

MEMBERS PRESENT:

Chairman Coulter  
Vice Chairman Fielding  
Assemblyman Bedrosian  
Assemblyman Polish  
Assemblyman Rhoads  
Assemblyman Dini  
Assemblyman Price  
Assemblyman Prengaman  
Assemblyman Bergevin

GUESTS PRESENT:

See attached listing

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Chairman Coulter brought this meeting to order at 2:00 p.m. First bill to be heard was:

AB 558 - Provides for free hunting and fishing license to elderly residents.

Assemblyman Wagner, District 25, testified on this bill, as she did introduce it at the request of some of her constituents. She stated that this bill was not exactly what she had in mind, once it came out of the bill drafter's office. Therefore, she suggested some amendments: 1) She requested that the age be changed from sixty-two years to sixty-five years; 2) She did not request a bill that would require no charge. The most important reason being collection of monies from the federal government. You must have some sort of a charge in order to pick up monies from the federal government and it was not her intention to do away with that. In fact, she stated, since they are contemplating reducing the residency requirement to six months, she suggested that perhaps they might charge \$2.00 vs. the current \$1.25; \$2.00 for each hunting and fishing license. 3) There needs to be some changes in terms of the effective dates of this legislation. The exemption for paid hunting licenses should become effective on July 1 of 1979 and the exemption for paid fishing licenses should become effective on January 1, 1980. Basically, she explained, the reason for that is that the Nevada Department of Fish and Game would be printing and issuing fiscal year 79-80 hunting licenses in May and June of 1979. Information substantiating this is contained in a letter from Fish and Game dated March 28, 1979 to Assemblyman Wagner which is attached hereto and marked as Exhibit "A". Then she made reference to a letter which she received this date, also from Fish and Game, which is attached hereto and marked as Exhibit "B", which deals with the economic impact of of raising the fee from \$1.25 to \$2.00. She stated that in light of Senate Bill 333, which contemplates General Fund support for Fish and Game, some individuals in Fish and Game find the need to tie this bill into receiving offsetting general funds in section two unnecessary.

Mr. Fred Wright, Nevada Department of Fish and Game, testified on this bill stating that they would prefer to see this license class decided upon and put to rest for a number of years. They have no objection to this bill. He stated that obviously, the fiscal impact would not be that great if their estimates are correct.

Mr. Dini noted that the reason they put that "ten year residency" requirement in there in 1971 was because they felt that if a person lived here for ten years, he paid his money into the Fish and Game program.

Mr. Robert L. Altick of Reno, Nevada testified on this bill from personal experience with respect to the ten year residency requirement. He made reference to an opinion that he was able to get from the Attorney General's Office on the subject, which is attached hereto and entered as Exhibit "C". He also made reference to his letter of January 5, 1979 to Assemblyman Wagner in regard to this subject, which is attached hereto and entered as Exhibit "D".

AB 566 - Removes restriction on installing toilets using quantities of water exceeding certain limits.

Assemblyman Paul May testified on this bill, as its introducer. He gave some background on this stating that two years ago there was quite a thrust of concern with regard to water conservation. There were two measures adopted by the 1977 Legislature concerning the use of water. He explained that NRS 444.432 provides that no toilet may be installed after July 1, 1978 that uses in excess of 3 1/2 gallons of water. They feel that NRS 444.432 conflicts with NRS 444.340. It is the industry's position that adequate legislation was accomplished with the adoption of the Uniform Plumbing Code in 1971.

Mr. Richard Vandenberg, Associated Plumbing and Air Conditioning Contractors of Nevada, Inc. and Mr. George W. Shoen, Kelly's Pipe and Supply, then testified on this bill. His testimony is contained in a letter dated April 5, 1979 with additional attachments. This information is attached hereto and marked as Exhibit "E". He stated that their concern is that they feel this legislation was premature in the face of what has been developed in the manufacturing of these particular units. Mr. Vandenberg stated that there is not significant water saved by these "water saver closets". Many problems with these, as outlined in said exhibit. These gentlemen demonstrated to the committee the various styles of water closets and exhibited a booklet of same. This booklet is attached hereto as Exhibit "F" and may be found in the Minutes filed with the History of the Legislative Counsel Bureau.

AB 642

Mr. George Ball, a registered professional engineer in the State of Nevada and has been a practicing consulting engineer in the water engineering field for the last thirteen years, testified on this bill. Due to this experience he feels he is quite familiar with

the physical and regulatory requirements for developing water supplies, particularly the development of proof of beneficial use. He detailed these regulations for the committee. He stated that the developer needs some assurance that he will not lose his water right. Mr. Ball noted that the present water law does allow the State Engineer to extend time for proof of beneficial use, however, it does not require it. He feels this is the major difference that AB 642 provides, i.e., it requires the State Engineer to extend the proof of beneficial use and the person requesting that extension, in fact, demonstrates conclusively that he is making due progress. He mentioned that contrary to some comments from people opposing this bill, no developer is going to sit on these water rights due to his substantial investment.

Assemblyman Weise then testified on this issue, noting that he didn't wish to speak to this bill specifically in that he has seen it in many different forms. Coming from a developer's standpoint and being as well acquainted with water law as a lay person can be, he spoke on this form of legislation. Mr. Weise stated that his concern is not so much for the developer as for the person who consumes the end product. The developers do not have that much of a problem; the developer would be in and out of the project in less time than the law even allows now if there were no extensions. He explained that his concern lies with the person buying a lot from someone who is developing it and finding out that when they are ready to build on it and they go to get their building permit, someone is going to advise them that they (the developer) didn't put this to beneficial use, therefore, they would not be issued the building permit. He mentioned that it is important to provide the consumer with the guarantee that they had when they bought the property. Mr. Weise stated that cities need this legislation as much as anybody. Mr. Weise feels that the current situation is only as good as the individual that is there (meaning the State Engineer). So far, he states, we have been lucky in that regard.

Mr. Ross deLipkau, an attorney representing various water companies, testified on this bill. He made reference to a letter which he mailed to each of the committee members, which outlines his support of AB 642. The said letter is attached hereto and marked as Exhibit "G". He mentioned that he is the motivating force and somewhat of the author on this bill. He detailed his letter to the committee. Mr. deLipkau noted a few amendments for this bill, i.e., Section c, line 14 of page 1, to delete (of the approval) and replace with except as provided in Section 4. On page 2, line 17, insert after 8 years or more. In addition, add a subsection 6 to read, Sections 4 and 5 shall apply to all applications and permits presently on file in the State Engineer's Office.

Mr. Dick Harris, an attorney from Reno and a Geological Engineer from the School of Mines, next testified on this bill. He wanted to address the specific impact of the present law on a project which he is involved. He explained exactly, through personal experience, why he feels the present law is inaccurate and he de-

(Committee Minutes)

tailed his experiences at length to the committee. He feels a schedule is needed allowing reasonable extensions because of these long governmental periods to obtain approval; would allow them to proceed with planned unit developments over a period of time and ultimately use the water in a conscientious fashion. Therefore, he urged the committee's favorable consideration because of the benefits offered to long time residents and taxpayers such as his family.

Mr. Gene Milligan, Nevada Association of Realtors, testified on this bill. Due to previous question from the committee, he went over the history of this bill on the Senate side, for their information. He further stated that his association supports this bill. Mr. Milligan stated that section five of the bill provides the necessary protection to the people and he read same.

Mr. Les Berkson, General Counsel for the Incline Village General Improvement District, testified in support of this bill. He detailed for the committee, the present problems at Incline Village. They have been going on a year-to-year basis, on extensions on their existing applications for water rights. They would feel much more comfortable if they had assurances that they had an additional eight years without having to depend on the fact that they have to come in and find some excuse year after year to extend their water applications.

Mr. John Holmes, Chairman of the Board of Trustees of the Sierra States General Improvement District, then testified on this bill. He stated that they are presently in the process of obtaining a beneficial use certificate and they find it quite difficult to work with this. He detailed his personal experience for the committee. Again, to go year to year and wonder if you are going to get your permit or not is a real problem. From a small government (which they are) standpoint, it just adds to the burden.

Mr. Bruce Scott, a consulting engineer and a water rights surveyor, testified on this bill in support of it. In answer to previous questions posed by Assemblyman Prengaman, Mr. Scott explained in detail what the procedures have been up until now in this regard.

Mr. John Madole, representing the Associated General Contractors, testified in support of the bill. He feels that based on the testimony heard today, there is much demonstration that this is to the best interest of the consumer

Ms. Debbie Sheltra, representing homeowner associations in Reno, testified on this bill. They opposed the similar bill on the Senate side (SB 13) and they oppose this bill with the same problem, i.e. there is a different problem here that still needs to be addressed. She feels that buyers of land should have some guarantee of water. They have asked that it be addressed instead as an attachment on perhaps the Sale of Property. The people would much rather know if there is water available before they build their homes, as opposed to after.



Mr. Stan Martin, president and general manager of Cave Rock Water Company, next testified in support of the bill. A copy of his remarks is attached hereto and entered as Exhibit "H".

Mr. Bill Newman, State Engineer, and Mr. Peter Morros, Assistant Director of the Department of Conservation and Natural Resources, testified on this bill. They do not oppose this bill; administratively, they have no problem with it. However, he noted some problems which this may create. There is nothing in this bill that is not already in the statutes. Regarding the concern for granting the extensions of time, he noted section c of the bill and Section 4, where it appears they have cut two years off, from ten to eight years, the possible extensions of time. He stated that for the first time in water law, there is a reservation of water, and that is contrary to water law. He detailed this for the committee. He made note of the fact that in 1971 the State Engineer's Office was required (by the legislature) to confirm water availability for subdivisions. In 1975, the Legislature changed that to require the State Engineer to sign adjured as to water availability for subdivisions. Under both acts, they are getting increasingly concerned with the water that is available to serve subdivisions and they have started to deny subdivisions in several areas of the state. They have changed their position on subdivisions of one-acre lots with individual wells on them. They now look at only subdivisions with one well per five acres for conservation measures.

Mr. Morros added that should the Legislature decide to approve this legislation, it is not going to change anything that exists at the present time as far as the granting of extensions of time. One purpose it might serve, it might give the State Engineer some legislative direction regarding his consideration of extensions of time.

SB 184 - Clarifies respective powers and duties of health division of department of human resources and state department of conservation and natural resources with respect to control of sewage disposal.

Mr. Lewis H. Dodgion, Public Health Engineer, Nevada State Health Division, testified in support of this bill, as this bill was introduced at his request. Attached is a copy of his testimony which is entered as Exhibit "I".

Mr. Ernie Gregory, Division of Environmental Protection, then testified on this bill noting that previously the Senate committee did request that they go back and see if they could work out just a one-signature authority. This would be instead of requiring the State Engineer, Environmental Protection and the Health Division. The State Engineer did not want to get involved with anybody else; he wanted his authority to remain as it was. The reasoning is that the original bill calls for a certification by the Division of Environmental Protection. This inconveniences the people in Las Vegas because they do not have field staff in the Las Vegas area.

Therefore, they thought that the most effective way they've handled this was by the certification process. He noted that the language between sections 38 and 44 on page two was put in at the request of the Senate committee.

SB 227 - Authorizes municipalities to recover certain costs of industrial sewage treatment and to refuse certain wastes.

Mr. Wendell McCurry, Division of Environmental Protection, testified in support of this bill, as this bill was drafted at their request. He explained that what prompted the request was the evaluation of certain mandatory requirements under the Federal Water Pollution Control Act. They found there were two problems that were not adequately addressed in the present Nevada Revised Statutes. One dealt with industrial cost recovery and the other dealt with the sewer agency to refuse service to an area that was not in compliance with an adopted 208 plan.

Helen Provoto, Administrative Assistant to the City Manager of Las Vegas, spoke on this bill on behalf of Jack Mitchell, Director of Public Works, City of North Las Vegas. She read from his prepared statement which is attached hereto and entered as Exhibit "J".

COMMITTEE ACTION:

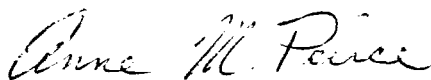
AB 413 - Assemblyman Rhoads moved for a DO PASS and to rerefer to the Assembly Ways and Means Committee, Assemblyman Polish seconded the motion. The committee voted unanimously in favor of Mr. Rhoads motion. Assemblyman Fielding was out of the room at the time of this vote.

AB 642 - Assemblyman Dini moved for INDEFINITE POSTPONEMENT, seconded by Assemblyman Bergevin and the committee voted unanimously in favor of this motion.

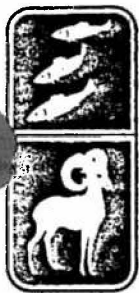
SB 184 - Assemblyman Bergevin moved for a DO PASS, seconded by Assemblyman Dini and the committee voted unanimously in favor of this motion.

There being no further business at hand, Chairman Coulter adjourned this meeting at 5:45 p.m.

Respectfully submitted,



Anne M. Peirce,  
Assembly Attache



NEVADA  
DEPARTMENT  
OF FISH  
AND GAME

GLEN K. GRIFFITH  
DIRECTOR

ROBERT LIST  
GOVERNOR

1100 VALLEY ROAD

P.O. BOX 10678

RENO, NEVADA 89520

TELEPHONE (702) 784-6214

March 23, 1979

The Honorable Sue Wagner  
Nevada State Assembly  
Legislative Building  
Carson City, Nevada 89701

Dear Assemblyman Wagner:

We have forwarded a Fiscal Note for A.B. #558, which includes an estimated first year minimum reduction in income of \$53,733. This estimate does not include the anticipated reduction in federal aid apportionment when an estimated 12,680 licenseholders become exempt. (Only licenses bearing fees are credited). Due to variables it is not possible to forecast the change that would result. Also, we have no way to measure anticipated additional uptake in exempt licenses over and above those who do not now hunt or fish. As 74 percent of the Seniors who now obtain senior licenses fish, and seasons are year around, it is conceivable that there will be an increase in fishing effort putting more pressure on the resource which is, in part, supported by fish production which adds to the program costs.

There is an important request we have as an amendment to AB #558. To facilitate administering our licensing system, it is necessary that:

The exemption for paid hunting licenses be effective July 1, 1979,  
and

The exemption for paid fishing licenses be effective January 1, 1980.

We will be printing and issuing Fiscal Year 1979-80 hunting licenses in May/June of 1979 and already have calendar year fishing licenses out and being sold. Calendar Year 1980 licenses will be printed and issued November/December of 1979.

There are several factors to be considered in your Bill:

1. AB #558 establishes the Senior privilege at age 62, while AB #116 exempts those 65 and older from purchasing a pheasant stamp or duck stamp -- the two ages are not the same.

EXHIBIT A

O-332

2. To be entitled to a resident license, a person must actually and physically live in the State of Nevada for six (6) months immediately preceding the application for a license, and with the intention of making Nevada his permanent home.

There is a segment of the retired population who reside in the State only a portion of the year -- winter in southern Nevada, then move on in the summer, for example. Enforcing the residency requirement is difficult under these circumstances.

3. It has been understood over the years that having a senior license at a reduced fee after 10-20 years of Nevada residency was recognition for their long time support of the program. The fact that they generally live on fixed income was also a consideration for the reduced fee. Population trend records indicate that the 62 or older segment is increasing at a faster rate than the overall state's rate of increase -- 6.6% vs 4.6%. This would lead one to believe that many Senior Citizens have not resided in the State for any length of time and have not, in effect, supported the program. It also indicates that we can expect a greater percent of increase in the uptake of exempt licenses than for paid documents.
4. The decision to offer exempt licenses as proposed under AB #558 is basically a philosophical question that only the legislature can answer. Does the State have an obligation to any resident 62 years and over, regardless of the length of residency (after six months) to offer them the privilege to hunt and fish at no cost to them, but with the cost being borne by others who pay to hunt and fish or by the general taxpayer as proposed in AB #558?

We hope that this will give you a little more information and insight to the ramifications of your bill. Your attention to our proposed amendment will be appreciated. If you have any questions, please advise. We will be in attendance at the 2:00 p.m. hearing the 29th.

Sincerely,

GLEN K. GRIFFITH, DIRECTOR

*Fred E. Wright*  
Fred E. Wright  
Acting Director

FEW:dr



Nevada  
Department  
of Fish  
and Game

GLEN K. GRIFFITH  
DIRECTOR

ROBERT LIST  
GOVERNOR

1100 VALLEY ROAD

P.O. BOX 10678

RENO, NEVADA 89520

TELEPHONE (702) 784-6214

April 4, 1979

The Honorable Sue Wagner  
Nevada State Assembly  
Legislative Building  
Carson City, Nevada 89701

Dear Assemblyman Wagner:

In regard to your proposal to amend AB 558 to make persons with six (6) months Nevada residency at age 65 eligible for a senior license, and if the fee is raised from \$1.25 to \$2.00 the same as juniors and servicemen, the net license fee income effect would be negligible. A net reduction of \$8,084 would be the estimated result.

This calculation is based upon the following:

If the fee became \$2.00 and assuming the 7,928 seniors 65 and older with ten (10) years residency would still purchase a license, there would be an increased income of \$5,945.

By reducing the residency requirement for those 65 and over from ten years to six months, it is estimated that 1,943 additional residents 65 or older would become eligible for a senior license. They would have contributed \$17,915 for regular licenses (a loss) but would spend \$3,886 for the \$2 license. The overall change here would be a loss of \$14,029 in license fees offset by \$5,945 gain noted above or the net reduction of \$8,084.

The \$2 fee would strengthen our counting those sales as a basis for our federal aid apportionment. In light of SB 333 and the estimated \$8,000 involved, your need to tie AB 558 into receiving off-setting general funds would seem to disappear.

The Honorable Sue Wagner  
April 4, 1979  
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The request for different effective date of July 1, 1979 for hunting and January 1, 1980 for fishing still is necessary.

Sincerely,

GLEN K. GRIFFITH, DIRECTOR

*Fred E. Wright*  
Fred E. Wright  
Acting Director



STATE OF NEVADA  
OFFICE OF THE ATTORNEY GENERAL  
CAPITOL COMPLEX  
SUPREME COURT BUILDING  
CARSON CITY 89710

ROBERT LIST  
ATTORNEY GENERAL

April 5, 1977

Honorable Mary Gojack  
Nevada State Senator  
Legislative Building  
Carson City, Nevada 89710

Dear Senator Gojack:

I am writing in response to your letter of March 24, 1977, wherein you requested an opinion on the constitutionality of subsection 2 of NRS 502.240. Such subsection requires that a citizen of the United States who has attained his 65th birthday live in this State for ten years before such citizen is eligible for a reduced license fee.

The guarantee of the equal protection of the laws in the Fourteenth Amendment to the United States Constitution does not preclude all discrimination as to persons who hunt and fish within the borders of the State. Discrimination is generally constitutional if it is based on some reasonable ground -- on some difference which bears a just and proper relation to the attempted classification.

The Legislature must classify whenever there exists a reason which may rationally be held to justify a diversity of legislation. The classification, however, must not be arbitrarily made for the mere purpose of classification, but must be based upon some distinction -- natural, intrinsic or constitutional -- that suggests a reason for and justifies the particular legislation. // The question as to whether a classification is arbitrary or is reasonably related to the inherent purposes of the law must be determined from the facts and circumstances surrounding the enactment and the subject matter, bearing in mind that the constitutionality of the enactment will be presumed, and any doubt respecting its constitutionality will be resolved in its favor.

One the the basic principles involved in considering the validity of legislation assailed under equality provisions of the Federal and State Constitutions is that in the exercise of its power to make classifications for the purpose of enacting laws over matters within its jurisdiction, the State is recognized as enjoying a wide range of discretion. Whether a classification of persons for the purpose of legislative regulation or control is based upon substantial differences or is arbitrary and consequently illegal is a judicial question reviewable by the Courts. McGowan v. State of Maryland, 366 U.S. 420 (1961).

As stated above, the statute in question is challenged on the basis that the ten year residency requirement unjustly discriminates against those who have obtained their 65th birthday but have lived in the State less than ten years. In applying the principles set forth above, it is first necessary to determine what the legislative purpose was in imposing the ten year requirement.

The determination of the legislative intent with respect to enactment of a particular statute is at best an educated guess and usually subject to a number of different interpretations. One theory which could be advanced to support the imposition of the ten year requirement is that those who have lived here for said period have contributed more to the welfare of the State, in particular to the revenues and administration of the Department of Fish and Game, and therefore are entitled to the benefit of paying a reduced license fee.

One problem with this theory is that there is no requirement that the ten year resident had previously purchased licenses at the higher rate. Other theories advanced will also have their weak points. Nonetheless, there is a presumption of constitutionality of the statute and as stated above, the State is given a wide range of discretion in exercising its power to make classifications.

There is no case law which specifically addresses the particular constitutional issue you have raised. We can therefore only conclude that the reasonableness and constitutionality of subsection 2 of NRS 502.240 is debatable, but



Honorable Mary Gojack  
April 5, 1977  
Page Three

nonetheless the statute is presumed constitutional until such time as a court determines otherwise.

I hope this information will be of some help to you.

Sincerely,

ROBERT LIST  
Attorney General

By *Scott Heaton*  
Scott Heaton  
Deputy Attorney General

SH/ema

January 5, 1979

Assemblyman Sue Wagner:  
845 Tamarack Drive  
Reno, Nv. 89509

Dear Sue:

Thanks for permitting me to review your file on the ten year residency requirement to obtain a Senior Citizen Hunting and Fishing license. I still am confused over the philosophy back of the long requirement, especially since there was no such requirement from 1935 to 1955. It was interesting to read in the Fish and Game memo of Feb. 1977 :

"In considering the history of changes inflicted on this group of the hunting and fishing population it would be desirable to tie the purpose of this license to some basic philosophy rather be subjected to random changes from any source or interest"

Former Gov. O'Callaghan wrote me that the requirement was to reward those who had worked at least ten years in the State. The law states nothing to that effect and in fact a person could have been retired for the ten years, unemployed, in jail, or on welfare, and still meet the residency requirement! Some light is shed on the matter when one reads further in the memo of Feb. 1977:

"The senior citizen population in Nevada is growing at the rate of 32% (1970-1974) versus an overall state growth of 17%. It would seem that these senior citizens who are in a position to move to Nevada primarily to retire are in a financial status above the lower income brackets."

