances when it would be desirable to set rates based on the operating costs of individual utility operations where independent utility operations are serving different users in the same park. The single park rate approach is preferable.

There are several permissible structures that can be used for establishing rates. These rate structures are described below. In addition, it would also be possible to combine aspects of more than one of the rate structures. However, whatever rate structure is adopted must be designed to fully recover estimated operating costs for the rate year. When

established, the rate structure for each park (not the actual rate) must be approved in writing by the Regional Director. Changes in the rate structure (not the rates) must also be approved in writing by the Regional Director.

The structure adopted should be as equitable as possible to all users and should be justified as being the appropriate system in seeking the Regional Director's approval. The structure should be adopted with care and with the anticipation that the same structure (not the same rates) will be continued into the foreseeable future. If for some reason, it becomes apparent that a change should be made in the rate structure, that change should be proposed and justified to the Regional Director for approval.

The simplest form of rate structure is the single unit rate structure. It is derived by dividing the total operating costs by the total number of units of utility service produced. This results in a uniform rate equal to the cost per unit of utility service. This unit rate structure is the easiest to determine, is likely to be more accurate in projecting cost recovery and is the simplest to manage administratively.

A variable or differential rate structure, however, can be used to serve specific goals. For example, where it is possible and desirable to encourage conservation and reduce usage, it may be useful to charge higher rates during what would normally be periods of heavy (peak) usage. This would be a rate structure which varies by time of use--time of day or time of year (season). Rate structures can also vary by class of user, however, except for the two classes inherent in this policy--NPS users and non-NPS users--no further variation by class of user should be adopted in implementing this policy.

A differential rate structure may reduce consumption particularly during high rate periods and make usage during peak and off-peak periods more even because, to save money, users are motivated to reduce utility usage or shift it from peak periods. The rates for this structure should be set with the anticipation that there will be reduced consumption as a usage response to the price change. In addition to the general benefits of conservation, reduced or redistributed usage may eliminate or at least postpone the need to expand the capacity of the utility physical plant.

Another possible rate structure is a flat fee plus unit charge. The flat fee is assessed for a period of time (monthly, semi-annually, or annually) with an additional charge for each unit used. This system is useful in situations where the system has a high percentage of fixed costs which would not be decreased by reduced usage. In those cases, a high unit rate might tend to discourage usage but costs would not be commensurately reduced and the park unit might find that the charges do not cover the full operating costs.

The flat fee in the flat fee plus unit charge rate structure is often used to recover the capital costs of the system, not a factor in the NPS rate structure. However, such a system could be used by a park unit to recover through the flat fee some of the fixed costs not affected by usage and the unit charge could recover variable operating costs.

Determining Usage

Many parks do not have meters or other means of measuring the usage of all users. Some parks are partially metered. Very few are fully metered though that is the eventual goal. Most park units, however, are able to accurately determine the number of total units produced.

While it is desirable to have the most accurate measures possible, metering can be expensive to install. It is essential to have meters where a variable or differential rate structure is to be used in order to record the variations in usage. It is also likely to prove cost effective to meter large users. In addition to the value of meters for determining usage, it is also important and helpful to keep good records and monitor periodic usage and usage patterns. This data can help guide operation of the system at optimum efficiency.

Under this policy and the implementing system, utility charges should be based on estimates where meters do not exist.

Determining the Difference Between Comparability and Operating Costs

The parks must compare the comparable rates with the operating cost rates to determine the appropriate basis of charging comparability or operating costs whichever is higher. It may be that the rate structure proposed by the park and the rate structure used by the comparable utility are not the same. While it might be more convenient if they were, the comparison can be accomplished by computing the total projected utility bill for the same period of usage (with appropriate adjustment for projected usage changes) under both comparability and operating costs.

The difference between operating costs and comparability should be determined based on the total projected utility billing for the same time period for all users. If the total projected billing is higher under comparability, the comparability rates should be charged by NPS. If the total projected billing is higher with NPS rates based on operating costs, those rates should be charged. When rates based on operating costs are charged, concessioners will be permitted to pass through those charges in excess of comparability through an adjustment factor in the rate approval program. (See Concessions Guideline, NPS-48, Chapter 18, paragraph F.)

