

## **INITIAL ANALYSIS OF THE ECONOMIC IMPACT OF WATER POLLUTION CONTROL COSTS UPON THE WINE AND DISTILLED SPIRITS INDUSTRIES**

The study is one of a series commissioned by the Environmental Protection Agency to provide an initial assessment of the economic impact of water pollution control costs upon industry, and to provide a framework for future industrial analysis.

For the purpose of this initial analysis, the water pollution control requirements were assumed to be those developed in 1972 as effluent limitation guidance by the EPA Office of Permit Programs. Costs were developed by the EPA Economic Analysis Division on the basis of treatment technologies assumed necessary to meet the effluent limitation guidance.

Because of the limitations of time and information available, these studies are not to be considered definitive. They were intended to provide an indication of the kinds of impacts to be expected, and to highlight possible problem areas.

This document is a preliminary draft. It has not been formally released by EPA and should not at this stage be construed to represent Agency policy. It is being circulated for comment on its technical accuracy and policy implications.

**The Economic Impact of the Cost of Meeting  
Federal Water Quality Standards on the  
Wines and Distilled Spirits Industries**

**APPENDIX**

**ENVIRONMENTAL PROTECTION AGENCY**

**Washington, D. C.**

**January 5, 1973**

**This report is of a proprietary nature and intended solely  
for the information of the client to whom it is addressed.**

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January 5, 1973

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Environmental Protection Agency  
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401 M Street, S.W.  
Washington, D.C.

Subject: Study of The Economic Impact of The Cost of Meeting Federal  
Water Quality Standards on The Wines & Spirits Industries

Dear Mr. Clark:

We are pleased to submit the appendix to our final report on the  
Wines and Spirits Industries. It is divided into two parts as follows:

- . Part A--Wine Industry
- . Part B--Distilled Spirits Industry

The report is being submitted under separate cover.

Very truly yours,

*Booz Allen*  
*Public Administration Services, Inc.*

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**APPENDIX A**  
**THE WINE INDUSTRY**

## A PROFILE OF THE WINE INDUSTRY

This appendix, presenting a profile of the wine industry, defines and describes the industry in the following terms:

- . Product types
- . Distribution systems
- . Consumption
- . Pricing
- . Production processes
- . Raw materials
- . Plants and their locations
- . Employment
- . Operation results
- . Current problems
- . Changes in current status

### 1. WINE AND BRANDY ARE BOTH PRODUCED FROM FRUITS

Wine is produced by fermenting grape or other fruit juice to achieve an alcohol content of 10-20 percent. Brandy is distilled from wine to an alcohol content of 40 percent or more. Specific product classifications are as follows:

- . Table wines
- . Fortified wines
- . Sparkling wines
- . Brandy

### 2. WINE CONSUMPTION HAS GROWN RAPIDLY DURING THE 1960's

Since 1958, total wine consumption has increased from 137 million gallons to 269 million gallons in 1971. Domestic table wines in 1971 accounted for 59 percent of consumption in 1971 compared to 31 percent in 1958.

(1) Table Wines Are the Most Widely Sold of All Wines

Of the 269 million gallons of wine consumed in 1971, table wine accounted for more than half--159 million gallons. Table wine has an alcoholic content not in excess of 14 percent by volume. Most domestic wines are sold under semigeneric names such as Burgundy or Rhine, names indicating the types of European wine they resemble in color and taste. The most expensive American wines, accounting for 10 percent of production, are varietal wines bearing the name of the grapes fermented to produce them such as Pinot Noir, Chenin Blanc, Cabernet, Sauvignon. Low alcohol flavored wine, low alcohol fruit wine, and low carbonated grape or other fruit wine are also table wines. When these "mod" or "pop" wines are included, the sale of table wine assumes the dimensions of a boom. The sale of table wine has increased every year since 1956, but in the last three years the rate of gain has been accelerating with an increase of 24 percent from 1970-1971.