This implies that all new residents of Nevada can afford a higher fee than those who have lived here at least ten years and that just is not the case. If it were true then the State should offer "free" hunting and fishing licenses to attract the rich retirees who make such a great contribution to all sectors of the States economy, taxes, purchases, services, etc. Certainly no one would move to Nevada to save a few dollars on his fishing license!

This philosophy of soaking the rich is akin to California's approach, in reverse! In California you receive a free fishing license if you are receiving "aid to the aged" or have an income below \$308 for single persons or \$574 for married couples. Surely Nevada did not attempt to copy California by setting up a residency requirement that in effect gives a lower fee to Senior Citizens than those of means.

According to the Dept. computations, 1029 of us over 65 yet between 5 and 10 years of residency contributed \$11,106 in fees. Is that equitable?

One could philosophize for pages on the unfairness of keeping a new resident as a "second class" citizen for ten years, but that would not contribute to the solution of the problem so let us get down to business.

As long as the Dept. must live on its income from fees, then one must start with the premise that the fees should be equitable and sufficient to do the job that the sportsmen public wants and is willing to pay for.

In view of the residency requirements to vote, receive welfare, register one's auto, benefit from in state tuition, pay taxes, etc. let us accept the position that, regardless of one's age, he should be able to become a full Nevada citizen after six months.

Since fish and game licenses seem to be set in age groups, let us set about to fix fees that are fair for the various groups.

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EXHIBIT D

Up to age 65 persons are supposedly working and therefor able to pay a higher fee. Also, those persons are physically stronger and therefore able to hunt and fish more vigorously and consequently harvest more game.

Next, I would suggest that the +65 group be broken into two groups-65 to 70 and over age 70. The fees for the 65 to 70 group should be reduced by  $\frac{1}{2}$  those charged the under 65 group and the fees for those over 70 might revert to the present structure. Keep in mind that the Mandatory Retirement age has been raised to 70 and therefore, many more persons will be working until that age. Those over 70 will largely be fishermen and it would only take a few fish, reared by the State at considerable cost, to exceed the small cost of \$1.25 or so.

According to the Dept.'s figures, Nevada will have a +65 population of 55,400 this year and 12% of this group will fish and hunt. The Dept. states that 11% will hunt, 42% fish, and 47% hunt and fish. This translates into 6,648 people, 733 of whom will hunt, 2792 fish, and 3124 do both.

Charging  $\frac{1}{2}$  fees for this entire group will produce \$43,079 before giving credit for those paying lower fees after age 70. I do not have the percentage figures for those over 70 who still hunt and fish is significant, and the overall system should produce more revenue for the Dept. Since there are 56% of present licensees who have been in the State since 1969, the Dept will realize additional funds as the ones who attain age 65 each year (and who have never had a senior license) will go to a half fee instead of clear down to the senior citizen rate.

Sue, I hope that the thinking I have done on this will be of help to you. In the absence of a Dept budget, and detailed population figures I could not be more precise. In any event try to get the Dept. more funds and still try to be fair to those of us who have not been here at least ten years.

Most sincerely,

Robert L. Altick  
1490 S. Arlington Ave  
Reno, Nv. 89509



ASSOCIATED PLUMBING AND AIR CONDITIONING CONTRACTORS OF NEVADA, INC.

1754 INDUSTRIAL ROAD

LAS VEGAS, NEVADA 89102

(702) 384-1032

April 5, 1979

PRESIDENT  
RICK BORLASE

VICE PRESIDENT  
RAY MORGAN

SECRETARY  
PAT WAITS

TREASURER  
BILL BARNETT

DIRECTORS  
ORLO E. COX  
CHARLES ENGLERT  
MIKE KELLY  
BILLY WILLIAMS

EXECUTIVE DIRECTOR  
RICHARD VANDENBERG

The Honorable Steven A. Coulter  
Chairman, Environment and Public  
Resources Committee of The Assembly  
Nevada Legislature  
Carson City, Nevada

Re: Assembly Bill No. 566

Dear Sir:

We respectfully request Committee support of A.B. 566 which will repeal N.R.S. 444.432, passed in the 1977 session as an act to restrict water consumption in toilets. While the intent of the legislation was very good, and the industry has been alerted to the need for conservation, the restraints imposed have not accomplished the purposes intended.

The following points warrant your consideration:

1. SIGNIFICANT WATER SAVINGS NOT ACCOMPLISHED

A few random calls to plumbing contractors in Southern Nevada revealed that more than 350 "water saver" closets in residences had to be replaced or modified because of inadequate flushing. One hotel alone had 366 "water saver" closets that had to be modified. If a 3-1/2 gallon "water saver" closet works effectively every other time it is flushed, there would be more water consumed by the "water saver" closet than by a 5 gallon standard water closet that worked every time. In many instances, repeated flushing is necessary. Florida statistics, utilizing water saving devices in standard tanks, found such devices to be troublesome and resulted in only a small savings of about 100 gallons per month per family.

2. NATIONAL STANDARDS NOT DEVELOPED

American National Standard Institute (ANSI) standard, A112.19.2-1973, has not adopted design requirements for vitreous china water saver closets. Present standards will be revised to include such units, but at this time

EXHIBIT E<sup>85</sup>

there are no nationally recognized designs, or testing procedures to demonstrate their performance. Many of the 3-1/2 gallon units have not performed properly. The first models were manufactured and tested under laboratory conditions. Field conditions differed and created disappointing results.

3. N.R.S. 444.432 CONFLICTS WITH N.R.S. 444.340, UNIFORM PLUMBING CODE

N.R.S. 444.340 adopted the Uniform Plumbing Code (UPC) in 1971 as the recognized standard for Nevada. Chapter 2, Table A, Plumbing Material Standards of the UPC, cites as the design standard for vitreous china plumbing fixtures, ANSI A112.19.2-1973. The UPC does not provide a standard for a water saver closet at this time. Thus, compliance with N.R.S. 444.432 results in a violation of N.R.S. 444.340, and vice versa. As standards for water saver units are recognized and adopted by UPC, they will automatically become Nevada law.

4. SANITARY STANDARDS MAY NOT BE MET

To meet sanitary standards, each flushing of a water closet must wash the entire rim of the bowl, completely remove the contents of the bowl, completely change the water, and replenish the water seal in the trap. If this is not accomplished, the next user of the fixture may be subjected to waterborne or airborne diseases. This is especially true in a public facility where the user does not usually concern himself with flushing the fixture repeatedly.

5. IMPACT OF REDUCED FLOW ON SYSTEM

There is concern over build-up of solids in plumbing systems experiencing reduced flows.

6. PUBLIC DISSATISFACTION

The poor performance of water saver closets has caused numerous customer complaints. The limited selection of styles and models meeting water saver requirements also does not meet public demand. One piece, or "low boy" models, and units utilizing flushometer valves do not meet the current restrictions.

7. ENFORCEMENT PROBLEMS

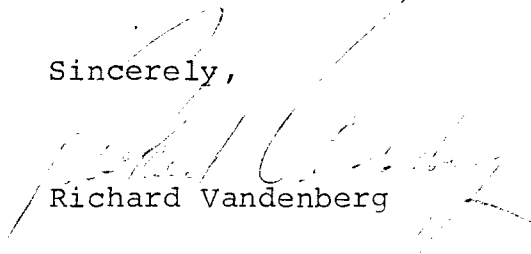
Local jurisdictions find it virtually impossible to enforce, but are in violation of Nevada law if they do not.

8. CONTRACTOR AND SUPPLIER LIABILITY

Customers are demanding fixtures that do not meet the requirements of the statute. Contractor violates Nevada law if such an installation is made.

Discussions with city and county building officials, contractors, and suppliers confirm support of A.B. 566. Only eight states have enacted legislation regarding water saver closets and seven of those states allow the local jurisdictions to substitute standard units if sanitary requirements are not met. It is the position of the industry represented here that adequate legislation was accomplished with the adoption of the Uniform Plumbing Code in 1971. As new water saver standards are developed and adopted, and manufacturers produce new products based upon the new standards, water conservation will be enhanced without the need for further legislation.

Sincerely,

  
Richard Vandenberg

/deb

copy: Committee

encl. A.B. 566  
N.R.S. 444.432  
N.R.S. 444.340  
UPC Table A  
Pat Higgans Maryland Testimony  
Excerpts from ANSI A112.19.2-1973  
Excerpts from National Standard Plumbing Code  
Article on St. Petersburg, Florida  
Article from Contractor Magazine

A. B. 566

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ASSEMBLY BILL NO. 566—ASSEMBLYMAN MAY

MARCH 21, 1979

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Referred to Committee on Environment and Public Resources

SUMMARY—Removes restriction on installing toilets using quantities of water exceeding certain limits. (BDR 40-1196)

FISCAL NOTE: Effect on Local Government: No.  
Effect on the State or on Industrial Insurance: No.

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EXPLANATION—Matter in *italics* is new; matter in brackets [ ] is material to be omitted.

---

AN ACT relating to toilets; removing the restriction on installing toilets using quantities of water exceeding certain limits; and providing other matters properly relating thereto.

*The People of the State of Nevada, represented in Senate and Assembly,  
do enact as follows:*

- 1 SECTION 1. NRS 444.432 is hereby repealed.
- 2 SEC. 2. This act shall become effective upon passage and approval.

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## TOILETS AND SHOWERS

### **444.432 Installation of toilets: Restrictions concerning water consumption; enforcement.**

1. Except as provided in subsection 2, no toilet may be installed after July 1, 1978:

- (a) In any new hotel, motel, apartment house or dwelling; or
  - (b) As part of an addition to or renovation of any hotel, motel, apartment house or dwelling,
- if the toilet uses more than 3½ gallons of water for each flushing.

2. Toilets having a capacity of more than 3½ gallons of water may be installed if:

- (a) Such toilets are equipped with devices to reduce water consumption to 3½ gallons of water or less for each flushing; or
- (b) The drainage system of an existing building requires a greater quantity of water to flush the system adequately.

3. The city or county, acting through its building department or public works department, if any, shall adopt and enforce regulations to enforce the restrictions imposed by this section.

(Added to NRS by 1977, 770)

### **444.434 Installation of shower apparatus: Restrictions concerning water consumption; enforcement.**

1. Except as provided in subsection 2, no shower apparatus may be installed after July 1, 1978:

- (a) In any new hotel, motel, apartment house or dwelling; or
- (b) As part of an addition to or renovation of any hotel, motel, apartment house or dwelling,

if the apparatus uses more than 4 gallons of water per minute.

2. A shower apparatus which uses more than 4 gallons of water per minute may be installed if it is equipped with a device to reduce water consumption to 4 gallons of water or less per minute.

3. The city or county, acting through its building department or public works department, if any, shall adopt and enforce regulations to enforce the restrictions imposed by this section.

(Added to NRS by 1977, 770)



## UNIFORM PLUMBING CODE

**444.340 Declaration of state policy.** The policy of the State of Nevada with respect to the uniformity of plumbing codes throughout the state is:

1. That uniformity is a matter of statewide interest and concern, affecting health and environmental conditions, housing costs and efficiency in private housing construction.

2. That, by allowing local governments to waive and modify provisions of the Uniform Plumbing Code, adopted by the International Association of Plumbing and Mechanical Officials, based on differences in geographic and climatic conditions only upon submission of such proposed waivers and modifications to the state public works board, excessive waivers and modifications would be deterred.

(Added to NRS by 1971, 233; A 1977, 1219)

**444.350 Compliance with code required; procedure for local modification of code.**

1. Any construction, alteration or change in the use of a building or other structure in this state shall be in compliance with the latest edition of the Uniform Plumbing Code adopted by the International Association of Plumbing and Mechanical Officials.

2. Any city or county may adopt such modifications as are deemed reasonably necessary because of geographic, topographic or climatic conditions of such city or county. Any city or county desiring to make changes to the Uniform Plumbing Code, with changes, shall submit such amended code to the state public works board prior to its adoption.

(Added to NRS by 1971, 233; A 1975, 201; 1977, 1219)

**444.420 State public works board: Duties.** The state public works board shall:

1. Review all proposed adoptions of the Uniform Plumbing Code by any city or county and any proposed changes to the Uniform Plumbing Code, and advise such city or county on whether or not such change is deemed warranted by geographic, topographic or climatic conditions.

2. Submit a copy of the Uniform Plumbing Code adopted by any city or county to the health division of the department of human resources.

(Added to NRS by 1971, 234; A 1973, 1406; 1975, 202; 1977, 1220)

**444.430 Power of local governments to adopt regulations; procedure.**

1. The governing body of any city or county shall, 60 days prior to the adoption of any regulation for the enforcement of the Uniform Plumbing Code or any other regulations pursuant thereto, deliver by certified or registered mail, a copy of the proposed regulation to the state public works board for the board's recommendation on the proposed regulation.

2. The governing body of the city or county may, 60 days after the state public works board receives the copy of the proposed regulation, adopt the regulation with or without the approval of the state public works board.

(Added to NRS by 1971, 235; A 1975, 202; 1977, 1220)

# UNIFORM PLUMBING CODE

**TABLE A — PLUMBING MATERIAL STANDARDS**

MATERIALS AND PRODUCTS	ANSI	ASTM	FS	IAPMO	OTHER STANDARDS	FOOTNOTES REMARKS
<b>PLUMBING FIXTURES:</b>						
Cultured marble lavatory .....				PS 18-74		
Enameled cast iron plumbing fixtures .....	A112.19.1(1973)			PS 13-66		Note 5
Grease interceptors .....			WW-P-541(1971)	NBS-PS 5-66 PS 1-75		
Job fabricated shower receptors (Installation) .....						
Porcelain enameled formed steel plumbing fixtures .....	Z124.1(1967)					
Prefabricated shower receptors, shower enclosures and metallic bathtubs .....	Z124.2(1967)					
Stainless steel fixtures .....					CS 243-62	
Vitreous china plumbing fixture .....	A112.19.2(1973)			IS 2-65		
Tile lined Roman bathtubs (Installation) .....				PS 31-75 PS 8-71		
<b>VALVES:</b>						
Backflow prevention devices .....						
Back water, sewer .....						
Bronze gate .....			WW-V-54D(1973) WW-V-58b(1971)			
Cast iron gate .....				PS 10-66		
Finished and rough brass plumbing fixture fittings .....	A112.18.1(1971)				UL 125-1968	
Globe-type log lighter (gas) .....				PS 15-71		
L. P. gas .....						
Pipe applied atmospheric vacuum breakers .....	A112.1.1(1971)					
Pressure reducing and regulating valves .....						
Relief valves and automatic gas shutoff devices for hot water supply systems and addendum .....	Z21.22(1971)				UL 132-1958	
<b>APPLIANCES AND EQUIPMENT:</b>						
Automatic storage type water heaters with input less than 50,000 Btu per hour, Approval requirements for, Vol. 1 .....	Z21.10.1(1971)					
Circulating tank, instantaneous and large automatic storage type water heaters, Approval requirements for, Vol. 111 .....	Z21.10.3(1971)					
Draft hoods, Listing requirement for .....	A21.12(1971)					

MATERIALS AND ALTERNATES

23

EXHIBIT E

# NATIONAL ASSOCIATION of PLUMBING • HEATING • COOLING CONTRACTORS

*Testimony of Patrick J. Higgins*

TESTIMONY TO THE AD HOC COMMITTEE APPOINTED TO HOUSE BILL 44, PLUMBING FIXTURES --

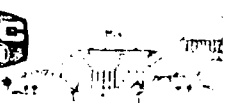
WATER CONSERVATION

Testimony Rendered By

Patrick J. Higgins  
Technical Director  
National Association of Plumbing -  
Heating - Cooling Contractors

PRIDE IN OUR PAST - FAITH IN OUR FUTURE

1016 Twentieth Street, N.W., Washington, D.C. 20036 • Telephone: (202) 331-7675



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EXHIBIT E

# NATIONAL ASSOCIATION of PLUMBING·HEATING·COOLING CONTRACTORS

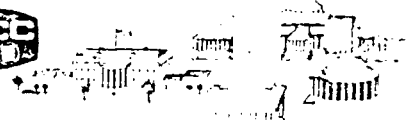
~~Ladies and~~ Gentlemen of the Ad Hoc Committee, my name is Patrick J. Higgins.

I am the Technical Director for the National Association of Plumbing - Heating - Cooling Contractors. As Technical Director for NAPHCC, I serve as the Code Secretary, to the National Standard Plumbing Code, and also serve as liaison to many standards writing groups, such as the American National Standards Institute A112.19.2 which is concerned with the standards for Vitreous China Plumbing Fixtures. In addition, my position with NAPHCC dictates that I monitor national activity of any technically related subject as water conservation. It is for this reason that I have been asked by certain members of our association, to provide some insight into the nationwide activity relative to water conservation:

The concept of water conservation is important and each of us here realizes the obvious benefits to reduced consumption. Our Association has gone on record for support of water conservation efforts. As an example of our concern Appendix D of our National Standard Plumbing Code 1978 reflects wording for local jurisdictions to adopt water conservation regulations. (A copy of this section of the Code is submitted as part of my testimony.) Addressing this appendix for a minute, we find that restrictive numerical values have been placed upon flow volumes for urinals, lavatory faucets shower heads, and sink faucets. These requirements are infact more stringent than those which are proposed in Maryland House Bill 44. Volume reduction in these devices, does appear to reap benefits, as documented by the Penn State University Research Publication 98. Most importantly, reduced volume tends to alter water usage habits of the consumer, thereby making them more cognisant of the needs to save water.

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The issue of primary concern, as reflected in previous testimony, appears to be concerned with the water conserving water closet. Before we address this fixture, let us address ourselves to the user of the fixture. The human body by its nature, tends to heal itself. One method of self healing is that of expelling diseases through excrement. The water closet, by definition and design, is a collector of human excrement which must safely remove the germ laden waste from the building environment. If the water closet does not function properly, then the potential for disease transmittal is greatly increased. Keep in mind that diseases can be transmitted through both air and water mediums. Deposits of excrement on the sides of a closet bowl or on the surface of the water can easily transfer disease bacteria.

In order to function in a safe and sanitary manner, a water closet must meet four primary requirements for proper flushing performances. These requirements are (1) the rim of the bowl must be washed entirely, (2) the contents of the bowl must be completely removed, (3) the water in the bowl must be changed, and (4) the water (or trap) seal must be replenished. All of the above mentioned requirements must be completed per each flushing cycle, as the user of the fixture does not usually concern himself with flushing the fixture twice, especially in a public facility.

The initial design of this fixture utilized seven to eight gallons per cycle. As technology developed, it was determined that approximately five gallons would perform as well as the seven gallons, therefore the five gallon units came into being. Service calls on these units were primarily concerned with careless stoppages or with constant fixture running.

The issue of water conservation surfaced and quite a few jurisdictions got on the band wagon to save water. Bottles in the closet tank, tank dams, bricks, and varieties of other items were placed in closet tanks. In the city of Saint Petersburg, Florida, 50,000 water dams were installed by the

city to reduce water consumption, despite unfavorable testimony by local contractor associations. After three years, the devices were in need of maintenance and officials found that the cost of sending city crews out to make adjustments would far exceed any water usage savings. In addition, a survey of the plumbing contractor involved in repair work in that same area showed that service calls rose 800 - 900% in a two year period from the date of installation of these devices.

In the interest of meeting new water saving needs, two or three major manufacturers of china started to redesign their water closets to save water. Under laboratory conditions, a 3½ gallon per flush unit was made. However, laboratory design, manufacture and testing of a few samples is no assurance of complete quality and performance of a product constructed of Vitreous China. A vitreous china bowl is hand made, not machine made. It is formed and then fired in 2200° for 40 hours. No two bowls are exactly alike. Since the bowl design mold reflects the absolute maximum water use as determined by laboratory tests, then most any factor could affect the performance. When the bowls were flushed with five gallons, any fault in the bowl quality was overcome by the additional volume. With the 3½ gallon water saver, a fault in the bowl can easily "break" the flush. In addition, other factors come into view with the installation of a water saver unit. The tank must be level, the supply fill valve must be adjusted, the available pressure must exist in the water supply system, and various other factors must be assured. After each of these factors have been addressed, then the fixture should work.

Yet certain questions about the water saver fixtures have not been openly addressed, such as:

- 1) Will any replacement fill valve work in this device?
- 2) Will this fixture work five years from now when calcium deposits form in the bowl from urine?

3) Who will guarantee the fixture and who will pay for repairs?

Will it be the plumber, the manufacturer, or the consumer?

4) How do I judge that the fixture is working properly?

Although many of these questions have been asked many times before, our records show that only eight states have enacted some form of water conservation requirements which are now or will in future months be in effect. However, reflective of the thinking behind the wording in Appendix B of our Code for the water saving water closet, seven of the eight states have included caveat statements which allow the local authorities to substitute standard flushing units in place of water savers should the water saving units fail to meet sanitary requirements.

As of November 13, 1973, there had not been any concerted efforts by the industry to address the problems of water saving closets. However, last Monday, the members of the ANSI A112.19.2 Committee for Vitreous China Plumbing Fixtures met in Washington, D.C. to update the 1973 issue standard. The highlights of the meeting were:

- 1) The committee is tending towards a maximum of 3½ to 4 gallons per complete flushing cycle for water saving water closets. This national committee realizes that a compromise solution for water saving as well as fixture performance is needed.
- 2) Instead of the single flushing test for these fixtures, as many as three laboratory and two field tests may be included in the new standard so that performance of these units will be assured.
- 3) All vitreous china manufacturers will be asked to provide input on this new standard so as not to exclude any fixture manufacturer's valuable performance criteria.
- 4) The new standard will take at least six months to prepare and submit for ANSI approval and publishing, yet it will be a consensus standard of the total industry.

