

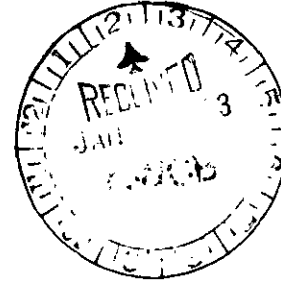
STATE OF COLORADO

DEPARTMENT OF INSTITUTIONS

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ROY ROMER
Governor
BARBARA McDONNELL
Executive Director



January 4, 1993

TO: Chris Bridges
Colorado Office of Water Conservation

FROM: Barbara McDonnell *BMcD*
Executive Director

SUBJECT: Water Efficiency Plan

Pursuant to your request, enclosed please find the Department of Institutions' Water Conservation Plan. This plan has been developed to comply with the provisions of the Governor's Order on water use efficiency in state government.

If you have any questions, please contact Robert Sutherland or George Collins at 762-4404. Thank you.

attachment

DEPARTMENT OF INSTITUTIONS

WATER EFFICIENCY PLAN

**Barbara McDonnell
Executive Director**

**Submitted
December 31, 1992**

**WATER EFFICIENCY PLAN
DEPARTMENT OF INSTITUTIONS**

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WATER EFFICIENCY PLAN
DEPARTMENT OF INSTITUTIONS

POLICY STATEMENT

The Department of Institutions (DOI) is committed to supporting the Water Conservation Act of 1991 consistent with available funding and with due consideration to the unique requirements posed by our clients. All new or renovation construction shall incorporate the provisions of this Act to the maximum extent possible. A long range program will be developed to implement water conserving techniques in existing facilities.

BACKGROUND

DOI is responsible to provide direct-care services to persons who are mentally ill or developmentally disabled and to juvenile offenders throughout the state. During fiscal 1991-92, DOI served approximately 80,000 persons in a combination of contracted and directly operated programs. The directly operated facilities comprise approximately 300 buildings with an aggregate of over 3,000,000 square feet of building area located throughout the state with the majority of the facilities located along the front range. The majority of these state owned buildings are over twenty years old, with some dating back to the previous century. DOI maintains irrigated grounds which are watered by underground sprinkler systems, many of which have not been updated to current water conserving designs.

Recent Capital Construction appropriations for new or renovated facilities have been limited to the construction of replacement beds in the Division of Youth Services (DYS) in the late 1980's. Capital Construction funding in the foreseeable future will continue to be directed to expansion of DYS facilities to overcome the current bed shortage. The correctional construction requirements for these facilities require careful evaluation of water conserving fixtures to assure the provisions of the Act can be satisfied with commercially available products suitable for use in these special facilities.

Water consumption does not represent a significant contribution to DOI's utility costs as slightly over 10% of the total utility costs are attributed to water. As a result, water conservation efforts to reduce utility costs have been considered but have not been given a high priority due to the long term return on investment. Since water usage is nearly equally divided between irrigation and domestic consumption, investments in a single water conservation program have not shown returns which

WATER EFFICIENCY PLAN
DEPARTMENT OF INSTITUTIONS
(continued)

BACKGROUND (cont'd)

are competitive with energy conservation. The current emphasis on water conservation will enhance the opportunity for water management projects.

Controlled Maintenance budget requests have been submitted, but not funded, to upgrade and automate irrigation systems at several DOI agencies. The sizable capital outlay required for these projects precludes implementation from appropriated operating funds. DOI minimizes water consumption by properly maintaining existing equipment and promptly correcting leaks and other deficiencies. Lawn moisture sensors have been installed at some installations and are being evaluated for use at other DOI Agencies.