Exceptions Based on Financial Feasibility

In a few instances, it appears that recovering the actual operating costs for utility services when they exceed comparability may threaten the economic viability of certain concession operations. Destroying the economic viability of a concessioner to provide visitor services that are "necessary and appropriate for public use and enjoyment" of the park, would frustrate the ability of NPS to carry out its statutory responsibilities to preserve and protect areas of the National Park System and to provide for their use and enjoyment by the public. Therefore, under this policy, the Regional Director can make exceptions (not a waiver of the policy) to permit utility charges to be reduced below actual operating costs, but under no circumstances below comparability. An exception will constitute a percentage reduction in the charge to a user, not a change in the basic rate. Utility bills should reflect both the charges at the established rate and the amount due at the reduced charge.

The request for exception must be made by the concessioner to the Superintendent. The Superintendent should investigate the concessioner request and forward the request along with relevant analysis and information and a recommendation to the Regional Director for decision. Such requests will be granted only where it can be documented that utility charges based on actual operating costs cannot be passed through to the visitor or paid by the concessioner without seriously damaging the marketability of the concessioner's goods and services or otherwise threatening the economic viability of the concession. Requests for exception must be made yearly; approvals are only valid for one year. Additional requests for exception must be made by the concessioner on an annual basis. Procedures for documenting and approving exceptions are set forth in NPS Concessions Guidelines, Chapter 18, paragraph F.2.

The Regional Director can make a determination to set the charges at an appropriate level between comparability and actual operating costs but may not approve rates below comparability.

Implementation

Concessioner rates for visitor goods and services are already established based on comparable charges for such goods and services in comparable locations. These comparable charges are presumed to include comparable expenses including utilities; therefore, the most current comparable utility rates are included in the approved rates for concessioner goods and services and should be collected by NPS. Further, as a matter of established and continuing policy, NPS employees are to be charged comparable rates for utilities.

Utility rates must be reviewed and updated on a yearly basis. All users should be given 60 days notice of a change in rates. This will generally mean notification no later than August 1 of rates to be effective at the beginning of the Fiscal Year. Concessioners are to be notified of utility rate changes far enough in advance so that advertising material can be printed to reflect the new utility charges. The notification should occur about the same time each year.

Unless there are extraordinary circumstances which merit special consideration for an extension of implementation, utility charges should be no lower than comparability. Requests for a phase-in extention will be handled on a case-by-case basis in accordance with the procedures below.

If it is determined that rates under comparability are greater than actual operating costs, implementation should proceed following notification. If operating cost based rates exceed those under comparability, the following approach should be followed:

1. Determine the appropriate rate structure and proposed rates to be charged based on actual operating costs. Submit rate structure and changes in rate structure to Regional Director for approval.

2. After approval, notify concessioners and other utility consumers and after 60 days notice, institute new utility rates for all users.

3. Concessioners notified of a utility rate increase may:

- absorb the rate increase;

- increase prices for goods and services to the extent that operating cost utility rates exceed comparable utility rates (through the rate approval process);

- request an exception or phase-in extention or;

- any combination of the above.

If the concessioner elects to request a rate change, an exception or a phase-in extension, a request must be submitted to the Superintendent not later than 15 days after notification of the utility rate increase. Rate change requests must be acted upon by the Superintendent not later than 15 days after the request. Exceptions or phase-in extensions must be acted upon by the Regional Director within 45 days of the request. Procedures for documenting and approving price increases and exceptions are set forth in the Concessions Guidelines, NPS-48, Chapter 18.

Where utility rate increases are substantial and will have a significant adverse impact on a concessioner's viability or operation, the Regional Director can approve a phase-in extension to full implementation. No such approval may be granted, however, without the concurrent negotiation and approval of an implementation schedule which will accomplish full implementation within a reasonable timeframe.

Waiver of Utility Policy

Any waiver of this policy may only be granted by the Director, National Park Service.

ATTACHMENT A: DETERMINATION OF OPERATING COSTS

Direct Costs

Operating costs are determined by the establishment of a Project Management Plan (Form 10-451) in PFM for each utility operation. All expenditures for personal services (salaries and benefits, excluding leave taken which must be charged to a separate account), travel, supplies and materials, and equipment directly associated with the utility will be shown on the 10-451.

Direct costs should be calculated on the most recent 12-month period for which data are available. (See Attachment B for categories of direct costs.)

Where operating costs are increased significantly by resource management and protection practices and considerations and have an impact on operating costs (and the utility rates), an adjustment should be made which deletes those costs attributable to resource management or protection from the operating costs calculations. In addition, operating costs can be adjusted either up or down to reflect reasonably anticipated changes in costs (e.g., a known increase in electricity charges for pumping or to take account of inflationary factors (e.g., the yearly inflation rate, or the amount of the Federal pay comparability increase where salaries are a significant component of operating costs). Known inflationary factors and anticipated costs should be applied to adjust operating cost data prior to making a comparison with comparable utility rates.