In light of these comments, we respectfully request that you defer implementation of the water conserving water closet section of House Bill 44 until the national standard is completed. Please do not delay the other methods of addressing water saving until this standard is completed though. We also urge that steps be taken to better inform the public of the need to save water and the methods used to accomplish this end.

I would welcome any questions from the committee.

I offer my services to the committee as needed in the future.

Thank you.



EXCERPT FROM PRESENT STANDARD

AMERICAN NATIONAL STANDARD

# Vitreous China Plumbing Fixtures

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ANSI A112.19.2 - 1973

*SECRETARIAT*

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS  
AMERICAN SOCIETY OF SANITARY ENGINEERING

*PUBLISHED BY*

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS  
United Engineering Center      345 East 47th Street      New York, N. Y. 10017

EXHIBIT E -- 98

for locating dimensions. The illustrations are not intended to indicate standard or required designs.

### 3.8 Standard Types and Sizes

The standard fixture types and sizes described in section 4 herein are those most commonly used, and are recommended as affording an adequate selection for all ordinary applications and for stock. It is intended, however, that other types and sizes will be provided as needed, but not carried as stock items. Use of the standard types and sizes wherever possible will be generally beneficial through simplification of production practices, improved distribution, and better service to consumers.

## 4 FIXTURE TYPES AND SIZES

### 4.1 Water Closets

Fixture shall consist of a water closet bowl made of one-piece vitreous china and equipped with a means for flushing. The water closets described are considered to be standard fixtures.

(1) *Close-coupled Water Closet.* Water closet bowl with separate tank secured to and supported by the water closet bowl, and separate tank cover.

(2) *One-piece Water Closet.* A single piece of vitreous china comprising water closet bowl and tank, and separate vitreous china tank cover.

(3) Water closet with direct flushing valve.

4.1.1 Types of Water Closets. Water closets shall be designated as described preceding, with the type of water closet bowl inserted, as, for example, "Close-coupled reverse-trap water closet." The standard types of water closet bowls are described in paragraph 4.1.2.

#### 4.1.2 Water Closet Bowls

(1) *Siphon-jet Water Closet Bowl.* A water closet bowl having a siphon trapway at the rear of the bowl, and integral flushing rim and jet. It shall have a minimum water surface of 12 by 10 inches, and a minimum depth of seal of 3 inches. The trapway shall pass a 2-1/8 inch minimum diameter solid ball (see figs. 3 and 4).

(2) *Reverse-trap Water Closet Bowl.* A water closet bowl having a siphon trapway at the rear of the bowl, and integral flushing rim and jet. It shall have a minimum water surface of 9 by 8 inches, and a minimum water seal of 2 1/2 inches. The trapway shall pass a 1 1/2 inch minimum diameter solid ball (see figs. 5, 6, and 7).

(3) *Washdown Water Closet Bowl.* A water closet bowl having a siphon trapway at the front of

the bowl, and integral flushing rim and jet. It shall have a minimum water surface of 8 by 7 inches, and a minimum water seal of 2 1/2 inches. The trapway shall pass a 1 1/2 inch minimum diameter solid ball (see fig. 8).

(4) *Siphon-jet Wall-hanging Water Closet Bowl for Direct Flushing Valve.* A siphon-jet water closet bowl designed for off-the-floor installation (see fig. 9). Bowl specifications are same as in paragraph (1) above. Bolt-hole dimensions are shown in figure 13-A. Bolt holes may be elongated at the option of each manufacturer to accommodate old mountings.

(5) *Siphon-jet Wall-hanging Water Closet Bowl for Tank.* A siphon-jet water closet bowl designed for off-the-floor installation, to be supplied by tank (see fig. 10). Bowl specifications are same as in paragraph (1) above. Bolt-hole dimension as specified in paragraph (4) above.

(6) *Blowout Wall-hanging Water Closet Bowl for Direct Flushing Valve.* A water closet bowl designed for off-the-floor installation, having a trapway at the rear of the bowl, and integral flushing rim and jet. It shall have a minimum water surface of 12 by 10 inches, and a minimum depth of seal of 3 inches. The trapway shall pass a 2-1/8 inch minimum diameter solid ball. Bolt-hole dimensions are shown in figure 13B (see figs. 11 and 12).

(7) *"Juvenile" Water-closet Bowls.* A siphon-jet water closet bowl measuring 13 to 13 1/2 inches from floor to top of rim. Other specifications are the same as in paragraph (1) preceding.

(8) *"Child's" Water Closet Bowls.* A siphon-jet water closet bowl measuring 10 inches from the floor to the top of the rim. May be supplied by tank or direct flushing valve.

(9) *"Physically-Handicapped" Water Closet Bowls.* A siphon-jet water closet bowl measuring 18 inches from the floor to the top of the rim. May be supplied by tank or direct flushing valve.

(10) *Siphon-jet Water Closet Bowl Floor Mounted, Back Outlet.* May be supplied by tank or direct flushing valve (see fig. 13).

4.1.3 Top Contour of Water Closet Bowls. Water closet bowls shall have round-front (regular rim) or elongated top contours as shown in figure 2.

4.1.4 Flushing. Water closet bowls covered by this standard shall pass the flush test specified in paragraph 6.5.

4.1.5 Spud Sizes. The standard sizes for spuds on water closet bowls are as follows: 1 1/2 inches for

NO MENTION OF WATER SAVING DEVICES IN  
THE PRESENT STANDARD

## 6.5 Flushing Test for Water-closet Bowls

**6.5.1 Paper.** The standard size paper to be used in this test is 4½ by 5 inches. If a smaller or a larger size is used, the load should be increased or decreased proportionately, based on the square inches of surface per sheet.

**6.5.1.1** For interfold (pack type) toilet paper, six sheets in all are considered equivalent to one six-sheet strip of single-roll paper.

**6.5.1.2** The "test load" for the flushing test shall be as given below, depending upon the absorption time of the paper used.

Paper absorption time, double-strip method, seconds.....	0 to 3	4 to 6	7 to 15
Number of crumpled six-sheet strips of single-thickness roll toilet paper.....	7	6	5

**6.5.2 Method of Determining Absorption Time of Paper.** To determine the absorption time of roll toilet paper by the double-strip method, take two two-sheet strips of paper and place them together with perforations in line, and with curvature from roll in same direction to insure uniform contact.

**6.5.2.1** These two strips shall then be placed gently on the surface of the water with convex side of paper down. The time in seconds shall be recorded from the moment the paper touches the water until a spot of moisture approximately 1/8 inch in diameter appears on the upper strip. Spots appearing through imperfections in the paper or at edges shall be ignored. (This test can best be made in a lavatory basin or sink where light is usually better than in closet bowl.)

**6.5.2.2** The absorption time of interfold (pack-type) paper shall be determined in the same manner as for roll toilet paper, after first cutting the interfold sheets where folded, then placing the two sheets on the surface of the water.

**6.5.3 Procedure for Testing.** The bowl shall be level, the trap and outlet clear, the bowl filled to weir level, the tank filled to the water line where marked and, in the absence of a mark, to a point 1 inch below top of overflow, and the float valve (ball cock) shall be adjusted to fill tank in not more than 3 minutes.

**6.5.3.1** The given number of six-sheet strips of roll toilet paper, as determined by absorption time, shall each be crumpled into a loose ball measuring 2 to 3 inches in diameter, and dropped all together as a "test load" into the bowl and the bowl flushed immediately. The bowl shall flush similar "test loads" repeatedly.

**6.5.3.2** If interfold (pack-type) paper is used, six sheets shall be crumpled into a ball in place of each six-sheet strip of roll paper, and the test shall be made as outlined above for roll paper.

**6.5.3.3** No paper other than common toilet paper, coming within the absorption time range as mentioned above, shall be used for the test.

**6.5.3.4** When water closet bowls to be tested are connected to direct-flushing valves, the control stop and valve should first be adjusted for best flushing action. The flow pressure (maintained at the flushing-valve inlet during test) shall not be less than:

10 pounds per square inch for siphon-action bowls.

20 pounds per square inch for blowout bowls.

## 6.6 Method of Determining Warpage

The fixture shall be placed on a flat surface so as to ascertain the amount of deviation from the horizontal plane that exists at the edges of the fixture. If a feeler gage of thickness equal to the total allowable warpage will not slide under the fixture without forcing, the fixture satisfactorily comes within the warpage limitations. If the fixture will rock on two opposite corners, the horizontal plane shall be determined by placing one feeler gage, of the total warpage allowed, under a corner that does not touch the plane and forcing the fixture down on this gage. If a second feeler gage of the same thickness will not slide under the fixture at any other point, the fixture is not warped out of horizontal plane by more than the specified tolerance, and satisfactorily comes within the warpage limitations.

## 7 MARKING

**7.1** Each vitreous china plumbing fixture shall be plainly and permanently branded for identification with the name or trade-mark of the manufacturer, and date of manufacture.

### 7.2 Seconds

All "second" grade ware shall be indelibly marked by the maker with two parallel lines cut through the glaze into the body of the ware at the location (see fig. 37). These cuts shall be filled with a bright red varnish or enamel which is resistant to the action of hot water. No labels shall be placed on "seconds."

**7.2.1** All packages containing "seconds" shall be clearly identified with two red marks adjacent to fixture identification.

# NATIONAL STANDARD PLUMBING CODE

1978



National Association  
of  
Plumbing-Heating-Cooling  
Contractors



American Society  
of  
Plumbing Engineers

## Water Conservation

### D.1 WATER CONSERVATION—WATER CLOSETS

Water closets shall be designed, manufactured, and installed so as to be operable and adequately flushed with no more than \* gallons of water per flush.

### D.2 WATER CONSERVATION—URINALS

Urinals shall be designed, manufactured, and installed so as to be operable and adequately flushed with no more than 2.5 gallons of water per flush.

### D.3 WATER CONSERVATION—FLUSHOMETER VALVES

Flushometer valves shall be designed, manufactured, installed, and adjusted so as to provide no more than \* gallons of water per flush to any water closet connected thereto, and no more than 2.5 gallons per flush for each urinal connected thereto.

### D.4 WATER CONSERVATION—FLUSH TANKS

Flush tanks shall be designed, manufactured, and installed so as to provide no more than \* gallons of water per flush for each water closet and no more than 2.5 gallons of water per flush for each urinal or for the equivalent length per urinal for trough urinals installed in accordance with Subsection 7.8.3.

### D.5 WATER CONSERVATION—LAVATORY FAUCETS

Lavatory faucets shall be designed, manufactured, and installed so that they shall not exceed a water flow rate of 2.75 gallons per minute with varying supply line pressure. Every lavatory faucet will be equipped with an approved aerator.

\*At this present time, sufficient research data has not been prepared relative to proper performance of water closets with reduced water consumption. Therefore, it is recommended that prior to insertion of any numbers into these sections, the jurisdiction having authority should consult manufacturer's recommendations, industry reports, and related research data.

D-1

#### D.6 WATER CONSERVATION SHOWER HEADS

Shower heads shall be designed, manufactured, and installed so as to deliver water at a rate not exceeding 2.75 gallons per minute with varying supply line pressure.

#### D.7 WATER CONSERVATION SINK FAUCETS

Sink faucets shall be designed, manufactured, and installed so that they shall not exceed a water flow rate of 2.75 gallons per minute with varying supply line pressure.

D-2

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## SINK

(cont. from p. 13)

for a pleasantly soft matting, not high enough to cause a trip and anchored so it can't slip.

Consider these two major comforts, and those hours spent in front of the sink will seem much shorter. "Add a drainboard-counter top-chopping block with minimum seams to catch dirt, and a faucet that responds to the gentlest nudge," Whitman concludes, "and sink time may even leave the ranks of household chores."

Theodore Roosevelt said:

"Every man owes a part of his time and money to the business or industry in which he is engaged. No man has a moral right to withhold his support from an organization that is striving to improve conditions within his sphere."

## Water-saving devices prove waste of money in St. Petersburg

In 1974, the City of St. Petersburg, Florida, installed 50,000 water-saving devices in toilet tanks. The work was done by city employees, free of charge.

The City Council ignored testimony by AP&MC of Pinellas that neither the economy or efficiency of the device had been established. The inference of the city fathers was that the plumbers had a self-interest motive.

Three years later, the devices were in need of maintenance, and officials found that the cost of sending city crews out to make

necessary adjustments would far exceed any water usage savings. At maximum, the plastic dams are said to reduce water usage 5-3½ gallons per flush.

"Without adjustments," said Utilities Director William Duynslager, "a lot of people have to flush twice. They just don't save that much water."

"Even when working right, the devices save about 100 gallons per month for the average family, and that's not much on a water bill."

## HIRING

(cont. from p. 7)

The Equal Employment Opportunity Commission election guidelines call for examination of the results of each step in an employer's hiring procedure. Courts and enforcement agencies will normally accept the "bottom line concept," which is included in the OFCCP guidelines. The bottom line concept calls for a look at the result of an employer's entire selection process.

If you find "adverse impact" on protected groups as a result of your selection process, check which step is causing that adverse impact and validate that step.

Possible defenses against a charge of adverse impact include:

- (1) the number of cases is too small for statistical significance,
- (2) the differences in selection ratios are not substantial,
- (3) the comparison is made against an inappropriate sample (if you can establish, for example, that the people involved do not parallel the general population).

Twenty-two hundred plumbing-heating-cooling contractors receive "The Texas Journal" each month, including the membership of the Associated Plumbing-Heating-Cooling Contractors of Texas (APHCC). This month we have added fifty contractors' names to our mailing list, including recently licensed Master Plumbers. These individuals will receive the Journal free for four months.

Membership in the APHCC is open to licensed individuals engaged in business as plumbing, heating, and/or cooling contractors. For your convenience, we have enclosed a membership application with this mailing. We urge you to take advantage of the benefits of APHCC membership!

### Funseekers Astronomical Autumn Cool Times, Great Savings.

**Save \$4.25**

Present this coupon and your AstroWorld Six Flags Funseeker card at any AstroWorld ticket booth between September 9, 1978 and November 26, 1978 and receive a \$4.25 discount off the regular special rates ticket price of \$8.50. Children under three free.

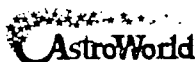
\$8.50 Regular Special Rates Ticket Price  
\$4.25 Autumn Funseeker Discount  
\$4.25 Autumn Funseeker Price

Coupon offer good for each family member up to a total of 6 persons.

Offer not good in conjunction with any other coupon or discount ticket offer other than Funseeker card. Offer valid after November 26, 1978.

AstroWorld is open weekends through November 26, 1978.

September 10 am - 8 pm  
October/November 10 am - 6 pm



(78-15)

Please circle number of guests: 1 2 3 4 5 6

### Funseekers Astronomical Autumn **SAVE \$10**

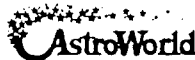
every night at these five hotels

Present this coupon at any one of these hotels and save \$10.00 off the most available rate on each night's stay. Discount not valid unless coupon presented at time of check-in. However, advance reservations are requested since package is subject to availability. Rates are net, non-commissionable and not applicable when attending a meeting or convention nor are they valid in conjunction with any other discount and/or special rate plan.

For reservations, call these toll free numbers:

Hamada Inn Dome  
1-800-228-2828  
Marriott AstroWorld  
1-800-228-0290  
Sheraton & Hilton  
1-800-492-6963

Advance reservations recommended. Offer expires November 26, 1978.





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# Contractor

The Essential News Source of Mechanical Contracting... AIR CONDITIONING • HEATING

## Wait Asked on Water-Saving Toilet Rule

Special to CONTRACTOR

WASHINGTON — A representative of the National Association of Plumbing-Heating-Cooling Contractors has testified in favor of water-conserving faucets, showerheads and similar fittings under consideration for Maryland.

But Patrick J. Higgins, PHCC technical director and others recommended postponement of the 3½-gal maximum regulation for water closets.

### No National Standards

Higgins explained that there are no national standards for water-saving toilets, and some water-saving fixtures now on the market have demonstrated higher than normal failure rates which ultimately may waste more water than they save.

More importantly, an incomplete flush in which deposits are not totally removed from the bowl may constitute a health hazard.

Purpose of the meeting of the ad hoc Committee for Implementation of Water Conservation in Maryland was to provide data on how that state could implement water conservation for all plumbing fixtures in accordance with recently passed legislation that went into effect Jan. 1.

Maryland officials indicated (Turn to Postpone, page 25)

## Postmortem Report of an H-V-AC Company Four Contributing Causes of Bankruptcy Analyzed

BY LOUIS A. ORLANDO, MBA

Special to CONTRACTOR

NEW YORK — This is an obituary of a respected mechanical contracting firm that once had a multi-million dollar volume. The firm was based in an eastern state, but not New York.

The contributing causes of death were:

- Incompetent management.
- Intransigent union rules
- Cash flow problems — insufficient working capital.
- Reluctance to seek professional assistance.

The single most important asset of any successful company is its employees and their dedication to the company.

Generally, this is not easily attained. But it's not too difficult in the mechanical contracting business whether union or nonunion.

Nonetheless, in the union field a plumbers' local union where plumbing work is involved can upset any dedication of employees to the company.

Why? Because in some localities plumbing mechanics are dedicated first to their union and second to the company that hires them out of the union hall.

Reason for listing "incompetent management" No. 1 in this particular case is due to lack of good business judgment in deciding to venture

*This postmortem report covering a multi-million-dollar-volume mechanical contracting firm is factual and true because the autopsy on this once highly successful company was conducted by the writer, a professional MBA business/management consultant. For his background, see page 27. — Ed.*

into the plumbing field on a large scale without recognizing the pitfalls associated with some of the ridiculous working rules and regulations of the plumbers local in the area of this mechanical contractor.

This five-year-old company was highly successful in the h-v-ac field, with skilled union journeymen and headed by a expert mechanic who knew every phase of the h-v-ac operation

### Little Plumbing Experience

But he knew very little about the plumbing end of the business and its union ramifications. Unlike the plumbers' local union, the company's affiliation with the Sheet Metal Worker local covering the h-v-ac field was smooth. Mechanics pledged their allegiance first to the company and second to their union.

After four years of profitable h-v-ac operation the company decided to bid on a large hospital

(Turn to Failed in Plumbing, page 26)

## Cooling Cont'rs Represented on 3 Fluorocarbon Task Forces

WASHINGTON — Industries that use fluorocarbons met last month to develop a unified plan for dealing with the government's consideration to ban or limit use of fluorocarbons.

Three task forces were

formed, with the Air Conditioning Contractors of America represented on all.

The pending regulation of fluorocarbon usage in coolants has been proposed by the Environmental Protection Agency.

### 3 Task Forces

The task forces are:

- Emission control task force, which will study any and all methods to reduce at

## ACCA Confab to Be Strategy-Filled

WASHINGTON — The annual convention of the Air Conditioning Contractors of America headlined "Strategies for Success" and slated for Feb. through March 1 at the Atlar (Ga.) Hilton Hotel, will feature roundtable discussions at workshops on a variety of subjects of concern to h-v-ac contractors, including special markets (food chains, computer rooms, solar and energy management), financial manage-

## Nat'l Standards Policy Drafted

WASHINGTON — A diverse group of 30 people, drawn from

the President, the Secretary of Commerce and the director of

EXHIBIT E



## Postpone

(Continued from page 1)

they are planning to proceed with all segments of the bill with the exception of the water closet section which will be postponed until a standard is prepared.

Higgins was particularly busy recently in representing PHCC at various functions.

### At A112 Meeting

He participated in a meeting of ANSI's A112.19 Plumbing Fixtures Standards Committee which was held to complete standards on enameled cast iron fixtures.

The committee includes representatives from industry manufacturers, code officials, government agencies, associations and institutes.

During the meeting, a final copy of ANSI Standard A112.19.1 on enameled cast iron plumbing fix-

tures was reviewed and forwarded to ANSI.

The initial draft for an updated A112.19.2 Vitreous China Plumbing Fixtures Standard was also considered during the meeting. Key proposals:

- ▶ Include water-saving closets.
- ▶ Establish a 3 1/2 to 4 gal range for closet flushing values.
- ▶ Set more stringent testing procedures for these fixtures.

### Apprentice Plan Explained

Higgins addressed a meeting of the Susquehanna Valley (Pa.) PHCC on how to establish an apprentice program.

He outlined the NAPHCC Open Shop Apprenticeship Program and provided information on standards, the national association's lesson plan manuals, the Appren-

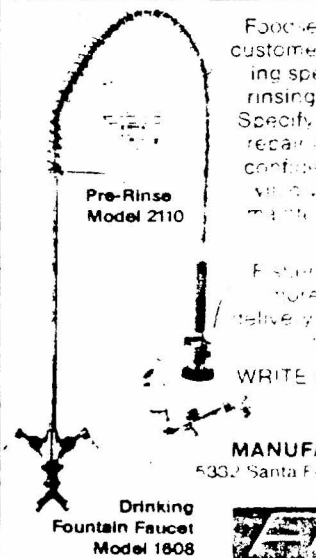
tice Evaluation Workshop program, and the LaBelle audio-visual system.

He also provided information on plans for further development of the apprenticeship program.

In reviewing steps to be taken by a local group establishing an apprentice program, he said they should include:

- ▶ A local apprenticeship committee.
- ▶ Training standards
- ▶ Contact with the Bureau of Apprentice Training to register the program.
- ▶ A facility suitable for serving as a training site.
- ▶ Interviewing and hiring of instructors.
- ▶ Participation in the National Apprentice Evaluation and Instructor Workshop programs.

and your hose



## Fluorocarbon

(Continued from page 1)

impact of any regulatory action. Rand's final report to EPA is due in March.

By May, EPA will have completed its own preliminary assessment and internal plan of action.

In August, EPA must report to Congress on the status of its assessments as well as its overall plan.