Demographic trends point to continuation of the dynamic growth of the wine market. Studies have shown that persons under 35 years of age drink as much as five times more wine than those over 35. The number of adults in the 20 through 34 age bracket will increase by 16.4 million between 1970 and 1980. Changes in state laws reducing the legal age to 18 will further enlarge the group most likely to choose wine. If present trends continue, table wine sales could come close to doubling by 1976. The accelerating demand for all wine was not retarded by the lagging economy of 1970, but continued prosperity will be required for wine sales to reach the projected levels. This, too, is expected, with an increase in annual per capita disposable income projected from \$3,200 in 1970 to about \$5,600 in 1980.

The major markets for table wine follow population distribution closely. For example, the top three states in 1971 wine consumption were California, New York, and Illinois, with other populous states rounding out the top ten.



(2) Consumption of Domestic Fortified Wines Has Declined Slightly Since 1958

Dessert wines, such as port, sherry, and muscatel, aperitif wines, e.g., vermouth, and some flavored wines are termed "fortified wines," because their alcoholic content is increased by the addition of wine spirits or beverage brandy during production. Fortified wines have an alcoholic content over 14 percent, but not in excess of 24 percent.

While the decline in apparent consumption of fortified wine produced in the United States has amounted to only 5 percent since 1958 to 87.5 million gallons, this decline has occurred during a time of rising population and affluence when the total consumption of domestic wine increased from 146 to 269 million gallons. Fortified wine, which accounted for 63 percent of sales in 1958, now accounts for only 33 percent. The shift from sweet, heavy beverages is apparent in all segments of the beverage industries. To accommodate this shift, California producers in 1971 abandoned their previous insistence on 20 percent alcohol in dessert wine to produce 17 and 18 percent types. While the decline in sales of domestic dessert wines continued in 1971, it was not so sharp as the 5.4 percent decline registered in 1970. In addition to the trend toward "lighter" beverages, the decline in sales of fortified wines is attributed to a shrinking of the segment of the market who calculate the cost of the alcoholic content of beverages--the "proof per penny market."

American producers dominate the U.S. market for dessert wine and fortified flavored wine (95 percent or more of the total sales) but not the market for vermouth. Imported vermouth accounted for just over 50 percent of sales in 1971. The market for flavored fortified wine and vermouth has remained relatively stable for the last four years in which statistics are available.

The present market for fortified wine is largely composed of persons over 35 with consumption by area closely tied to population.

(3) Sparkling Wine Sales Have Increased Dramatically  
But Comprise Only 8 Percent of the Market

The sparkling wines include effervescent wines made from grapes or other products, whether the gas contained in the wine is produced by secondary fermentation as in champagne and sparkling burgundy, or is injected as in the production of carbonated wine. The latter are reported with the sparkling wines if they contain 7 percent or more of carbon dioxide.

Consumption of sparkling wine since 1968 has more than doubled, from 10.3 million gallons to 32.9 million gallons in 1971 with the largest increase (6.6 million gallons) in 1969-1970. From 1970-1971 consumption increased by 2.6 million gallons.

Most use of champagne and sparkling wines in the United States is confined to occasions such as weddings, anniversaries, and holidays. In 1971, 31 percent of the champagne and sparkling wine sold was sold in November and December. As with other wines, consumption by area is tied closely to population.

(4) Brandy Consumption Has Almost Tripled Since 1958

Brandy is a distilled spirit obtained solely from the fermented juice, mash, or wine of fruit. Most brandy is distilled at 140 to 170 proof and bottled at 80. Some 84 proof brandy is available. Brandy sales have progressed steadily upward since 1958, making volume gains above the average for other distilled spirits. This trend, supported by the growing demand for after-dinner drinks, is likely to continue.

Domestic brandies dominate the market by a considerable margin. Christian Brothers brandy scored 24th among the top-selling liquor brands in 1970 and alone regularly outsells all imported brandies.

Brandy sells steadily the year around.