The unique client care responsibility of DOI's mission necessitates consideration of specialized fixtures to protect the welfare of these clients. For example, most of our facilities require scald-proof temperature compensation to prevent accidental injury. The shower heads in DYS and the Division of Mental Health (DMH) facilities must be of special design to minimize the incidence of suicide in addition to satisfying vandal proof criteria. The institutional client care responsibility carried out in DOI's facilities precludes wholesale conversion with commercially available fixtures; a careful evaluation must be conducted before implementing conversions. Only recently, have many of these specialized fixtures become available in water conserving models. No new buildings or major renovation projects have been funded since implementation of the Water Conservation Act; therefore DOI has no direct experience in dealing with water conserving fixtures for our specialized client needs. It will be necessary to first implement a limited scope pilot program to field test available fixtures in order to establish a list of acceptable equipment to be incorporated in the department-wide program.

As a result of the Governor's March 3, 1992 Executive Order and HB 91-1154, DOI is increasingly aware of the water usage at its facilities. The relatively stable client population, except for DYS, has established a consistent baseline record of water consumption over the past few years. This baseline data provides the necessary structure to measure the savings of DOI's future water conservation programs.

**WATER EFFICIENCY PLAN
DEPARTMENT OF INSTITUTIONS
(continued)**

GOALS

The water conservation plan for DOI will exceed the requirements of the Act and Executive Order by considering existing facilities in addition to new and renovated construction. After evaluating applicable fixtures for new and renovation construction, DOI will establish a long range program to replace worn or damaged existing fixtures with water conserving models. Because of our unique client requirements, a replacement program will be approached in a cautious and deliberate manner, to minimize harm to the clients.

The first year of the plan will concentrate on evaluating and specifying water conserving equipment for new or renovated construction which satisfy the unique requirements of DOI. Additionally, in the first year, an accurate inventory of water-consuming equipment will be established for existing facilities. Once accurate inventories have been established and the results evaluated, acceptable replacement fixtures will be identified and a water conserving policy will be incorporated into the purchasing procedures. Low-cost, no-cost programs will be implemented in subsequent years awaiting funding for the more cost intensive programs. The proposed milestones which satisfy these goals are outlined below:

1993

**Establish a Department of Institutions Water Conservation Committee
New and Renovated Construction**

- Establish a program to incorporate statutory requirements.
- Establish a list of acceptable water conserving models.
- Request waiver exceptions as necessary.

Existing Facilities

- Establish accurate historical database.
 - Establish accurate fixture inventory.
 - Establish accurate irrigation inventory.
 - Establish standards for replacement fixtures.
 - Establish list of acceptable replacement models.
 - Incorporate in DOI purchasing standards.
- Develop budget requests which include water conservation.

WATER EFFICIENCY PLAN
DEPARTMENT OF INSTITUTIONS
(continued)

GOALS (cont'd)

1994

Existing Facilities

- Implement low-cost, no-cost programs.
- Implement funded programs.
- Evaluate alternate irrigation methods.
- Evaluate landscaping alternatives.
- Evaluate potential domestic water saving options.
- Refine budget requests for prime water saving candidates.
- Evaluate progress and update procedures.

1995

Existing Facilities

- Implement funded programs.
- Continue to request funding for prime water saving candidates.
- Evaluate internal funding sources.
- Evaluate non-General Fund options.
- Evaluate progress and update procedures.

ACTION PLAN

A detailed action plan will be developed in 1993 after the formation of a committee to oversee the water conservation program. In the interim, the first year's events will follow the plan outlined under GOALS.

**WATER EFFICIENCY PLAN
DEPARTMENT OF INSTITUTIONS
(continued)**

RESPONSIBILITIES

Coordination of the water conservation plan for the Department of Institutions shall be the responsibility of the Executive Director's office through the existing Facilities Management working group and the DOI Purchasing Director.

PROCEDURES

Detailed procedures will be developed by the committee following the general timelines outlined below. Procedures will be revised on a periodic basis as the Department becomes more experienced in water conservation.

-
- 1st Qtr 1993 Appoint Committee
 - 2nd Qtr 1993 First committee meeting
Refine plan for new and renovated construction and specify acceptable equipment
 - 3rd Qtr 1993 Establish database for existing facilities
Submit preliminary budget requests
 - 4th Qtr 1993 Publish list of acceptable replacement fixtures
Update plan and set goals for 1994