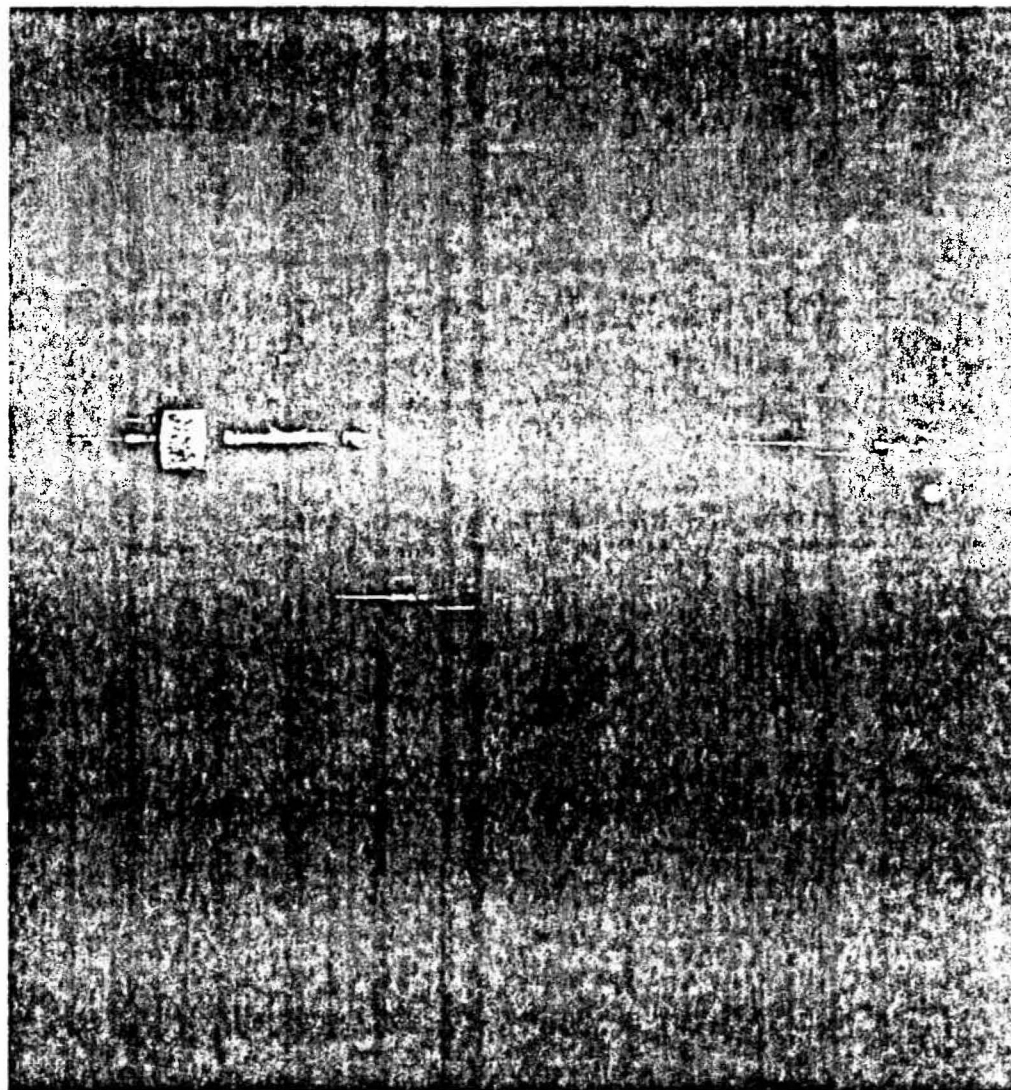
Preliminary regulations are likely to be issued as early as next October, according to ACCA.

## Trane Co. Forms Building Systems Division

LA CROSSE, WISC — Trane Co. has announced formation of a new operating arm, to be known as the company's building systems group.

The group is composed of the wholly owned subsidiary, Trane Sentinel Inc. (formerly Sentinel Electronics Corp., St. Paul, Minn.) and the newly formed building energy systems engineering department.

Named as manager of the building systems groups is Dennis R. Bridges, formerly manager of marketing development and of ad-



# ANNOUNCING

## B&G's new ThermoMate non-electric zone c

EXHIBIT E

106

# KOHLER ELEGANCE

GREAT IDEAS FOR BATHROOMS, POWDER ROOMS AND KITCHENS



117

EXHIBIT F

# Country Grey

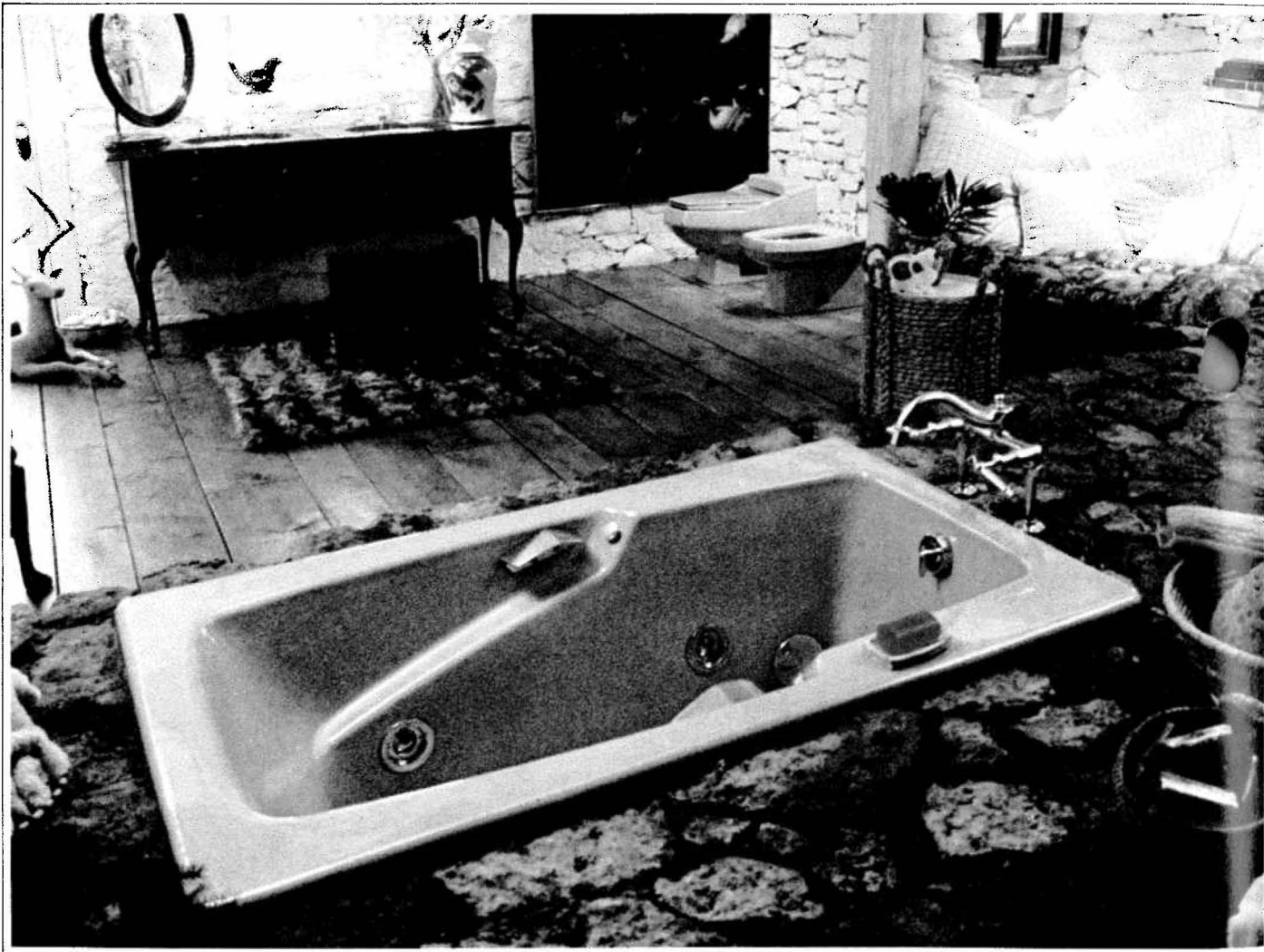
*Because deep inside, there's a little bit of country in all of us.*

And now Kohler takes you there... with Country Grey. A gentle color so perfectly natural it works with most other colors, naturally. Country Grey recalls things that are warm. And open. And honest.

Like a tiny grey kitten cuddled against soft wool. Weathered barns nestled against grey woods. Smooth stones in a sparkling country stream.

That's country, pure and simple. That's Country Grey, simple and pure. Country Grey... Kohler's newest color.

Shown here on the Steeping Bath Whirlpool, Rochelle toilet, Caravelle bidet, Caxton lavatories. "Antique" faucets.



ON THE COVER: The Steeping Bath, 20" deep for chin-deep soaking in steeping hot water.

# LOOK TO KOHLER FOR GREAT IDEAS IN BATHROOMS POWDER ROOMS & KITCHENS

## *A few words about Kohler Quality*

For more than 100 years, the people at Kohler have recognized that there's something special about their customers.

So they have consistently and conscientiously dedicated their efforts toward bringing you better products.

You won't find anything cheap or shoddy coming from the Kohler factories nor promises of product performance that can't be kept.

You will find every product worthy of the Kohler name — and manufactured by a company that has backed its product lines ever since John Michael Kohler made his first plow way back in 1873.

Building well is a way of life at Kohler where skilled and dedicated people know their jobs and work hard at doing them well.

That's why Kohler faucets work smoothly, positively, and reliably; and that's why Kohler toilets, lavatories, bathtubs and kitchen sinks offer homeowners the best value their money can buy.

Because Kohler cares.

That's why, for more than 100 years, people have recognized that there's something special about Kohler products.

*Kohler Co. Manufacturers of Plumbing Products, Engines and Generators with factories in Kohler, Wis., Brownwood, Texas, Spartanburg, S. C., Toledo, Ohio.*



**THE ELEGANCE OF BLACK.** There's real excitement in bathroom planning and decorating today. Bathrooms are getting bigger. Colors are more exciting, bathtubs more luxurious, lavatories more convenient, toilets more stylish. Your new bathroom might not be as spacious as shown at right, but you can enjoy the same plumbing products and apply similar decorating ideas. Focal point: The Bath, nearly 5½' x 7' of bathing elegance. In Black Black, a bold neutral color for top-line fixtures. Other products: Man's Lav and Lady Vanity shampoo/grooming center lavatories, Rochelle toilet, Caravelle bidet, Alterna Water-Guard faucets in 24 carat gold electroplate.

**AN ECLECTIC LOOK.** Whether you are a world-wide traveler, a compulsive collector, or amateur photographer or artist, here's a bathroom setting that could reflect the real you. Warm colors, a refreshing, eclectic decor, and total convenience begin with twin Tahoe self-rimming lavatories in high-fashion Espresso, complemented by Alterna Water-Guard faucets in 24 carat gold electroplate. Other fixtures are Harvest Gold. Mendota bath is 5' long, extra wide, 16" deep. Compact Pompton toilet saves space. Caravelle bidet offers personal cleanliness for the entire family.

# THE BOLD LOOK OF KOHLER

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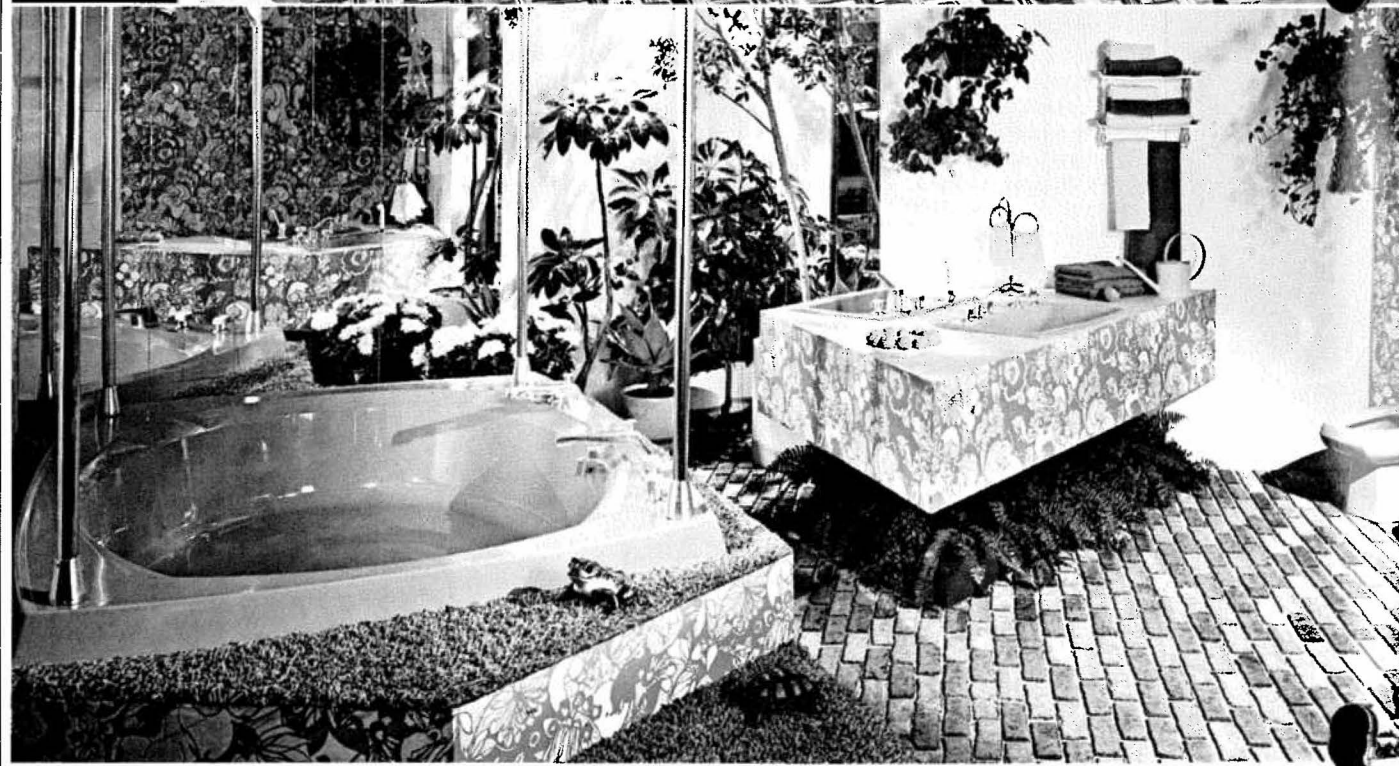


## *The Elegance of Black*



## *An Eclectic Look*

## *Japanese Bath*



## *Atrium Bath*





# THE BOLD LOOK OF KOHLER

*JAPANESE BATH.* A serenely beautiful room dedicated to the art of bathing. With pure textures of bamboo, quarry tile and natural woods complementing plumbing fixtures in Mexican Sand. The skillful use of platforms creates the illusion of a sunken bath. Bradford bathtub, 48" x 42," features a built-in seat. Kohler Raindrop personal shower allows you to soap and rinse in the Japanese manner prior to your soaking bath. Rochelle toilet and Caravelle bidet are also in Mexican Sand. Self-rimming Farmington lavatory is in Espresso. Faucets and controls from Kohler's Alterna Water-Guard series in polished chromium.

*ATRIUM BATH.* The beauty of a spring garden can be yours all year round. Greenery thrives in the warm, moist air of the bathroom, so move it indoors, into this room that revolves around The Bath, a fiberglass bathing oval nearly 5½' x 7'. Its Fresh Green color complements and enhances the room's garden decor. Convenient lavatory island contains two generous-size grooming center lavatories—the Lady Vanity and the Man's Lav. Both are self-rimming with swing-away spouts and shampoo sprays. Caravelle bidet for personal cleanliness is an ideal companion to the low-silhouette Rochelle toilet. Faucets and other fittings are from Kohler's Alterna Water-Guard series in 24 carat gold electroplate.





### *Parchment Bath*

Combine a subtle decorating color like Kohler's Parchment with a practical, one-wall fixture arrangement for convenience, privacy and elegance. Parchment is the off-white with character...a color that creates a mood of rest and relaxation. It is warm, versatile and easy to decorate with. Barbados 5' bath/shower module in easy-care fiberglass features exclusive Rigid-Wall processing for added durability. Shown with "Antique" Rite-Temp pressure balanced bath/shower control, City Club Water-Guard showerhead. Wellworth Water-Guard toilet. Farmington lavatory with "Antique" Water-Guard faucet.

### *Practical Bath*

A bathroom that's ordinary in size can be extraordinary in conveniences. Kohler's Steeping Bath offers extra depth for deep-down soaking comfort. Yet it's 5' long to fit in most bathrooms. Alterna Rite-Temp shower control helps eliminate sudden bursts of hot or cold water caused by water pressure fluctuations. Compact Pompton toilet saves space. Radiant lavatory is self-rimming for neater installation. Water-Guard showerhead and lavatory faucet are designed to save water and energy. Fixture color is Pink Champagne.

## CREATE YOUR OWN BATH

The bathroom is your private place, worthy of all the attention you lavish upon it to create a special environment for yourself.

It can be as large as your budget allows...or as small as needs dictate...as long as it's a room that's **exactly** right for you.

That's where Kohler comes in...with plumbing products in designs and colors that can make an ordinary room extraordinary.

Where do you begin? Right here!

You've already seen some great ideas in bathroom design, color coordination, product selection and convenience features in this guide.



## Library Powder Room

Book-lined walls make this powder room a restful haven... and take advantage of wall space that might otherwise be wasted. Self-rimming Farmington lavatory in a bright, bold color (we picked Sunflower) provides a dash of warmth and sunshine for the room. Alterna Water-Guard faucets have interchangeable handle inserts in teak, walnut, ebony and white colors to let the homemaker match a mood or complement a decor while helping to save water and energy. Wellworth toilet in Avocado combines economy and style.

## Country Bath

Recapture the charm of rustic living in a room of contemporary conveniences. The unusual four-poster bath is built around a Guardian bathtub in soft Cerulean Blue. The Bolton toilet is also in Cerulean Blue. Vanity features a Farmington lavatory in Blueberry, a Kohler Accent. Kohler's antique-style Water-Guard faucets help save water and energy. Random-planked floor and rough plaster walls provide a cozy setting for your cherished possessions.

You've seen how color can make such a difference, so begin with colors that appeal to you. Kohler's palette includes 16 colors, plus white. Choose from bold Accents, exclusive high-fashion colors, pleasing deeptones and pastels. Study how colors complement or accent each other for exciting room decors.

Then select fixtures that offer the features you want — soothing whirlpool baths; deep, comfortable baths; grooming center lavatories; fashionable toilets; a bidet for personal cleanliness. Decide where the fixtures will fit in the room to best serve your family's needs.

Consider twin lavatories. A compartmented toilet. Faucets and bath/shower controls that provide safety, convenience and styling.

Consider Water-Guard toilets, faucets and showerheads... designed to use less water so they help save water, energy and money.

Remember, too, that powder rooms take up little space and have a relatively low price tag for the great convenience they offer, so you can afford to be bold and lavish in product selection and color scheme.

Now put it all together... and make your dreams come true.

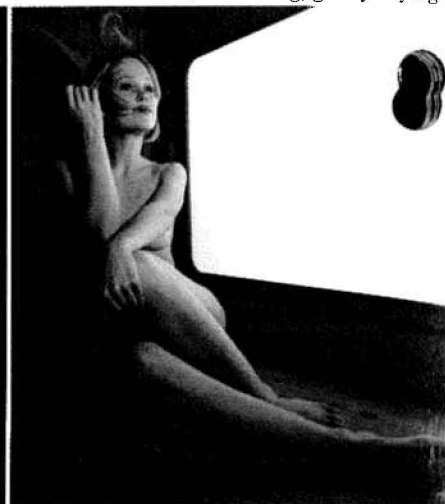
*BAJA SUN*—warm and glowing



*SPRING SHOWERS*—to cool and refresh



*CHINOOK WINDS*—soothing, gently drying



ENVIRONMENT™ by KOHLER

TROPIC RAIN—a caressing rain



*Imagine a place where you can achieve relaxation, rejuvenation and warm tranquility.*

ENVIRONMENT, by Kohler, is such a place. It provides a synthesis of man's natural environment—heat, sun, rain, steam and wind—whenever you want it, in amounts to soothe your body and psyche.

ENVIRONMENT is like taking a vacation any day of the year. It's more than a sauna, solarium or steam bath; it's a totally new dimension in gracious living.

Here's how ENVIRONMENT works:

On the exterior control panel, you select the elements of nature you want to enjoy—Baja Sun, Tropic Rain, Jungle Steam, Spring Showers and Chinook Winds. Select one, all or any combination, and up to 29 minutes for each element.

While heat lamps pre-warm the enclosure, undress and climb inside the handcrafted teak enclosure.

Once inside, stretch out on the cypress deck and press the start button on the interior control panel. Your experience begins.

Sun bathe...rinse with warm rain... be caressed by steam...then cooled by rain...and dried by wind.

ENVIRONMENT includes four heat lamps, four sun lamps, six 24-carat gold electroplated spray heads, a steam generator, and two warm air circulating systems.

The unit measures 107" long, 44" front to back, and 91" high on the outside, and 84½" long, 37½" front to back, and 58" high on the inside.

Sliding safety glass doors permit easy entry; a 60" by 30" back-lighted lucite panel illuminates the unit.

Other features include a Kohler Raindrop hand-held shower; 20" diameter porthole cabinet with shelves, and a 30" diameter porthole window.

The entire control circuitry of ENVIRONMENT is operated by a low voltage (12 volt) power source.

To further enhance ENVIRONMENT, Kohler offers four options: Stereo AM/FM radio and 8-track tape player; art nouveau painting silk-screened on the translucent back panel; a fiberglass fascia panel to frame the enclosure, and an air-filled comfort pad with pillow.

For a complete ENVIRONMENT presentation, send \$2.50 to Dept. EN, Kohler Co., Kohler, WI 53044.