3. DISTRIBUTION OF WINE IS CONTROLLED BY EACH STATE

Exhibit I, following this page, is a flow diagram which illustrates the distribution patterns for wines. Distribution patterns are distinctly different in "Controlled" and "Open" states.

(1) In the 18 Control States, the State Government Liquor Commission Distributes Alcoholic Beverages

Alabama, Idaho, Iowa, Maine, Michigan, Mississippi, Montana, New Hampshire, North Carolina, Ohio, Oregon, Pennsylvania, Utah, Vermont, Virginia, Washington, West Virginia, and Wyoming are the Control or Monopoly States. Population estimates of July 1971 of persons 18 years of age and over credit these states with 41.1 million adults. In monopoly states, the State Commission buys from distillers, importers, and vintners either directly or through brokers.

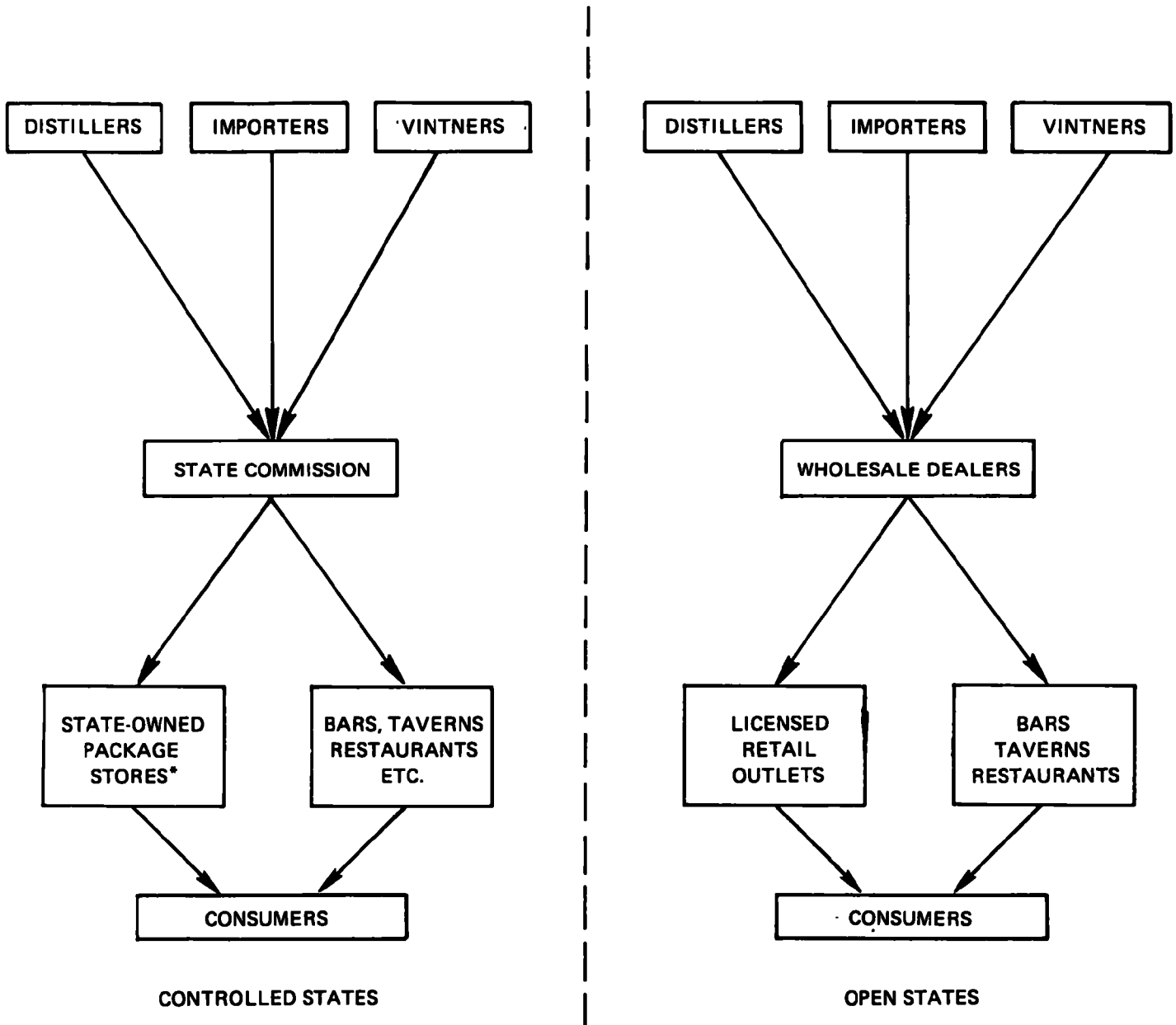
Fifteen of the states operate state-owned package stores. In North Carolina, the package stores are owned and operated by individual counties. In Wyoming and Mississippi, licensed package stores which are privately owned buy at wholesale from the state. Michigan and West Virginia operate state retail stores, but also sell at discount to Specially Designated Distributors or agencies which may be food, drug, or other retail outlets.