Unanticipated expenses incurred or savings realized may be factored into the following year's rates, though rates may not be set below comparability. End of year payments by users or rebates by NPS to equalize actual costs and payments will not be made.

Direct costs will be determined by adding a leave surcharge to the total accrued expenditures in the project. The leave surcharge is computed by multiplying personal service charges (including accrued payrolls) by a percentage factor of 10.5 percent. This factor may be calculated and changed periodically by the Finance Division.

Cyclic maintenance costs should be divided by the number of years in the maintenance cycle for each cost and the appropriate per year portion included. Cyclic maintenance costs include the repair and replacement of component parts of process equipment but should not include significant capital improvements which result in upgrading the system. Avoid counting salaries and benefits twice (for both routine and cyclic maintenance) for hours employed in maintenance activities.

Acquisition costs for vehicles and heavy equipment (object class 3110) are capital costs and should not be included.

The attributable costs of any leased equipment or vehicles must be added as a direct cost. Costs for any GSA leased space for the utility services at the park level must be added as a direct cost. The cost of GSA leased space, where applicable, can be obtained from the WASO Administrative Services Division.

Extraordinary costs associated with utility production and attributable to resource management and protection practices are to be subtracted before totalling direct costs.

A Park Utility Operation Costs Worksheet is outlined on page A-3.

Indirect Costs

To determine the full cost of the operation of the utility, indirect costs (overhead) must be applied. The indirect costs (overhead) to be included in the determination of operating cost will be those directly related to park administrative costs; a flat percentage will be used Servicewide. These costs will be recovered in the utility rates by adding 15 percent of direct costs onto the direct park utility operating costs. WASO, Service Center, and Regional Office overhead costs are not included but an appropriate proportion of park costs which are paid out of WASO or Regional accounts for postage, FTS, etc., are included in the calculation of the 15 percent and amount to one percent. The following are the components of the indirect cost factor:

Park Administrative Costs of Parks with Utility Systems This factor is based on the average park administrative costs (WEs 105 & 110) for parks that produce utilities. (14 percent)

Park Administrative Costs Funded by WASO and Regional Offices These Washington and Regional Offices funded park costs include the parks' proportion of postage, unemployment benefits, workman's compensation, and Federal Telecommunications Service (FTS) expenses. (1 percent)

PARK UTILITY OPERATION COSTS

WORKSHEET

Park Name _____ FY _____

Utility _____

Project Account No. _____

Hours Worked In Project Account _____

Direct Costs:

Personal Services (Pay & Benefits)	(1)$_____	
Leave Surcharge (10.5% of Line 1)	(2) _____	(+)
Non-Capital Equipment (Exclude Capital Equipment)	(3) _____	(+)
GSA Leased Space	(4) _____	(+)
All Other Expenditures	(5) _____	(+)
Cyclic Maintenance	(6) _____	(+)
Subtotal Direct Costs	(7)$_____	
Minus Extraordinary Res. Mgmt. Costs	(8) _____	(-)
Total Direct Costs	(9)$_____	

Indirect Costs:

15% of Total Direct Costs (15% of Line 9)	(10)$_____	(+)

TOTAL OPERATING COST (Direct + Indirect Costs--Line 9 + Line 10) (11)$==========

ATTACHMENT B: DIRECT COSTS OF UTILITY SYSTEMS

Water Systems (Potable and Irrigation)

The direct costs of treatment, storage and distribution of water will vary depending on the type of treatment required, the amount of energy required for pumping, the storage requirements and the distribution system layout. In general, calculations of operating costs should include:

1. All personal services, supplies, power, and equipment repairs necessary to operate and maintain potable water facilities in accordance with Federal and State standards.

2. Maintenance projects (including replacement of equipment components of the system) necessary for the operation of the utility funded from ONPS or Cyclic Maintenance (Type 280) accounts. Cyclic maintenance costs and other costs of a periodic nature should be allocated as a cost element over the appropriate number of years.

The kinds of operation and maintenance costs which should be included where appropriate in calculating the operating costs of water systems include but are not limited to:

1. Inspections and testing.

2. Repair and replacement of valves, hydrants, meters and other appurtenances.

3. Replacement of water line if less than 1,000 feet.

4. Cleaning, painting and sealing water storage reservoirs.

5. Maintenance on raw water reservoirs, intakes and transmission lines.

6. Repair and/or replacement of electrical and mechanical components of the treatment process.

7. Chemical costs associated with the treatment process.

8. Utilities and maintenance costs for any structures housing treatment and pumping equipment.

9. Replacement of filter media and cartridge-type filters.

10. Backwash pond cleaning and maintenance including sludge removal.

11. Laboratory equipment or fees necessary to monitor process, control and obtain reporting data as required by regulatory agencies.