*THERE  
HAS NEVER  
BEEN ANYTHING  
LIKE IT BEFORE*



# A WONDERFUL NEW WORLD OF PLEASURE & RELAXATION

Maybe you can't live in a perfect climate. But that doesn't mean you can't own one. Because now you can bring the essence of nature's most refreshing elements into your everyday life with Kohler's *habitat*, an environmental enclosure that surrounds you with beneficial SUN, RAIN and STEAM (optional).

Inside *habitat*, you can escape from the stresses of everyday living and relax while sunlight, water and steam work their restorative magic on you, gently relaxing you... washing away the cares and strains of the workaday world.

You don't have to move from sunlamp to steam bath to shower to experience these pleasures. They're all built into *habitat*. Slide open the door, lie back and enjoy your own private world of luxurious renewal.

The controlled circuitry in *habitat* is programmed to

# habitat™ by KOHLER



sequence automatically 20 minutes each of SUN, STEAM and RAIN, unless you wish to change it.

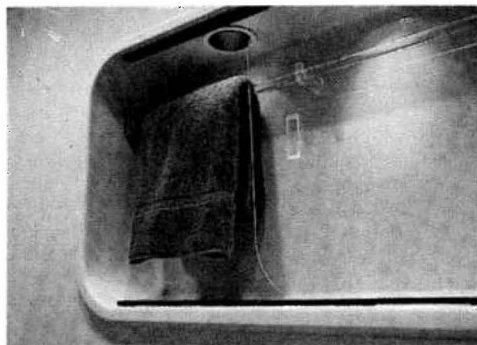
And that's one of the most delightful features of *habitat*. With the push of a button near your shoulder, SUN can follow RAIN followed by STEAM and then cool RAIN, and again by SUN. Any combination you can dream of, for as long or short as you wish. But should you forget or accidentally fall asleep, there is always the 20 minute automatic sequencing to protect you or bring the cycle to a stop. You have complete flexibility and control at your fingertips.

Two "conditioning" elements — AMBIENCE and WARM BREEZE — make *habitat* even more enjoyable. They can be used with any of the elements to change and enhance the unit's atmosphere, or to warm and freshen the enclosure.

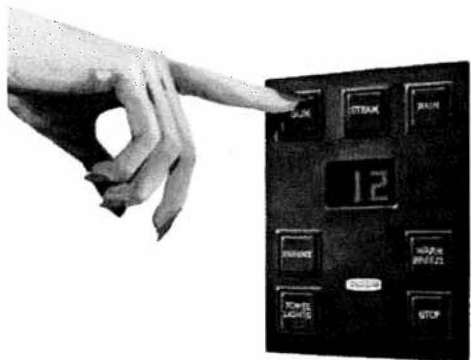
Add WARM BREEZE to SUN, and *habitat* takes on the environment of a desert evening buffed by a light wind. AMBIENCE and RAIN are like a bright summer shower. Add WARM BREEZE, and a caressing mist drifts through the enclosure. Conditioning elements can be used alone, added or eliminated at any time during any cycle.

A variety of options let you personalize your *habitat*. STEAM is available from an optional steam generator. Other options: AM-FM stereo radio with 8-track player; exterior knotty pine frame; tinted bronze safety glass doors; frosted safety glass doors; Kohler Raindrop hand-held shower.

*Habitat* features an acrylic interior surface with cypress deck. It measures 82" by 50" by 64" high on the outside, and 78" x 36" x 56" high inside.



Large interior recessed cabinet provides storage for towels and bathing accessories. All heat lamps keep towels toasty warm. Kohler Raindrop hand-held shower in cabinet is optional.



Interior control panel has three instantaneous LED buttons for SUN, STEAM (optional) and RAIN cycles. An LCD digital read-out display indicates time elapsed for each element. Four additional LED buttons control WARM BREEZE, AMBIENCE, TOWEL LIGHTS and STOP.



Easy-to-read temperature control for RAIN cycle varies water temperature from 60° to 115°F.

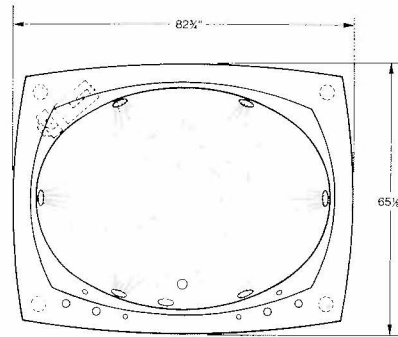
*Habitat* is a versatile environmental enclosure that combines nature's soothing elements... SUN, RAIN or STEAM in a single unit that can be easily installed wherever people want pleasure, stimulation or comfort. It's a new world that refreshes you nature's way.



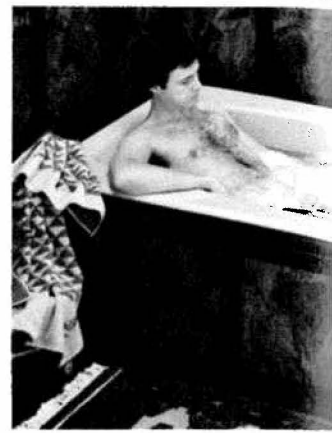
*Habitat*, like all Kohler environmental enclosures, has been designed according to specific water and energy guidelines. During a 60-minute cycle of SUN, STEAM and RAIN, *habitat* uses approximately 55 gallons of water and four kilowatt hours of electricity. Based on national average water and electrical rates — 7.5¢ per 100 gallons of water and 3.5¢ per kilowatt hour of electricity — the cycle would cost approximately 18¢.

## The Bath Whirlpool

## Caribbean Whirlpool



The Bath Whirlpool

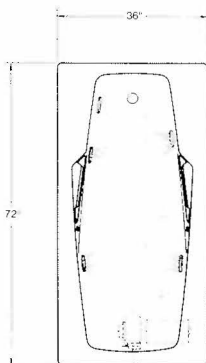


In Espresso with Alterna Onyx faucets.  
K-1402 with control.

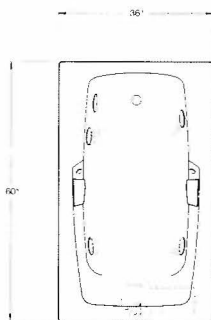
In Mexican Sand  
with Flair faucets.  
K-802-S with control.



## Steeping Bath Whirlpool



Caribbean Whirlpool



Steeping Bath Whirlpool



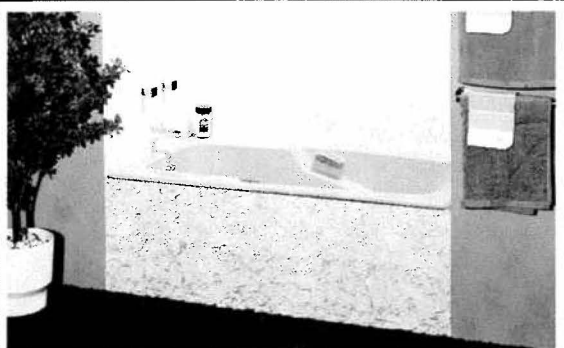
In Black Black with Alter  
K-792-S with control.

# THE KOHLER WHIRLPOOL

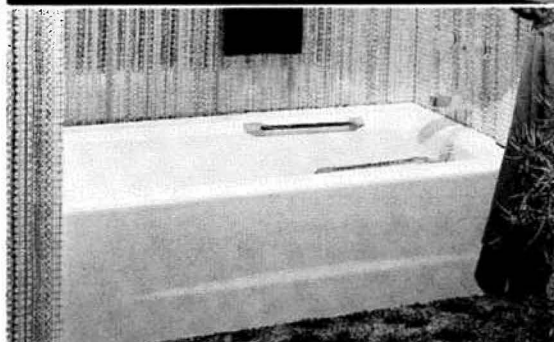
Imagine soaking chin  
as millions of bubble  
Kohler whirlpool bat  
Choose from The Ba  
fiberglass bath nearl  
Caribbean Whirlpool  
enjoyment; durable e  
Steeping Bath Whirl  
deep-down whirlpool  
enameled cast iron in  
Kohler whirlpool bat  
jets than most other  
for more pleasureabl  
electronic timers — in  
that tells how long y



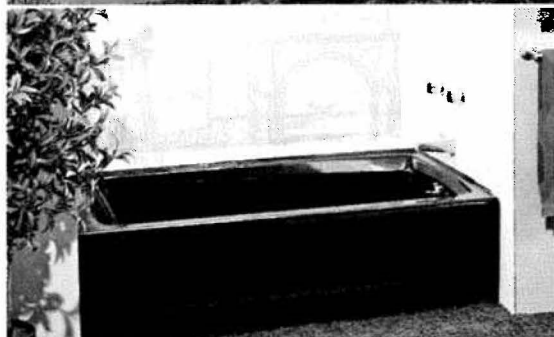
STEEPING BATH



GUARDIAN



MENDOTA



VILLAGER



MAYFLOWER



**STEEPING BATH.** 20" deep for chin-deep soaking. Built-in arm rests, integral lumbar support, safety grip handles. Pictured in Fresh Green. Also in 14 other colors and white. K-790-S with Safeguard® bottom.

**GUARDIAN.** Safety, comfort, handsome styling. 5' long, 32" wide, 16" high with safety grip handles, Safeguard® slip-resistant bottom. Pictured in Parchment. Available in 11 colors and white. K-786-S.

**MENDOTA.** Large sculptured bath offers extra bathing dimensions, large color choice. 5' long, 32" wide, 16" deep. Pictured in Black Black. Also offered in Country Grey and nine other colors plus white. K-506-S with Safeguard® bottom.

**VILLAGER.** Contemporary design, competitive price, choice of seven colors and white. 5' long, 30" wide, 14" deep. Pictured in Avocado. K-715-S with Safeguard® bottom.

**MAYFLOWER.** For corner installations. Integral seat, space-saving design. 48" x 44" x 14" high. Pictured in Harvest Gold. Also available in seven other colors. K-824-S with Safeguard® bottom. Other compact recessed baths also available.

## GREAT BATH IDEAS

Today's bathrooms are showplaces... and bathtubs are their focal points.

Kohler makes bathtubs in many sizes, styles and colors. Bathtubs in enameled cast iron, with a strength, depth of color, vividness and lustre that other materials cannot match. Bathtubs with the feel of long-lasting quality... the solid warmth, comfort, color and quiet security only enameled cast iron can offer.

Kohler makes big bathtubs with body contour designs. Deep bathtubs for steeping comfort. Bathtubs with slip-resistant bottoms and safety grip handles. And bathtubs in a flower garden variety of colors for almost every installation imaginable.

Make your new bathroom a reflection of your lifestyle. With a colorful Kohler bath.



## *Birthday Bath*

Past elegance and old-fashioned comfort are recreated with charm. A durable cast iron bath with lustrous enameled interior, rolled rim, high sloping back, antique-style faucets, ball-and-claw feet. Birthday Bath measures 6' by 37-1/2". Available in Antique Red, Black Black, Parchment and White with faucets and feet in satin or polished 24 carat gold electroplate or chromium. K-100.



## *Caribbean*

Luxury length, body contour design, built-in safety features. Six feet long, 3' wide with gently sloping back for stretch-out soaking comfort. Safeguard® slip-resistant bottom and safety grip handles. No-apron design is ideal for sunken installations. Offered in 11 colors and white. Pictured in Pink Champagne with Alterna Rite-Temp pressure compensating bath/shower control. Roman spout and safety grip handles in satin finish 24 carat gold electroplate. K-800-S.



## *The Bath*

Kohler's biggest-ever bathtub. Nearly 5-1/2 by 7 feet of bathing luxury. A sculptured, one-piece bathing oval made of reinforced fiberglass. In 15 colors and white. Faucets from Kohler's Bravura or Alterna series in 24 carat gold electroplate or chromium with satin or polished finishes. Dual shower stanchions also available. K-1400.



**SUNFLOWER.** Suggested complementary colors for bathtubs and toilets: Fresh Green, Black Black, Mexican Sand, Harvest Gold, Espresso, Country Grey.

**ANTIQUE RED.** Suggested complementary colors for bathtubs and toilets: Cerulean Blue, Kohler White, Pink Champagne, New Orleans Blue, Country Grey.

**BLUEBERRY.** Suggested complementary colors for bathtubs and toilets: Cerulean Blue, Kohler White, Fresh Green, New Orleans Blue, Country Grey.

**TIGER LILY.** Suggested complementary colors for bathtubs and toilets: Avocado, Harvest Gold, Mexican Sand, Parchment.

Open up a whole new world of color and convenience with Kohler lavatories in durable enameled cast iron and vitreous china.

Bright, bold Accent colors let you inject instant glamor and add decorating drama. Accent colors include Sunflower, Antique Red, Blueberry and Tiger Lily, and are available only on select enameled cast iron fixtures.

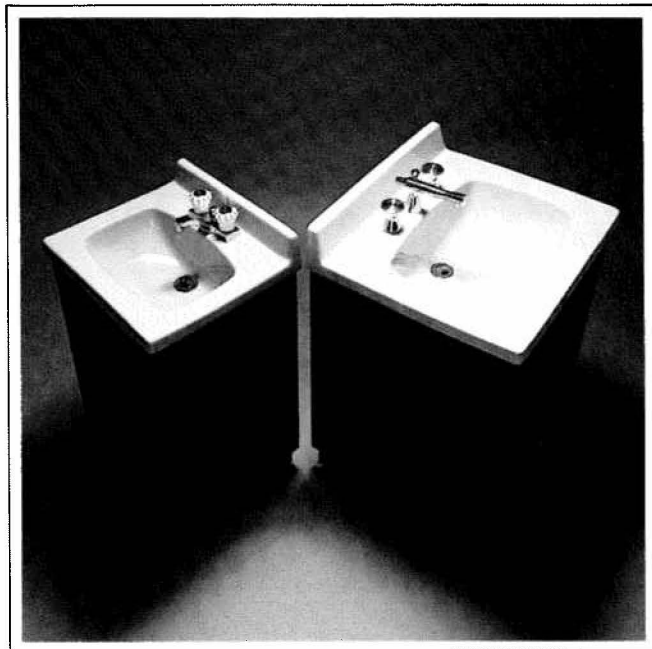
There are high-fashion colors — Country Grey, Black Black, and Espresso — as well as deep tones and pastels to combine easy decorating harmony with the elegance of color.

Choose from king-size Kohler lavatories like the Man's Lav, Lady Vanity, Rondelle, Royale and Tahoe. Compact shapes like the Boutique, Farmington and Pennington.

Most Kohler lavatories are self-rimming — they seal directly to countertops for neater, quicker installations. Some lavatories are wall hung; some install under tile or marble countertops. Vanity top lavatories install directly on vanity cabinets.

At left:

- A. Antique Red Radiant, White Flair faucet;
- B. Blueberry Farmington, Centura faucet;
- C. Tiger Lily Man's Lav, Alterna faucet;
- D. New Orleans Blue Boutique, Triton II faucet;
- E. Espresso Radiant, Amber Flair faucet;
- F. Pink Champagne Rondelle, Alterna faucet;
- G. Sunflower Farmington, Alterna faucet;
- H. Fresh Green Lady Vanity, Flair faucet.



### *Royale Vanity Lavs*

Made of durable vitreous china, Royale vanity top lavatories offer gracious styling, easy installation and the widest selection of colors available.

The lavatories have large shelf areas for soaps and toiletries, integral splashbacks, generous-size basins, and rounded edges for easier cleaning.

Two sizes: 25" x 22" and 19" x 17" with faucet drillings for 4" or 8" centers. Available in eleven colors including Country Grey, Black Black and Espresso, plus white.

*Pictured:* Royale K-2250 19" x 17" in New Orleans Blue with K-7401-FL White Flair faucet, and Royale K-2252 25" x 22" in Parchment with K-6846 Bravura faucet in 24 carat polished gold electroplate.

*All Kohler lavatory faucets with aerators now provide water-saving flow control at no additional cost.*

## LAVATORIES IN BOLD KOHLER COLORS



**MAN'S LAV.** A rugged enameled cast iron lavatory with a large, deep basin. Designed especially for men; ideal for the whole family. Generous 28" by 19" dimensions and sloping basin of the Man's Lav mean more splashing room, less water on countertops.

Personalized fittings include shampoo spray and soap-lotion dispenser. For extra convenience, spout swings out of the way.

Available in 15 Kohler colors including Accents, Country Grey, Black Black and Espresso. Pictured in Sunflower with K-6962 Alterna Water-Guard faucet. Man's Lav: K-2885.

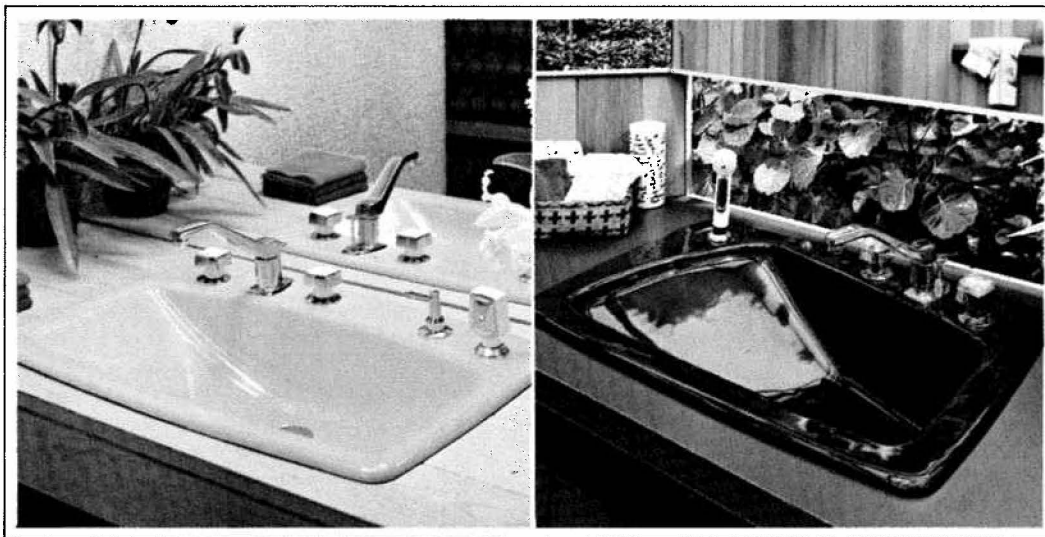
**LADY VANITY.** An all-family lavatory.

You'll love it as a shampoo basin... with swing-away spout, handy shampoo spray.

It's shaped like a miniature bathtub... and just right for bathing the baby.

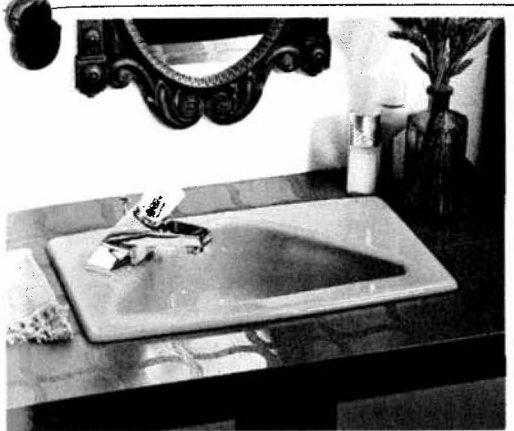
Generous 28" by 19" dimensions mean that there's plenty of shaving room for dad... plenty of scrubbing room for the kids. In vitreous china with self-rimming feature. Offered in Country Grey, Black Black, Espresso, deeptone and pastel colors.

Pictured in Espresso with K-6956 Alterna Onyx Water-Guard faucet. Lady Vanity: K-2170.



# MAN'S LAV & LADY VANITY

# LAVATORIES



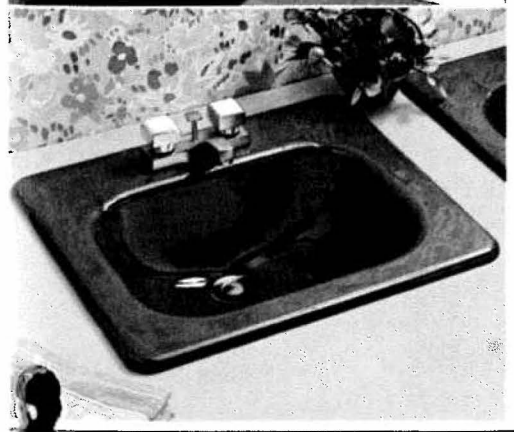
**BOUTIQUE** in Mexican Sand. Space-saving vitreous china lav. Only 13" front to back. Ideal for compact powder rooms. Self-rimming, 21" x 13" Centura faucet. K-2180.



**FARMINGTON** in Tiger Lily. Oval, self-rimming, enameled cast iron lavatory. 19-1/4" x 16-1/4", just the right shape for narrow countertops. Centura faucet. K-2904.



**CAXTON** in Cerulean Blue. Vitreous china lavatory for marble or tile countertop installations. 17" x 14" or 19" x 15" Bravura faucet. K-2210.



**PENNINGTON** in Pink Champagne. Self-rimming vitreous china lav, 20-1/4" x 17-1/4", with "Antique" faucet and handles. K-2196.



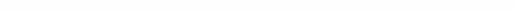
**RONDELLE** in Country Grey. Vitreous china lav shaped like a miniature The Bath. Self-rimming 21" x 19" K-2187.



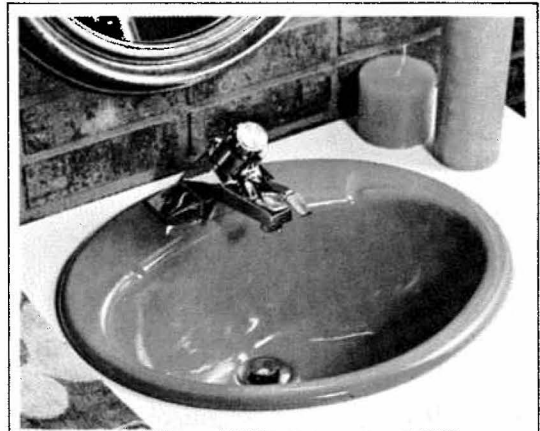
**RADIANT** in Harvest Gold. An enameled iron beauty that's just 19" in diameter. Self-rimming or with rim. K-2917.