Bars, taverns, clubs, hotels, restaurants, and railroads all sell liquor by the drink in all monopoly states except North Carolina. As in the open states, on-premise consumption is restricted legally and often capriciously from state to state. Pennsylvania has more than 20 thousand licensed on-premise outlets, and Ohio more than 11 thousand. There are a total of 51,845 licensed on-premise outlets in the 17 control states that permit such sale. Wine is sold in grocery stores in 11 of the monopoly states.

## EXHIBIT I

Environmental Protection Agency

### DISTRIBUTION PATTERN IN CONTROLLED AND OPEN STATES



\*IN NORTH CAROLINA, COUNTRY-OWNED STORES; IN WYOMING AND MISSISSIPPI, LICENSED PACKAGE STORES; IN MICHIGAN AND WEST VIRGINIA, DESIGNATED DISTRIBUTORS.

(2) In the 32 Open States and the District of Columbia,  
Producers Sell to Wholesalers Who Sell to Retailers

Wholesale houses in open states may:

- . Handle one line of wine (and/or spirits) exclusively
- . Handle the brands of competitive producers and importers
- . Handle other products like soft drinks and food
- . Not handle beer

In major cities, multiple distributorships are often maintained--two or more wholesalers handle the same brands in one market.

Leading wholesalers market aggressively. They maintain sales forces which:

- . Sell and advise the retailer
- . Place point-of-purchase advertising
- . Conduct advertising and sales campaigns
- . Promote new brands

While there are large numbers of wholesalers across the nation, in each major, local market distribution of a specific distiller or winemaker's product is handled by only one or two wholesalers. Because of this, wholesalers have significant local market influence, where state regulation permits. Wholesalers can and often do launch true private label brands, bottled under their own name or for individual or chain retailers. Some wholesale dealers are importers or divisions of firms which are also producers. Gallo, for instance, owns wholesale firms in New York and other major metropolitan areas and maintains a large sales force.

## APPENDIX A (7)

In some states the producers can sell directly to retail outlets. California lists 555 wholesale dealers because all the wineries are permitted to sell to retail outlets and to consumers. Florida, Illinois, Massachusetts, New York, and Texas are the only other states with more than 100 wholesale dealers. There are 2,291 dealers in all the open states and D.C. combined.

Retailers sell wine and spirits to the consumer for on- and off-premise consumption. States' licenses in the open states are granted for both on-premise sales and off-premise sales. California and New York grant no licenses for both kinds of sales but they have very large numbers of licensed outlets.

	<u>On Premise</u>	<u>Off Premise</u>
California	12,202	10,578
New York	23,308	5,070

Illinois grants only dual licenses. In all the license states and D.C., there are:

- . 76,026 licenses for on-premise sales
- . 45,859 for off-premise sales
- . 49,096 for on- and off-premise sales

In 17 of the 33 open areas, liquor may be sold in grocery stores; 22 allow the sale of wine in grocery stores.