12. Cleaning and repairing distribution systems.

13. Winterizing and de-winterizing the system.

14. Removal of animals, vegetation and other obstructions (ice) from intakes.

15. State certification and licensing fees for plants and training costs for operators.

16. Cost of special maintenance assistance/engineers to monitor and improve performance.

Wastewater Systems (Sewage)

The direct costs of waste water collection, treatment and disposal will vary depending on the type of facilities--septic tanks, absorption fields, lagoons, and complex mechanical treatment plants. In general, calculations of costs should include:

1. All personal services, supplies, power, and equipment repairs necessary to operate and maintain wastewater facilities in accordance with accepted standards for resource protection and compliance with State and Federal regulations.

2. Maintenance projects (including replacement of equipment components of the system) necessary for utility operation funded from ONPS or Cyclic Maintenance (Type 280) accounts. Cyclic maintenance costs and other costs of a periodic nature should be allocated as a cost element over the appropriate number of fiscal years.

The kinds of operation and maintenance costs which should be included where appropriate in calculating the operating costs of wastewater utility services include but are not limited to:

1. Inspections.

2. Normal operational and maintenance procedures, in accordance with standard practices, required to comply with State and Federal regulations and to provide resource protection.

3. Energy required for pumping and treating wastewater.

4. Inspecting, cleaning and repairing sewerlines and manholes.

5. Repair and replacement of pumps, motors, electrical and mechanical equipment in lift station.

6. Absorption field replacement.

7. Repair and/or replacement of mechanical and electrical components in wastewater treatment and disposal plants.

8. Chemical costs associated with wastewater treatment and disposal.

9. Pumping septic tanks, vault toilets, pit toilets and holding tanks.

10. Lagoon and percolation pond cleaning.

11. Replacement of sludge drying bed media.

12. Laboratory equipment or fees necessary to monitor process, control and obtain reporting data as required by regulatory agencies.

13. Repair and/or replacement of flow monitoring equipment.

14. Winterizing and de-winterizing the system.

15. Removal of animals, vegetation and other obstructions.

16. State certification and licensing fees for plants and training costs for operators.

17. Cost of special maintenance assistance/engineers to monitor and improve performance.

Solid Waste Collection and Disposal

Solid waste collection and disposal costs will vary with the geographical distribution of the generating points, the volume generated at each location, and the distance to the disposal site. In general, calculations of operating costs should include:

1. All personal services, supplies, power, and equipment repairs necessary to operate and maintain solid waste collection and disposal facilities in accordance with Federal and State standards.

2. Maintenance projects (including replacement of equipment components of the system) necessary for the operation of the utility funded from ONPS or Cyclic Maintenance (Type 280) accounts. Cyclic maintenance costs and other costs of a periodic nature should be allocated as a cost element over the appropriate number of years.

The kinds of operation and maintenance costs which should be included where appropriate in calculating the operating costs of solid waste systems include but are not limited to:

1. Inspections.

2. Cost of storage containers, bins and liners.

3. Personnel, fuel and maintenance costs for collection/transportation equipment.

4. Personnel, fuel and maintenance costs for excavation and equipment at NPS operated landfills.

5. Disposal costs at commercial disposal sites or costs for permits.

6. Fence repair at NPS landfills.

7. Personnel, fuel and maintenance costs for incinerators.

8. Cost of incineration or disposal outside the park.

Electricity

The direct costs of electrical generation and distribution will vary depending on the type of generation (hydro or diesel), the length of transmission, and the size of the generator. In general, calculations of operating costs should include:

1. All personal services, supplies, power, and equipment repairs necessary to operate and maintain electicity system facilities in accordance with Federal and State standards.

2. Maintenance projects (including replacement of equipment components of the system) necessary for the operation of the utility funded from ONPS or Cyclic Maintenance (Type 280) accounts. Cyclic maintenance costs and other costs of a cyclic nature should be allocated as a cost element over the appropriate number of years.

The kinds of operation and maintenance costs which should be included where appropriate in calculating the operating costs of electricity systems include but are not limited to:

1. Inspections.

2. Maintenance of turbines, transformers, and switch gear.

3. Maintenance of distribution lines and meters.

4. Maintenance of diesel engines and generators.

5. Cost of fuel and antifreeze.

6. Winterizing and de-winterizing the system.

7. Removal of animals, vegetation and other obstructions (ice) from hydro intakes.