**TAHOE** in Blueberry, an enameled iron beauty, 21" x 19", self-rimming. Shown with Alterna faucet in satin finish chromium. K-2894.



**BROOKLINE** in New Orleans Blue. Round and right and just 19" in diameter. Self-rimming vitreous china. Charcoal Flair faucet. K-2201.



*All Kohler lavatory faucets with aerators now provide water-saving flow control at no additional cost.*



### *Champlain*

Beautifully styled with low silhouette, one-piece construction. No-overflow feature, siphon action flushing. Only 19" high. Shown in Pink Champagne. K-3390-EB, K-4690 seat.

### *Cayuga*

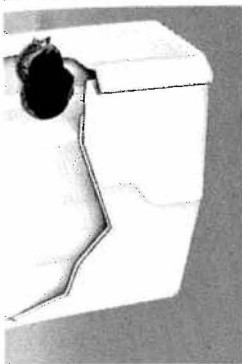
Mounts off the floor for easier cleaning. Firmly anchored to wall by hanger or bracket. Siphon jet flushing. Shown in Fresh Green. K-3440-PB, K-4662 seat.

### *Pompton*

Kohler's most compact toilet. Low silhouette, round front design. Siphon action flushing, no-overflow feature. Only 19-1/4" high. Shown in New Orleans Blue. K-3400-PB. K-4662 seat.

AMERICA'S  
FINEST  
TOILETS





## *Insuliner*

Urethane foam lining insulates cold water in tank from warm air in room. Helps prevent condensation. Molded into tank at factory. Optional on certain toilets. K-4555.

## *Highline Water-Guard*

Extra-height toilet appreciated by the elderly and infirm. 18" high bowl. Designed to flush with 3-1/2 gallons of water. Insuliner tank lining. Shown in white. K-3528-EB, K-4652 seat.

## *Placid*

Graceful lines, one-piece construction, medium price. Siphon jet system provides thorough flushing even when water pressure is low. Shown in Mexican Sand. K-3405-EB, K-4652 seat.

## *Wellworth Water-Guard saves water*

Wellworth Water-Guard toilet helps save water because it is designed and engineered to flush positively and efficiently with less water than conventional toilets. The savings could add up to more than 14,600 gallons of water annually for a family of four, assuming five toilet flushings per person per day. Other features: compact design, low silhouette tank, elongated or round-front bowl, wide choice of colors. Shown in Parchment. K-3500-EB, K-4652 seat.



## *Rochelle toilet*

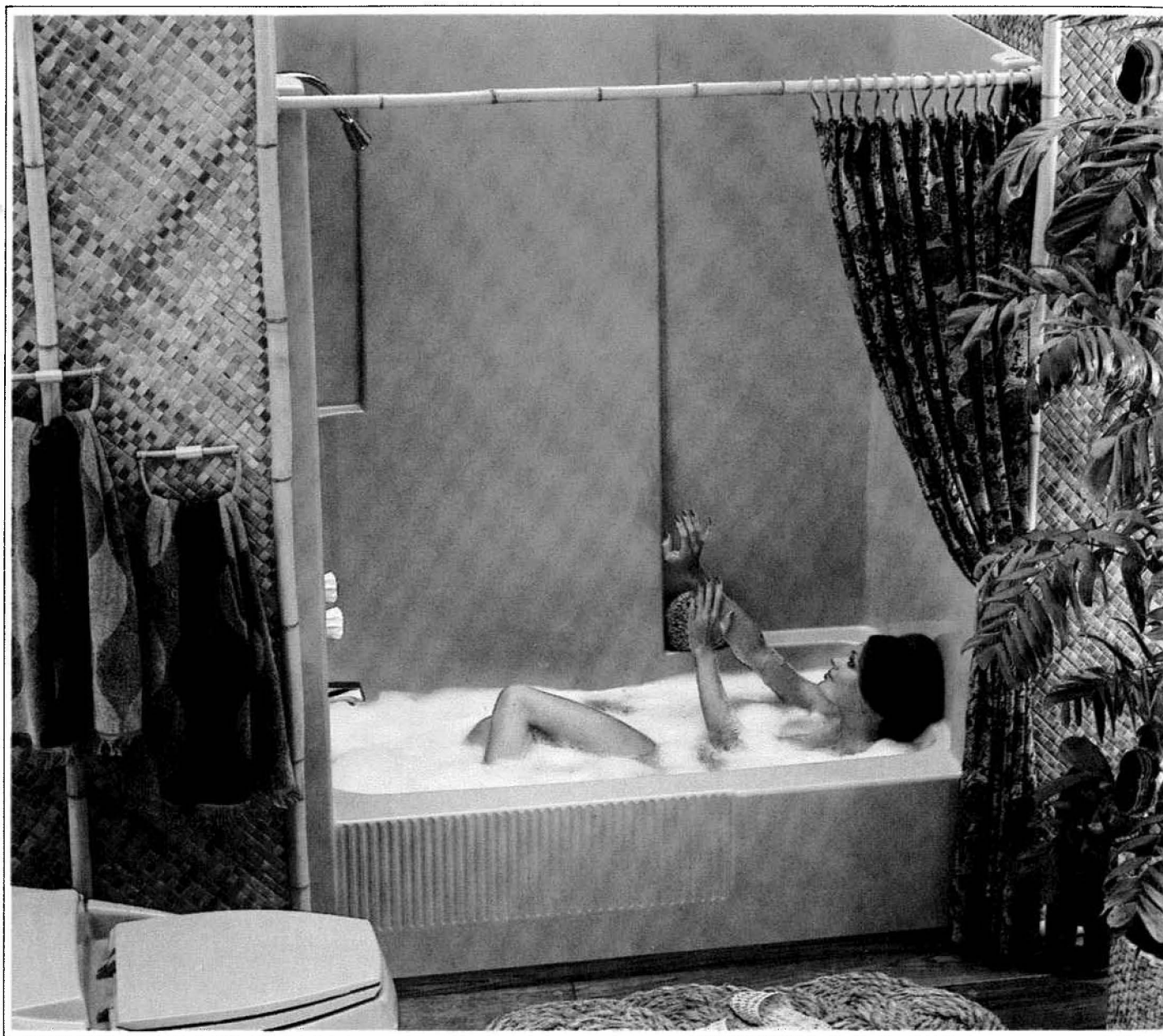
The best in advanced design, Rochelle features low silhouette, elongated bowl, no-overflow feature, siphon action flushing. Rochelle is available in Black Black (shown above), Country Grey, Espresso and eight other colors plus white. K-3385-EB, K-4675 seat.

## *Caravelle bidet*

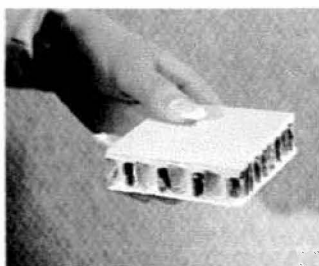
A fixture for personal cleanliness. Caravelle is the logical companion piece to the toilet. User sits astride bowl facing hot and cold water controls to wash perineal area. Pictured in Black Black; also offered in Country Grey, Espresso, eight other colors and white. K-4862.







# FIBERGLASS BATHING MODULES



**RIGID-WALL** reinforcing process gives Kohler fiberglass units more strength and rigidity than backings used on competitive models.

An impact-resistant honeycomb material is laminated to the sides, back and bottom of each unit for greater resistance to damage before, during and after installation, and for greater support of wall and base surfaces during daily use.

## *Walls 'n All Beauty, Convenience and Durability*

Kohler fiberglass bathing modules offer homeowners a variety of advantages —

- Seamless, one-piece construction — no cracks, crevices, tile or grout to repair or replace
- Smooth surfaces and gently rounded corners for easy cleaning
- Built-in rigidity and durability with Kohler's exclusive Rigid-Wall reinforcing process
- Built-in thermal insulation and sound deadening for a more enjoyable bath or shower
- Choice of four convenient sizes, from a 5' bathtub with integral walls to a compact 32" shower cove that's ideal for remodeling
- Choice of 9 vibrant deep-down colors and white, with durable, long-lasting surface gloss.

Kohler fiberglass bathing modules are ideal for new construction and many remodeling plans — residential and commercial.

Fiberglass colors include Country Grey, Cerulean Blue, Parchment, Harvest Gold, New Orleans Blue, Mexican Sand, Fresh Green, Avocado, Pink Champagne and White — to mix with or match other Kohler colors.

Shown above: Barbados 5' bath/shower module and Rochelle toilet in New Orleans Blue; Flair bath/shower control; Water-Guard showerhead.





## *Tobago*

For complete bathing comfort. Built-in seat, convenient corner ledges; sidewall support for shower door or curtain. 48" wide, 36" front to back, 75" high. K-1448. Shown in Cerulean Blue with Suburban Water-Guard showerhead, Champlain toilet, and Espresso Man's Lav grooming center lavatory with Alterna Water-Guard faucet.

## *Barbados*

The ultimate bath/shower module, Barbados offers comfortable bathing, fluted front panel for added beauty, flat rim for convenient seating or shower door, ledges for storing soaps and toiletries. 5' long, 33-1/2" front to back, 75" high. K-1406. Shown in Parchment with Clear Flair bath/shower control, Autel Water-Guard showerhead, Lady Vanity shampoo center with Clear Flair Water-Guard faucet, and Rochelle toilet.

## *Bimini*

Ideal for remodeling. Just 32" wide, 36" front to back, 75" high; fits through most doorways. K-1462 shown in Harvest Gold with Centura shower control, Autel Water-Guard showerhead, Rondelle lavatory with Centura Water-Guard faucet, Wellworth Water-Guard toilet.

## *Trinidad*

Shower cove measures 36" wide, 34" front to back, 75" high. Corner ledges for soaps and toiletries. Side-wall supports for shower door or curtain. K-1436 shown in Fresh Green with "Antique" Rite-Temp, City Club Water-Guard showerhead, Pennington lavatory and Pompton toilet.



### *Trieste*

Three-compartment convenience with centrally located disposal basin, self-rimming feature. 43" x 22" In Tiger Lily with Centura single lever Water-Guard faucet. K-5914.



### *Brookfield*

Twin 8" deep basins, self-rimming feature. Kohler's most popular kitchen sink. 33" x 22" In Harvest Gold with Triton II Water-Guard faucet. K-5942.



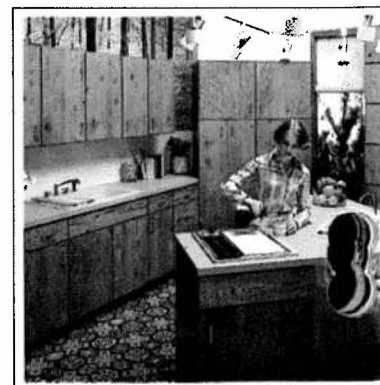
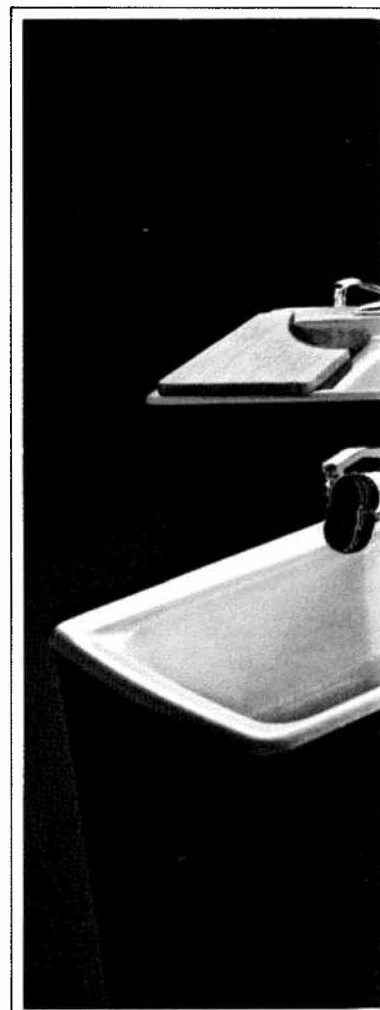
### *Mayfield*

Newly designed to replace older metal rim sinks without replacing entire countertop. 25" x 22" In Espresso with Centura single lever Water-Guard faucet. K-5964.

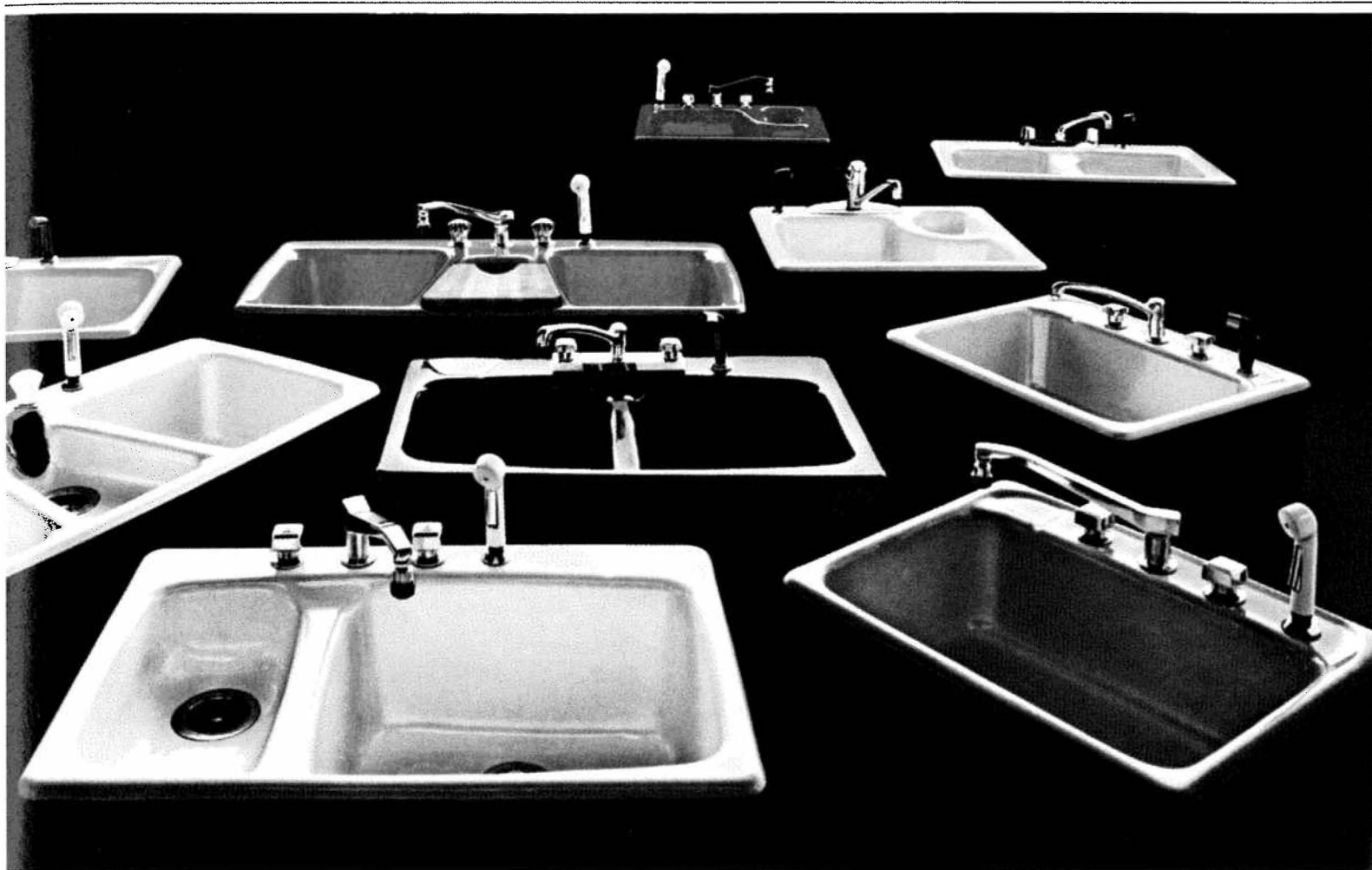


### *Lakefield*

Raised basin for installation of disposal unit without changing drainpipe. Large basin for pots and pans. 33" x 22" In Country Grey with Alterna Onyx faucet. K-5924.



# KOHLER SINKS IN BOLD COLORS



Kohler enameled cast iron kitchen sinks make a beautiful first impression. And their enduring beauty becomes more obvious with each passing year.

Kohler sinks have unflinching strength, deep-down color, vividness and gloss that other materials cannot match. They resist acid, stains, scratches, dents... and keep their good looks for a long, long time.

Colorful enamel on a Kohler cast iron sink is 5 times thicker than enamel on a steel sink. And solid cast iron helps dampen disposer vibration and noise.

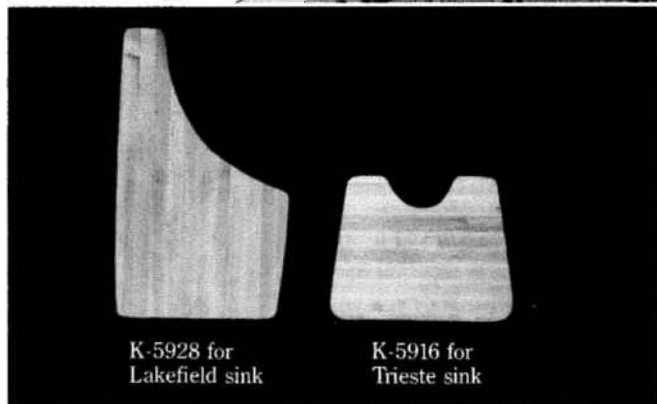
The big news in kitchens today is color. New warm earthtone colors from leading appliance manufacturers. And an unmatched selection of 15 Kohler sink colors to match, complement or accent those new appliances.

Choose from "natural" colors like Parchment, Espresso, Country Grey, Harvest Gold, Avocado, or Coppertone. Or from bright, bold accents and deep tones like Sunflower, Tiger Lily, Blueberry, Antique Red, Pink Champagne, Fresh Green or New Orleans Blue. There are also pleasing pastels... Cerulean Blue and Mexican Sand.

Kohler offers sinks in one, two and three basin models to meet every kitchen plan. Most models are self-rimming—they seal right onto the countertop and need no metal rim. Save installation time. Look neater.

Convenience features for Kohler sinks include built-in disposal basins, Duostrainers,<sup>®</sup> pop-up drains, hardwood cutting boards, soap/lotion dispensers, hose and spray units, Swinger sink spout attachment and a variety of complementary Kohler faucets.





**Soap/Lotion Dispenser**  
Built-in on the edge of your sink. Puts soap/lotion at your fingertips. K-9610.



**Pop-up Drain**  
No need to reach into hot greasy water searching for drain. Simply pull handle to close drain, push to open again. K-8802.



**Swinger**  
Sweep your sink clean with Swinger sink spout attachment. Stream or spray. Swings, swivels, rinses, aerates. K-7777.

## Urbanite

Compact sink with large basin, convenient corner disposal compartment. Self-rimming 25" x 22". In Harvest Gold with Alterna faucet. K-5918.

## Delafield

Twin 8" deep basins, metal frame, versatility of installation. Two sizes — 32" x 21" K-5950, and 32" x 20" K-5952. In Avocado with Alterna faucet.

## Cutting Boards

Hardwood cutting boards fit snugly into disposal basins of Lakefield and Trieste sinks. Made of laminated select maple. Handiest work space in the kitchen.

## Convenience Features

Kohler offers a variety of accessories designed to make your kitchen work better. Ask your plumbing contractor to help you choose.





*Gibson in Antique Red, 25" x 15" K-6025.*



*Gibson in Sunflower, 25" x 15" K-6025.*



*Gimlet in Black Black, 15" x 15" K-6015.*

## BAR SINKS AND FAUCETS

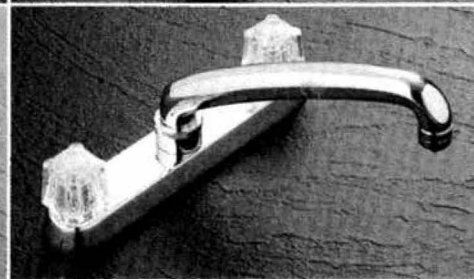
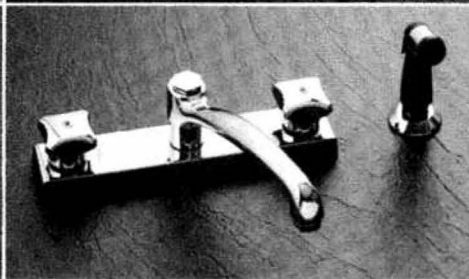
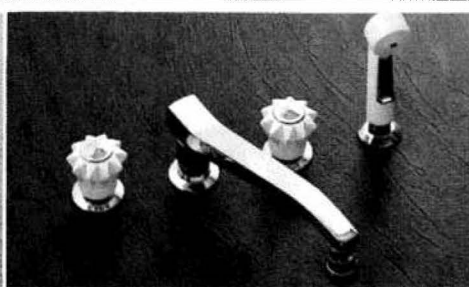
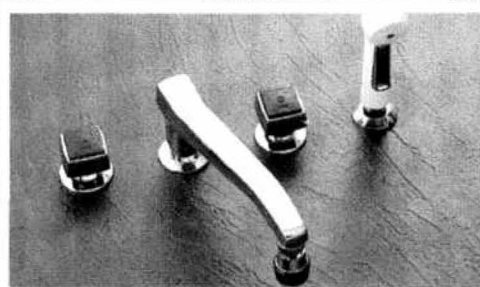
Add color and convenience to leisure living with durable acrylic bar sinks from Kohler. Gibson features stainless steel garnish cups, handy hardwood cutting board. Compact Gimlet saves space. Both are self-rimming for neater, quicker installation. In three colors — Sunflower, Antique Red and Black Black. Continental-styled Europa Water-Guard faucets in chrome or gold electroplate, satin or polished, K-11930. Garnish cups also in satin gold electroplate.