4. THE PRICE OF WINE HAS INCREASED ERRATICALLY IN THE LAST FOURTEEN YEARS

(1) The Retail Price-Class of Wine for Off-Premise Consumption is Established by the Brand Owner

The brand owner selects the price class when he establishes his price (F.O.B.) to wholesalers and to monopoly states. Based on his knowledge of freight charges, state taxes, local taxes, if any, and markup, he can calculate the approximate retail price of his brand. The price progression he uses to a typical low-priced table wine in New York State are shown in Exhibit II following this page.

This price progression is typical of that for an open state with freight a large variable. In this connection, note that the cost of shipping wine to the large eastern markets from California approximates the cost of shipping it from Europe. The state tax per gallon varies from California's low of \$.01 to \$1.10 in Tennessee. Imported wine is usually shipped already bottled, labeled, and cased. The importer must figure the same price progression as the winery, with the addition of the customs duty--37.5 cents per gallon. The importer is often his own wholesaler as are the California wineries within their own high consumption state. Ranges of taxes applicable to wines are shown below:

<u>Wine Type</u>	<u>Excise Tax</u>	<u>New York Tax</u>	<u>Open States Taxes</u>	<u>Duty</u>
Fortified	\$ .67	\$ .10	\$ .02-2.50	\$ .21-1.00
Sparkling	\$ 3.40	\$ .53	\$ .20-3.08	\$ 1.17
Carbonated (17 percent or more)	\$ 2.40	\$ .26	\$ .20-3.08	\$ 1.17

The excise tax on all the wine types has been stable since 1955; 18 of the open states raised their tax on still wine in the period 1969-1972; the duty on carbonated and

## EXHIBIT II

### Environmental Protection Agency

#### PRICE PROGRESSION FOR WINES PER GALLON

Winery Cost <sup>a/</sup>	\$0.87
Winery Markup	1.11
Advertising <sup>b/</sup>	0.09
Bottling and Packaging <sup>a/</sup>	0.43
Federal Excise Tax	0.17
F. O. B. Price	2.67
Freight <sup>c/</sup>	0.30
New York State Tax	0.10
Wholesaler's Cost	3.07
Wholesaler's Markup (25%) <sup>d/</sup>	.77
Retailer's Cost	3.84
Retailer's Markup (50%) <sup>e/</sup>	1.92
Retail Price (rounded)	
per gallon	5.80
per bottle, i. e., fifth	1.20

a/ Assumes winery is large California plant

b/ Average, 1971

c/ Estimated

d/ Range 5% to 45%

e/ Range 34% to 50%



sparkling wines was reduced from \$1.50 in 1967 to \$1.17 in 1972 (the final Kennedy round reductions), while that on vermouth and marsala dropped to \$.21 and \$.315 respectively.

The price progression in control states is simpler. The state board (Liquor Commission) buys directly or through brokers from vintners and importers, adds freight charges, adds the markup (the markup formula often is a percentage plus a flat amount per bottle) and sells retail. The markup in Pennsylvania was recently reduced (7 monopoly states raised their markup formula between 1969 and 1972) from 58 percent plus 15 cents to 48 percent plus 18 cents. The theoretical gallon of table wine which the Pennsylvania Liquor Commission bought for \$2.67 (see price progression) would sell at retail then for \$4.70 with the fifth selling for about a dollar.

The control states buy wine (and spirits) at the vendor's lowest price. Producers and importers are bound by each state to an agreement which provides that no vendor may sell a listed brand to any customer in the United States at a price lower than that to the state. The agreement is called in the trade The Des Moines Warranty. Each control state purchase order states: "In accepting this order we warrant that the price charged is the lowest tax paid price F.O.B. offered any purchaser for the same merchandise." Thus, each of the 18 states pays the same price and that price is usually lower than to open state buyers. In this way a margin is created in open states for timely "specials," i.e., vendor discounts to wholesalers. Without this margin, prices to control states would automatically drop whenever a vendor discounted to wholesalers in open states. It is noted that trade sources believe that the large volume states may "revolt" and overthrow the Des Moines Warranty System.