**SINK FAUCETS.** Kohler offers faucets in six styles to complement kitchen sinks and enhance kitchen decor.

Alterna K-6973

Flair K-7771-FL

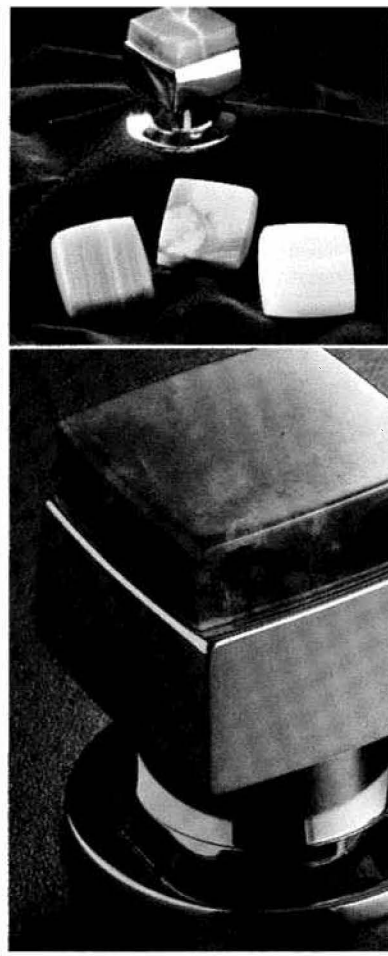
Centura Water-Guard K-6895



Centura K-6896

Triton II Water-Guard K-7827-T

Trend Water-Guard K-11920-PH



*Alterna Onyx Water-Guard.* High-fashion natural onyx inserts snap into and out of faucet handles in the Alterna line. In four colors: Persian Chocolate, a deep mottled brown; Turkish Firelight, bands of brown, gold and cream; Argentine Mist, a gentle green, and Turkish Pearl, a softly banded white. Dependable Valvet® cartridge controls water flow.

## ELEGANT FAUCETS IN 24 CARAT GOLD AND CHROMIUM

The Kohler Faucet Collection... for America's most beautiful homes.

Faucets in 24 carat gold electroplate or chromium... with satin or polished finishes. Unmatched elegance... a multiple selection of styles... refined water delivery systems with built-in dependability.

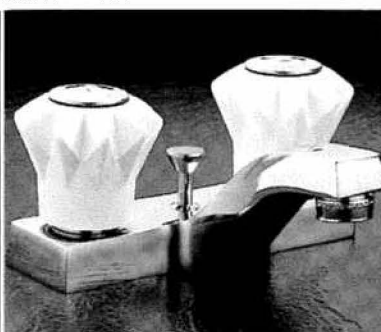
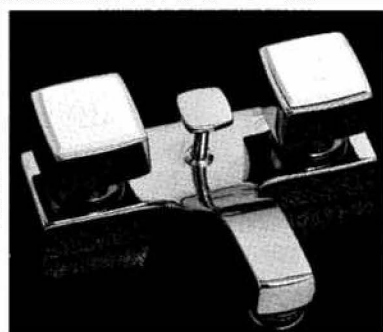
Kohler also offers showerheads, pressure balanced shower controls, personal showers, no-motor whirlpool baths, soap-lotion dispensers and other accessories to add beauty and convenience to the bath, powder room or kitchen.

And now, ALL Kohler Water-Guard lavatory faucets, sink faucets and showerheads offer water-saving, energy-saving flow control at NO ADDITIONAL COST.

*Alterna Water-Guard.* Interchangeable inserts in White, Walnut, Ebony and Teak colors snap into and out of faucet handles. Finishes in satin or polished 24 carat gold electroplate or chromium. Valvet® valves.

*Flair Water-Guard.* A touch of crystal-like elegance. 24 carat gold electroplate with Amber acrylic handles. Chromium finish with White, Clear or Charcoal handles. Valvet® valves.

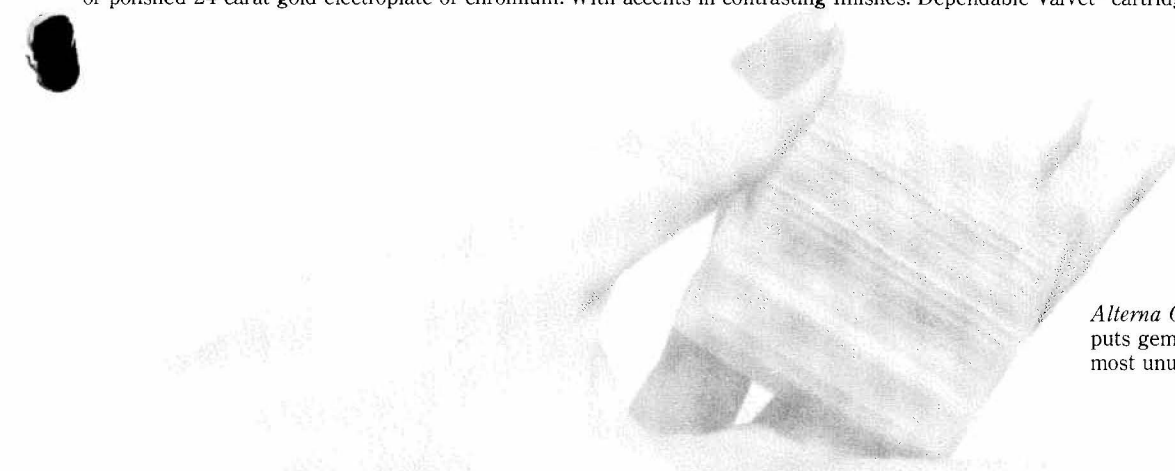
*"Antique" Water-Guard.* A touch of nostalgia to complement almost any decor. Satin or polished 24 carat gold electroplate or chromium for lavatory, bath or bidet installations. Valvet® valves.







*Bravura Water-Guard.* Newest addition to the Kohler Faucet Collection. Avant-garde elegance. Sleek and distinctively modern. In satin or polished 24 carat gold electroplate or chromium. With accents in contrasting finishes. Dependable Valvet® cartridge controls water flow.



*Alterna Onyx.* Kohler puts gemstones in the most unusual places.

*Centura Water-Guard.* Convenience at your fingertips. Push-pull lavatory faucets and bath/shower controls in gold electroplate or chrome. Single lever lavatory and sink faucets in chrome. Dependable washerless cartridge.

*Trend Water-Guard.* For economy combined with quality, style and durability. Here's low-priced beauty. Handles in clear acrylic or polished chromium.

*Triton II Water-Guard.* Kohler quality. Pleasing economy, too. Smart styling. Clean, attractive lines. Gleaming chromium finish. Valvet® units for positive shutoff, long valve life.





# BRAVURA

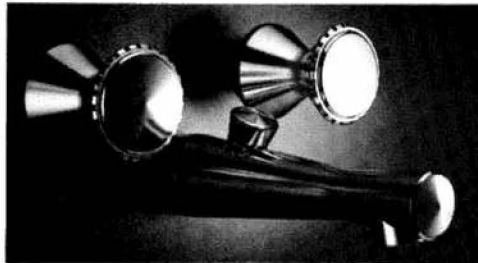
## Water-Guard

To reflect the bold, uncluttered design of contemporary living. Distinctive lavatory faucets, stunning bath spouts, and the new look in showerheads. All in satin or polished 24 carat gold electroplate or chromium, with contrasting highlights. Showerhead and lavatory faucets feature Kohler's Water-Guard water-saving flow control.

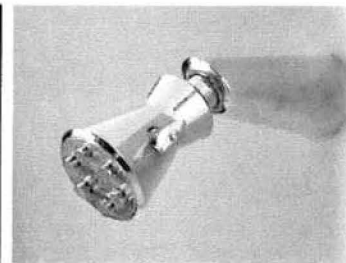
K-6846 Lavatory Faucet



K-6842 Faucet K-6832 Bath Spout



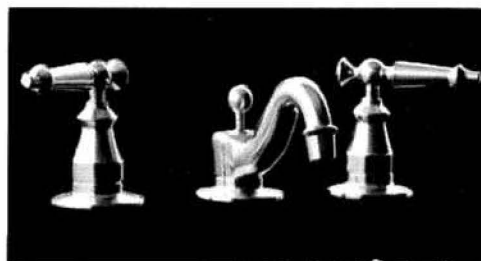
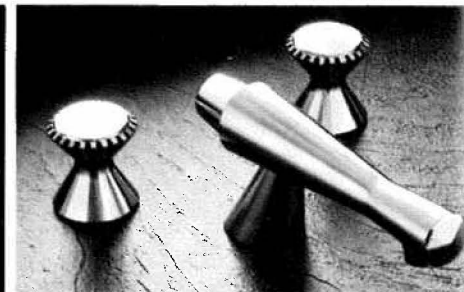
K-6844 Showerhead



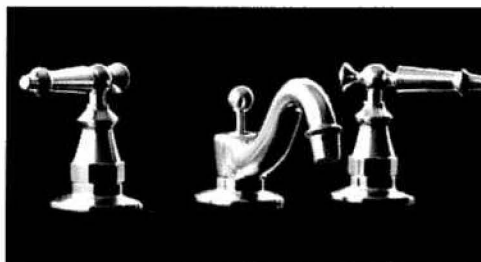
K-6848 Lady Vanity Faucet



K-6840 Bath Faucet K-6834 Bath Spout



K-108 Lavatory Faucet



K-108 Lavatory Faucet

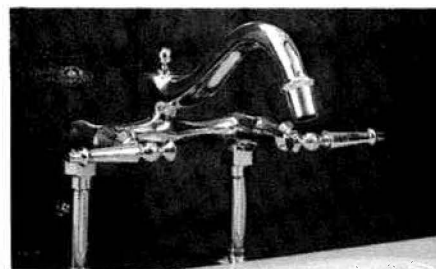


K-120 Bath/Shower

# "ANTIQUE"

## Water-Guard

Distinctive elegance for everyday living. Imaginatively designed with a touch of nostalgia. For the Birthday Bath, bath/shower installations, lavatories, Caravelle bidet. In 24 carat gold electroplate or chromium, satin or polished finish. "Antique" Rite-Temp pressure balanced mixing valve features china dial plate in Espresso, Parchment, Black Black or White. Showerhead and lavatory faucets feature Water-Guard water-saving flow control.

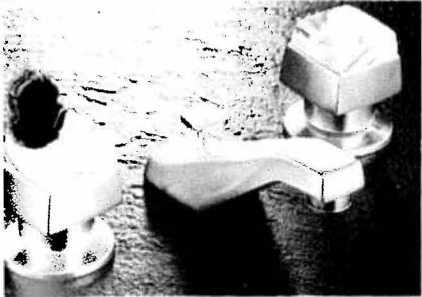


K-104 Deck Mounted Bath Faucet

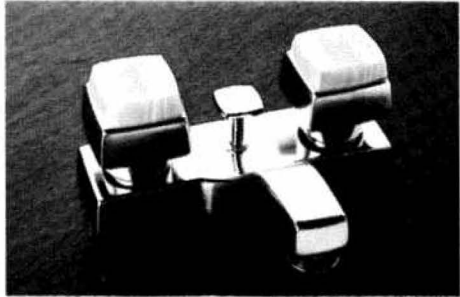


K-134 Rite-Temp Control

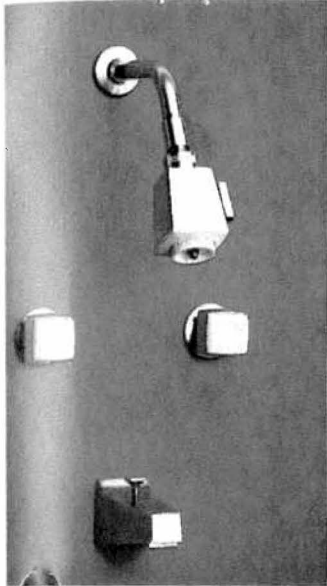
952 with K-9628 Onyx



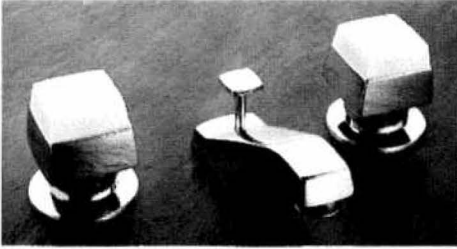
K-6950 with K-9625 Onyx



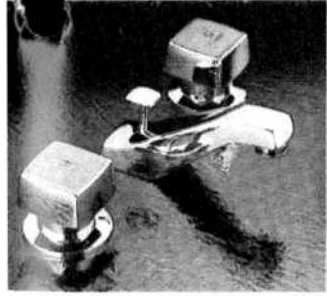
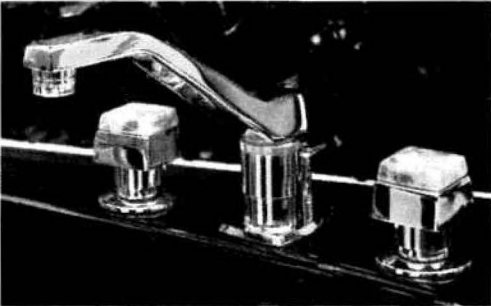
931 with K-9627 Onyx



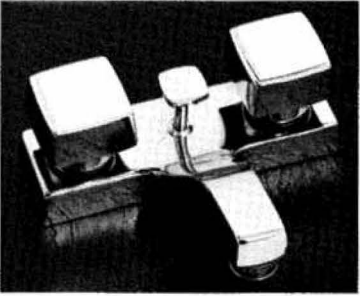
K-6952 with K-9627 Onyx



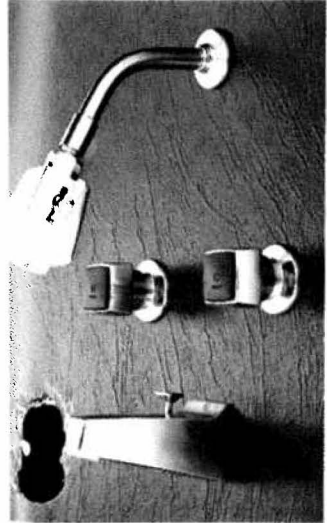
K-6956 with K-9626 Onyx



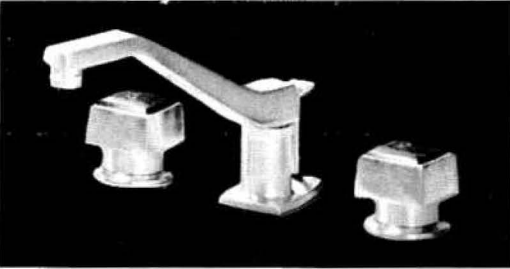
952 Lavatory Faucet



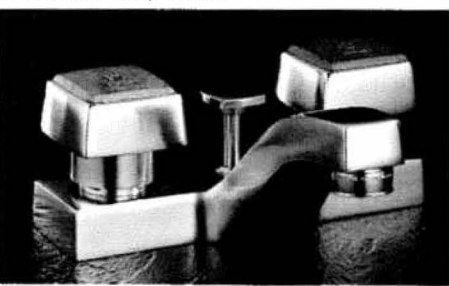
K-6950 Lavatory Faucet



931 Bath/Shower



K-6956 Lavatory Faucet



K-6950 Lavatory Faucet

# ALTERNA ONYX *Water-Guard*

Here's decorator innovation. Imported natural onyx inserts snap into and out of Alterna faucet handles. Four colors: Persian Chocolate, Turkish Firelight, Argentine Mist, Turkish Pearl. Packaged in two-pair sets — white and green or two browntones. Faucets in satin or polished chromium or 24 carat gold electroplate. Showerhead and lavatory faucets feature Water-Guard water-saving flow control.

# ALTERNA *Water-Guard*

Versatile, imaginative, beautiful. With molded interchangeable handle inserts in Teak, Ebony, Walnut and White. Four pairs packed with every faucet. Faucet finishes in satin or polished 24 carat gold electroplate or chromium. Showerhead and lavatory faucets feature Water-Guard water-saving flow control.

# FLAIR

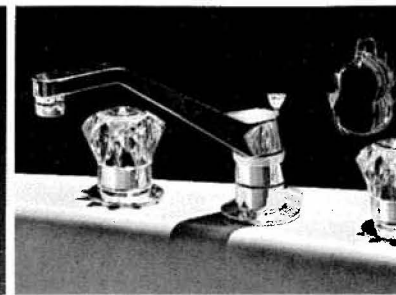
## Water-Guard

Elegance in bathrooms, powder rooms and kitchens. Amber acrylic handles with 24 carat gold electroplate finish. White, Clear or Charcoal handles with chromium finish. Showerheads and lavatory faucets feature Kohler's Water-Guard water-saving flow control.

K-7436-FL Amber



K-7449-FL Amber



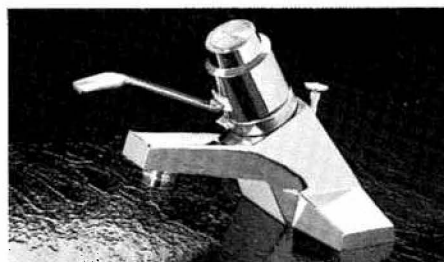
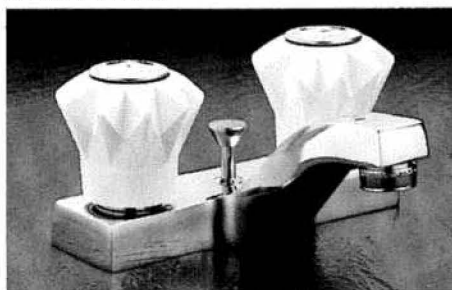
K-7436-FL Clear



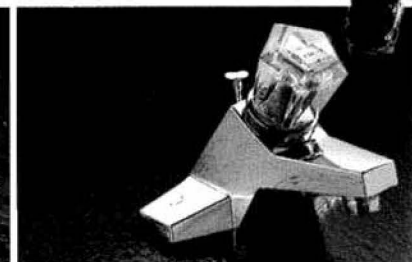
K-7004-FL Clear



K-7401-FL White



K-6883 Single Lever



K-6882 Push/Pull

# CENTURA

## Water-Guard

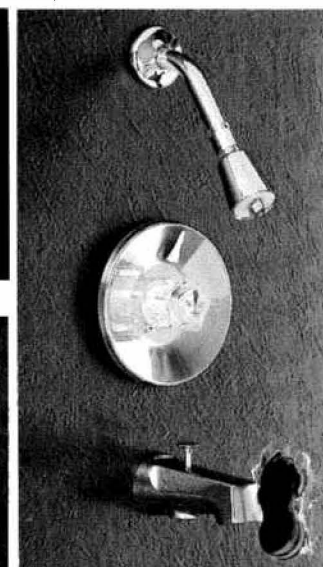
The Kohler One-Controllables. Push-pull lavatory faucets and bath/shower controls in 24 carat gold electroplate or chrome. Single lever lavatory and sink faucets in chrome. Dependable no-leak, no-drip washerless cartridge inside. Shower control gives you a water comfort zone five times wider than most other shower controls. Showerhead and lavatory faucets feature Water-Guard water-saving flow control.



K-6882 Push/Pull

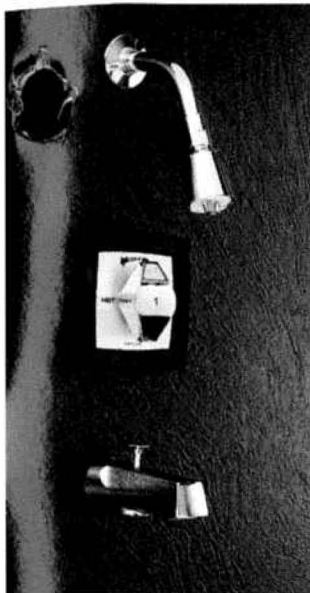


K-6878 Bath/Shower Control

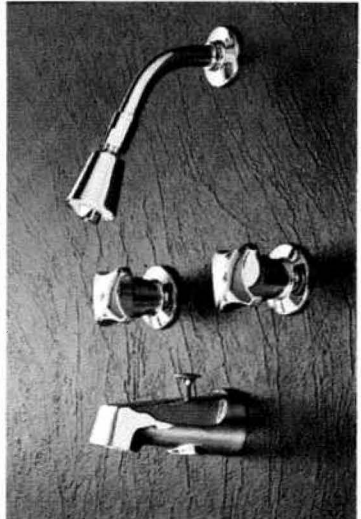


K-6872 Bath/Shower

6808 Rite-Temp Control



K-7004-T Bath/Shower



# TRITON II

## Water-Guard

Triton II faucets in chromium feature elegance for the smartest bathrooms, economy to please your pocketbook. Contemporary design. Graceful lines. Long-lasting service. Easy to care for. Showerhead and lavatory faucets feature Water-Guard water-saving flow control.

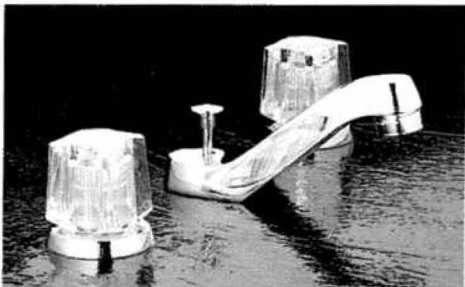
8040-T Lavatory Faucet



K-7436-T Lavatory Faucet



K-7401-T Lavatory Faucet



1616 Bath/Shower

K-11810-PH Lavatory Faucet



800 Lavatory Faucet

K-11820-PH Lavatory Faucet

# TREND

## Water-Guard

Trend, in chromium, for quality combined with economy. Low priced beauty. Contemporary styling. Proven dependability. Your choice of easy-to-grip handles in clear acrylic or polished chromium. Showerhead and lavatory faucets feature Water-Guard water-saving flow control.