(2) The Retail Markup of Wine for On-Premise Consumption is High to Cover Tavern or Restaurant Operating Expenses

A typical bottle of table wine which retails for \$1.95 would cost the retailer \$1.30 and would be sold for on-premise consumption for \$4 or more.

(3) Prices for Wines Have Risen Over the Last 15 Years

An examination of the 1958 and 1972 prices as displayed in Exhibit III, following this page, reveals rather erratic movement. California Clarets and Burgundies are up 42 percent, while New York State Clarets and Burgundies are up 24 percent and some prices have nearly doubled without any tax increases. The 1960 average price of California grapes was \$40.70 a ton, in 1969 it reached \$57.20, then climbed to \$73.60 in 1970, and \$83.80 in 1971. Some grape varieties sold for \$700 a ton. The 1970 eastern crop was good although prices reached \$175 a ton, above the previous \$100-\$125 price level. Prices in 1971 returned to that level.

The rising prices for grapes and wine reflect the accelerating demand and the actual shortage of the best grapes. Unlike the distillers who maintain an inventory equal to a seven year supply, the inventory maintained by American vintners is little more than a year's supply.

5. THERE ARE TWO BASIC PRODUCTION PROCESSES IN THE WINE INDUSTRY

The wine industry has two basic or standard processes for making its products. One is for the production of table wines; the other for dessert wines and brandy. Both processes are depicted on exhibits following this page:

- . The manufacturing process for table wines is Exhibit IV, following Exhibit III.
- . The manufacturing process for dessert wines and brandy is Exhibit V, following Exhibit IV.

Across the top of both exhibits there is a brief description of each step of the production process. Along the bottom of each exhibit, there is an identification of waste products--solid and liquid--emanating from the various production steps.

# EXHIBIT III (1)

## Environmental Protection Agency

### PRICES OF TYPICAL AMERICAN WINES, FIFTHS

	1958	1972
California Claret (Red Bordeaux)		
Beringer Brothers Private Stock	\$1.45	2.15
Charles Krug	1.35	2.17
Louis M. Martini Mountain	1.39	1.70
California Burgundy		
Beaulieu Vineyard	1.65	2.43
Beringer Brothers Family Bottling	1.75	2.15
The Christian Brothers	1.55	2.00
Charles Krug	1.35	2.17
Louis. M. Martini Napa	1.39	2.20
Novitiate of Los Gatos	1.45	2.25
Wente Brothers Livermore	1.67	2.20
California Claret-Type (Cabaret Sauvignon)		
Almaden Vineyards	1.50	2.65
Beaulieu Vineyard	1.65	3.82
Beringer Brothers Family Bottling	1.94	3.69#
Inglenook Vineyard Company	1.59	4.70
Charles Krug, Vintage	1.55	2.17
Louis M. Martini, Vintage	1.67	3.20
Paul Masson, Inc.	1.65	2.60
Novitiate of Los Gatos	1.70	2.75
California Claret-Type (Zinfandel)		
Beringer Brothers Private Stock	1.45	2.63
Buena Vista Vineyards	1.49	2.59
Charles Krug	1.35	2.69
Louis M. Martini Mountain, Vintage	1.39	2.45
California Burgundy-Type (Pinot Noir)		
Almaden Vineyards	1.50	2.65
Beaulieu Vineyard Beaumont	2.00	4.15
Buena Vista Vineyards	1.79	3.49#
Inglenook Vineyard Company	2.19	4.15
Louis M. Martini Mountain	1.67	3.20
Paul Masson, Inc., Chateau Masson Red	1.50	2.60
California Burgundy-Type (Gamay)		
Almaden Vineyards Mountain	1.50	2.65
Charles Krug, 1954	1.55	2.69
Paul Masson, Inc.	1.65	2.60