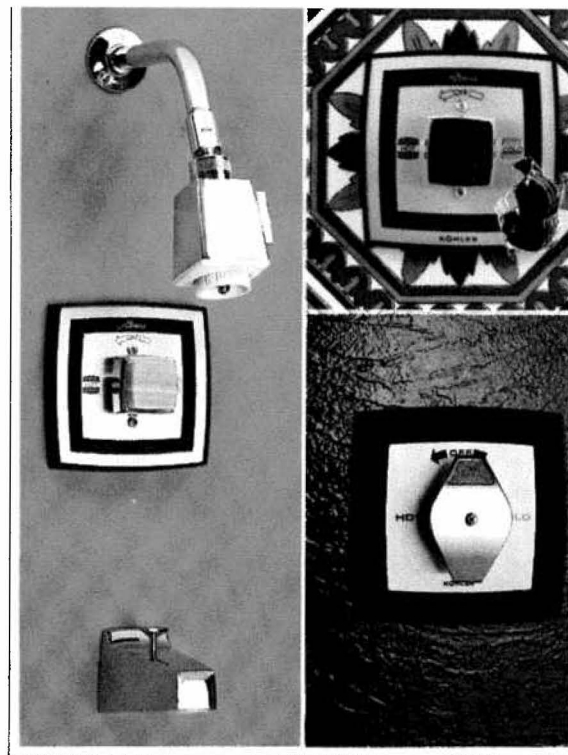
# KOHLER SHOWERS

Kohler showerheads and shower controls complement the exceptional styling and design features offered throughout the Kohler Faucet Collection.

Ask your plumbing contractor about the many quality features of Kohler showerheads — spray adjustments, ball joint swivel connections, Noryl internal working parts and spray faces that help end corrosion problems, choice of finishes and built-in Water-Guard flow control to help save water, energy and money.

Kohler's Rite-Temp, right, is a pressure balanced mixing valve that combines safety and comfort in the shower. You adjust a single control to mix hot and cold water to desired temperature and, regardless of pressure changes in the available water supply, Rite-Temp maintains that water temperature. No more lunging for the controls when water temperature changes as a result of water pressure fluctuation — toilet flushing, dishwasher or clothes washer using water.

Easy to install...just one hole to cut. Easy to maintain...made of non-corrosive materials.



## RITE-TEMP *shower controls*

### *Alterna Onyx*

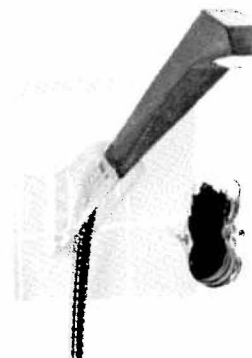
The safety features of Rite-Temp plus interchangeable natural onyx inserts for the handle. Inserts in green, white, two browntones. Pictured above: K-6900 control, K-9629 onyx insert, K-7330 Suburban Water-Guard showerhead.



## THE RAINDROP *personal shower*

Raindrop...The shower that comes off the wall. For convenient showering, localized bathing, washing your hair. Ideal for modernizing and new home construction. Raindrop can attach to showerarm or special diverter tub spout. It can hang from acrylic wall brackets or an adjustable slide bar to accommodate every member of the family. Accessories include two-way showerarm diverter, elbow supply, swivel mounting bracket.

Available in Tangerine or White with 59" chrome plated flexible hose. Or choose economical Raindrop II in White with 59" white vinyl hose.





## Alterna Rite-Temp

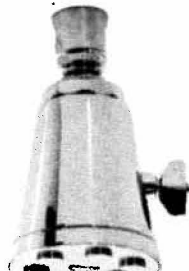
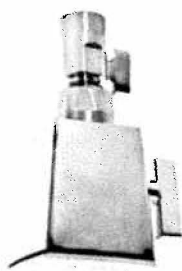
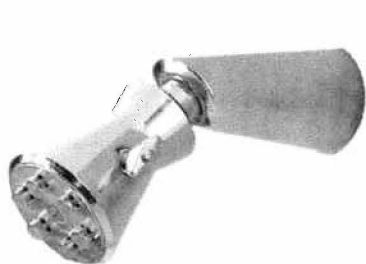
Complements the Alterna faucet line. Available in four finishes — satin or polished 24 carat gold electroplate or chromium. Molded inserts in White, Teak, Walnut and Ebony color. Upper left: RITE-TEMP shower control.

## Triton II Rite-Temp

Complements the Triton II faucet line. Offered in polished chromium. Lower left: K-6913 RITE-TEMP shower control only.

## "Antique" Rite-Temp

The look of yesterday, safety features for today. Vitreous china dial plate in Black Black, Espresso, Parchment or white with script lettering. Handle and back plate in satin or polished 24 carat gold electroplate or chromium. K-130.



## Water-Guard Showerheads

Kohler Water-Guard showerheads now provide drenching showers with a maximum flow of 3 gallons per minute at **NO ADDITIONAL COST.**

*Avura* offers the new look in showerheads. Adjustable multi-spray face, ball-joint directional control, four finishes. K-6844.

*Suburban.* Was created to complement the Alterna line. Spray face and internal working parts of Noryl end corrosion problems, prevent lime build-up. Available in all four finishes. K-7330.

*City Club* A fine showerhead to complement any Kohler bath and shower fitting. Features spray adjustment for drenching, normal or fine spray. K-7350.

*Town House.* One of Kohler's fine showerheads. Features self-cleaning spray face made of non-clogging Delrin. Metal parts of brass. Complementary styling. K-7375.

*Autel.* Delrin face resists build-up of corrosive mineral salts... helps prevent clogging. Regularly furnished with both the Triton II, Centura and Flair series. K-7370.

# SAVE WATER, ENERGY & MONEY

Kohler Co. designs Water-Guard toilets, faucets and showerheads to deliver all the water you need... without being wasteful.

These products are designed to use less water without loss of efficiency. They can save an average family of four about 36,500 gallons of water every year. They can reduce water bills and the amount of gas or electricity you use to heat water. Even lower sewer service bills where rates apply.

**Water-Guard toilets.** Kohler manufactures a variety of Water-Guard toilets for residential and commercial installations.

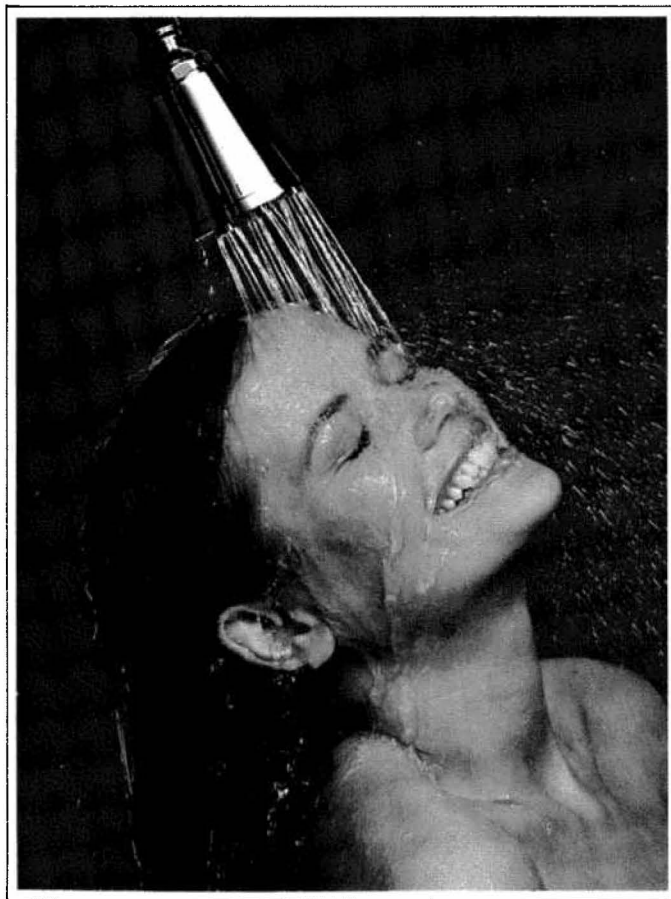
The Wellworth Water-Guard, for instance, is designed to flush positively and efficiently with less water than conventional toilets. The savings could add up to more than 14,600 gallons of water per year for a family of four, assuming five toilet flushings per person daily. Water-Guard toilets cost no more to install than conventional toilets.

**Water-Guard showers, faucets.** All Kohler lavatory and sink faucets with aerators, and all Water-Guard showerheads now also provide water-saving flow control at NO ADDITIONAL COST.

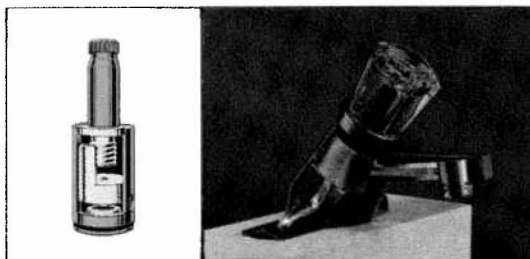
Conventional showerheads use 6 to 8 gallons of water per minute. Water-Guard showerheads limit flow to a maximum of 3 gallons while still delivering drenching, thoroughly satisfying showers. With Kohler, water use can be reduced 50% or more, energy consumption is lower because less hot water is required, and there's also less waste water.

Replacing a conventional showerhead with a Kohler Water-Guard showerhead could save a family of four as much as 21,900 gallons of water annually, assuming the equivalent of a daily 5-minute shower per person.

Water-Guard lavatory and sink faucets have a standard flow rate of 2 to 2.75 GPM at normal water pressures of 40-80 PSI. Maximum flow is 3 GPM. That's additional water and energy savings at no additional cost.



## INSIDE STORY



There's more to Kohler faucets than beauty and variety. It's called craftsmanship... quality and dependability built into faucets to give them long life and extended service.

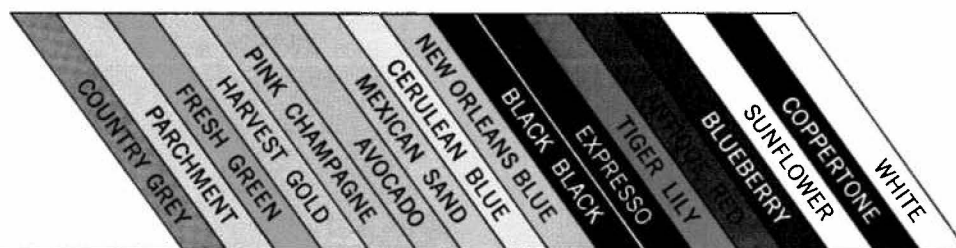
Bravura, "Antique," Alterna, Alterna Onyx, Flair and Triton II faucets have Valvet® valves for positive no-leak, no-drip water control and complete compression-type shut-off. The faucet opens and closes with a smooth up and down movement, pressing a sealing washer firmly but gently against a chrome plated seat, and eliminating the grinding action that causes wear in conventional faucets.

Centura faucet features a *washerless* cartridge that is self-contained, non-metallic and corrosion-resistant. It has no washers, no O-rings, no springs — parts that can cause leaks in ordinary faucets.

Centura sink faucets feature low-friction Celcon bearings on spout posts for smooth swing action.



# KOHLER COLOR GUIDE



BATHTUBS — ENAMELED CAST IRON																
K-100 BIRTHDAY																
K-505/06-S MENDOTA																
K-785/86-S GUARDIAN																
K-790-S STEEPING/K-792-S STEEPING WHIRLPOOL																
K-800-S CARIBBEAN/K-802-S CARIBBEAN WHIRLPOOL																
ALL OTHER BATHTUBS NOT LISTED ABOVE																
FIBERGLASS BATH AND SHOWERS																
K-1400 5½ x 7' THE BATH/K-1402 WHIRLPOOL																
ALL OTHER FIBERGLASS UNITS																
LAVATORIES — VITREOUS CHINA																
K-2170 LADY VANITY																
K-2187 RONDELLE																
K-2196 PENNINGTON																
K-2210 17 x 14" CAXTON																
ALL OTHER LAVATORIES NOT LISTED ABOVE																
LAVATORIES — ENAMELED CAST IRON																
K-2753 TRAILER																
K-2885 MAN'S LAV																
K-2890/92 TAHOE																
K-2894/95 TAHOE																
K-2900/02 FARMINGTON																
K-2904/05 FARMINGTON																
K-2910/12 RADIANT																
K-2916/17 RADIANT																
ALL OTHER LAVATORIES NOT LISTED ABOVE																
LAVATORIES — VITREOUS CHINA VANITY																
K-2250 ROYALE 4" C.C. FAUCET DRILLINGS																
K-2252 ROYALE 8" C.C. FAUCET DRILLINGS																
TOILETS — RESIDENTIAL																
K-3385-EB ROCHELLE																
K-3400-PB POMPTON																
K-3500-EB WELLWORTH WATER-GUARD (ELONGATED)																
ALL OTHER TOILETS NOT LISTED ABOVE																
BIDETS																
K-4862/66 CARAVELLE																
SINKS — ENAMELED CAST IRON																
K-5950/51/52/53 DELAFIELD																
K-5960/61 24" x 21" MAYFIELD																
K-5961 16" x 21" MAYFIELD																
K-5960/61 30" x 21" MAYFIELD																
K-5980 SUTTON																
K-6550 12 x 12" ADDISON																
K-6550 ADDISON — ALL OTHER SIZES																
K-6620 CLEARFIELD																
K-6629/30 WESTOVER																
ALL OTHER SINKS NOT LISTED ABOVE																
BAR SINKS — ACRYLIC																
K-6015 15 x 15" GIMLET																
K-6025 25 x 15" GIBSON																

For availability of colored fixtures for commercial and institutional projects, contact your Kohler distributor or Kohler Co. representative.



**KOHLER**

KOHLER CO., KOHLER, WISCONSIN 53044

Form P-888-478M

HILL CASSAS de LIPKAU AND ERWIN

LAWYERS

SUCCESSOR TO  
GRAY, HORTON AND HILL  
ROBINSON AND CASSAS

EARL M. HILL  
FRANK CASSAS  
ROSS E. de LIPKAU  
THOMAS P. ERWIN  
ROBERT E. MCCARTHY

SUITE 504 SECURITY NATIONAL BANK BUILDING  
1 EAST LIBERTY STREET  
POST OFFICE BOX 2790  
RENO, NEVADA 89505  
(702) 323-1601

April 4, 1979

Honorable Steve Coulter and  
Members of the Committee on  
Environment and Public Resources  
Nevada State Legislature  
Carson City, Nevada 89701

Re: Assembly Bill 642

Gentlemen:

On behalf of many small water companies,  
as well as developers, I have been quite active in  
the drafting of Assembly Bill 642. In my opinion,  
the proposed amendment is advantageous to everyone  
and at the same time is neither harmful to the public  
nor to the water resource.

By way of background, NRS 533.380, the statute  
which we are attempting to amend, was first enacted  
in 1913. Minor procedural changes were made in 1951  
and 1967. NRS 533.380 was compatible with building  
trends for many years, but now it simply does not  
take into account the many time consuming steps necessary  
to actually place the water to beneficial use.

Chapter 534, of Nevada Revised Statutes,  
the present ground water law, was first enacted in  
Nevada in 1939. Subsequent thereto, if a Permittee  
serving a subdivision or other quasi-municipal develop-  
ment was required to file his Proof of Beneficial  
Use by reason of his Permit "running out of time",  
he would simply do so and at the same time file another  
Application to Appropriate Water. This is commonly  
called a "top filing" and in past years the latter  
applications were routinely granted by the State Engineer.  
Later, as ground water basins became designated, the

holders of the permitted rights learned that when they filed their Proofs of Application of Water to Beneficial Use, they would not be able to obtain another source of water, i.e. their subdivision or other development would stop at that stage.

Hardships have arisen in that the purchaser or purchasers of a lot would not be able to connect to the water company or utility. They were and are free to drill their own domestic wells, however, even though the water line ran in front of or quite near their residence. The price of a well may be quite expensive, ranging between \$2,000.00 and \$10,000.00. Further problems arose, however, when by reason of the size of the lot, local health authorities would not allow a septic tank and well on the same lot. Consequently, the lot became useless.

It should be noted that Nevada, unlike other western states, does not allow for a reservation of water rights for municipal purposes or for any purposes. This bill does not create a reservation, but merely attempts to lengthen the period of time in which orderly development may take place.

In summary, the reasons why I believe Assembly Bill 642 is advantageous are as follows:

(1) The amendment takes into account the time consuming and modern trends of land and municipal growth. It alters the 1913 law to take into account the changing trends in land development.

(2) It assists the purchaser of a lot, wherein he can rely upon a firm source of water if he does not intend to build and occupy the lot for some time.

(3) It assists the utility or the purveyor of water as there are a great many instances wherein the Permittee (owner of the water right) does not own any land within his service area. Two examples are those of Cave Rock Water Company and Incline Village General Improvement District. These utilities have, as their source of water, Lake Tahoe. In both of

Page Three  
April 4, 1979

these instances, the water system has been built out and designed to encompass the ultimate growth of the district. If the water right(s) expires, a very expensive water system would be serving a relatively small amount of people. The various owners of land, both largeholders and smallholders, within the service area, would probably forever be without a source of water.

(4) The ground water, or service water resource, is not adversely effected as the State Engineer when issuing future permits will simply assume a 100% build-out and issue or deny permits accordingly.

(5) The State Engineer, if he determines that the granting of additional extensions of time would adversely effect prior users, may refuse to grant the extensions of time. Thus, the resource is adequately protected.

(6) The amendment would establish some certainty in the minds of lending institutes, as the same would be quite reluctant to lend funds to a development if the water rights file in the State Engineer's Office were marked "no further extensions."

One suggestion I have is the following phrase be added as a new Section 6 starting on Line 23, Page 2 as follows:

"Sections 4 and 5 shall apply to all applications and permits presently on file in the state engineer's office."

I heartily recommend this bill.

Very truly yours,

HILL CASSAS de LIPKAU AND ERWIN

By \_\_\_\_\_  
Ross E. de Lipkau

RED:km

ASSEMBLY ENVIRONMENTAL AND PUBLIC  
RESOURCES COMMITTEE  
ASSEMBLY BILL NUMBER #642

My name is Stan Martin, I am president and general manager of Cave Rock Water Company. We are a small investor owned utility and serve customers in the Tahoe area of Douglas County.

I would briefly like to speak in favor of Assembly Bill number 642. Without the changes as proposed in this bill we could be put in the position of facing and extremely serious situation sometime in the near future.

We currently serve our customers by several water permits. We differ from an agriculture user in that he can file for a permit and then put the water to full beneficial use within a very short time. We as a public utility have absolutely no control over our pumping demand, which is dictated by normal community growth and development. Therefore, we can only prove beneficial use for the exact amount of water pumped to our customers at the end of each year. If further extensions of time were not granted, we would not be able to connect any new customers, nor would we be able to start over and file new applications, as all applications in the Tahoe Basin are presently and have been frozen because of law suites. The new customers I refer to are those lots presently not built on, but in already developed subdivisions, some as much as 20 years old.

To complicate the problem we operate under the laws, rules, and regulations of the State Public Service Commission.

These regulations dictate we must serve our present customers and those potential customers I have mentioned earlier.

We could be squeezed between the demands of two state agencies and thirdly the potential customer who will be looking for someone to take out his wrath and recourse on.

The changes as proposed by Mr. DeLipkau here today are a sound and responsible way to protect the interest of the consumer both present and future and insure their water needs will be met.

Thank You  
For your time & consideration



March 29, 1979

S.B. 184 BEFORE THE ASSEMBLY COMMITTEE ON  
ENVIRONMENT AND PUBLIC RESOURCES

The purpose of this bill is to clarify the responsibility and authority of the Health Division and the Division of Environmental Protection regarding sewage disposal and the certification of subdivisions.

The 1977 Legislature reorganized several State agencies. This reorganization took the Environmental Protection Section from the Bureau of Environmental Health of the Health Division and created the Division of Environmental Protection in the Department of Conservation and Natural Resources.

Statutes were changed to transfer authority and responsibility for environmental functions from the Health Division to the Division of Environmental Protection.

We feel that some of those changes were incomplete and this is an attempt to rectify that.

NRS 439.200, Section 1(d), was amended to delete the control of sewage disposal from the Board of Health's authority to adopt regulations.

I assume that this was done because the primary control of municipal sewage systems is with the Division of Environmental Protection and is covered under water pollution laws.

(Continued)

However, of all factors influencing public health in both rural and urban areas no single item is of greater importance than the proper disposal of sewage!

NRS 439.150 declares the State Board of Health to be supreme in all non-administrative health matters.

Therefore, we are requesting that NRS 439.200 1(d) be amended to restore the specific authority for controlling sewage disposal <sup>but</sup> with wording to clarify the Board's authority with respect to the Water Pollution Control Law administrator <sup>ed</sup> by the Environmental Commission.

This is reflected in the change shown on Page 1, lines 9-12.

While the environmental functions were removed from the Health Division, the subdivision and condominium statutes - NRS 117 and 278 - were not amended and still require the Health Division to certify approval of water pollution, and sewage disposal for all new subdivisions and condominiums.

This bill would transfer the responsibility for certifying approval of water pollution and sewage disposal by public systems to the Division of Environmental Protection while retaining the responsibility for certifying water quality and water supply facilities with the Health Division.

This is reflected in the change shown on Page 2, lines 29-34 and Page 4, lines 33-38.

COMMENTS BY: Jack Mitchell, Director of Public Works, City of North Las Vegas

REGARDING: SB 227

Section 1, paragraph two, would allow any municipality to refuse to receive any sewage, liquid waste, solid waste, industrial waste, night soil or any other waste from any other municipality...

This provision is totally unreasonable and would allow an unconscionable act in shutting off the sewage flow from one city to another. There will most likely "never" be sufficient reason to shut off the sewage flow as provided for in this legislation. Other systems - such as fines or penalties may be considered, but consider the catastrophic endangerment of the health and welfare that would occur if any entity should cut off the sewage flow from any city or any part of the city.

This bill must be revised to reflect a practical means of accomplishing whatever purpose was intended by section 1, paragraph two.

## GUEST LIST

116