\* 1958 New York State Posted Minimum Prices; October  
1972 New York State Official Minimum Consumer Resale Prices

## EXHIBIT III (2)

	1958	1972
New York Claret		
Great Western Products, Inc.	1.55	1.95
The Taylor Wine Company, Inc.	1.55	1.85
Widmer's Wine Cellars Neapolitan	1.45	1.85
New York Burgundy		
Gold Seal Vineyards, Inc.	1.45	1.85
Great Western Producers, Inc.	1.55	1.95
The Taylor Wine Company, Inc.	1.55	1.85
Widmer's Wine Cellars Neapolitan	1.45	1.85
Ohio Burgundy		
Meier's Dry	1.70	1.99
California Grenache		
Almaden Vineyards Grenache Rose	1.35	1.92
Beaulieu Vineyard Grenache Rose	1.64	2.09
Novitiate of Los Gatos Grenache Rose	1.45	2.45
California Gamay		
Louis M. Martini Napa Gamay Rose	1.39	2.20
California Rose		
Beringer Brothers Private Stock Barenblut	1.45	2.15
Buena Vista Vineyards Rose Brook	1.79	2.49#
The Christian Brothers Napa Rose	1.55	2.00
New York Rose		
Gold Seal Vineyards Gold Seal Rose	1.45	1.85
Great Western Prods. Inc. Gr. Western Rose	1.55	1.95
Widmer's Wine Cellars Canadaigua Lake Roselle	1.50	1.95
Ohio Rose		
Meier's Rose	1.70	2.19
California Rhine Wine		
The Christian Brothers	1.55	2.00
Charles Krug	1.55	2.69
Paul Masson, Inc.	1.50	1.80
California Chablis		
Beaulieu Vineyard	1.65	2.43
The Christian Brothers	1.55	2.00
Paul Masson, Inc.	1.65	1.80
Wente Brothers Livermore	1.49	1.99
California Sauterne and Dry Sauterne		
Beaulieu Vineyard	1.65	2.75
The Christian Brothers	1.55	2.00
CVA Company Cresta Blanca	1.55	1.89
Charles Krug	1.35	2.17
Novitiate of Los Gatos	1.45	2.25
California Haut and Sweet Sauterne		
Beaulieu Vineyard	1.65	2.75
The Christian Brothers	1.55	2.00
Charles Krug	1.55	2.69

	1958	1972
California Rhine-Type and Moselle-Type (Johannisberg Riesling)		
Buena Vista Vineyards	1.98	3.49#
Charles Krug	1.75	3.71
Louis M. Martini, Vintage	2.12	3.20
Cal. Rhine-Type and Moselle-Type (Grey Riesling)		
The Christian Brothers	1.75	2.60
Wente Brothers Livermore, Vintage	1.67	2.50
Cal. Rhine-Type and Moselle-Type (Riesling)		
Almaden Vineyards	1.50	2.65
Louis M. Martini Mountain, Vintage	1.57	1.99
Cal. Rhine-Type and Moselle-Type (Traminer)		
Buena Vista Vineyards	1.98	3.49#
Inglenook Vineyard Company, Vintage	1.59	2.45
Charles Krug	1.75	2.69
Cal. Chablis-Type (Folle Blanche)		
Louis M. Martini Mountain, Vintage	1.57	2.20
Cal. Chablis-Type (Pinot Chardonnay)		
Almaden Vineyards	1.50	2.65
Beaulieu Vineyard Beaufort	2.00	2.65
Inglenook Vineyard Co., Vintage	2.19	4.70
Charles Krug Napa Valley	2.00	3.69
Louis M. Martini Mountain, Vintage	2.50	3.20
Wente Brothers Livermore, Vintage	2.35	3.50
Cal. Chablis-Type (Pinot Blanc or White Pinot)		
Novitiate of Los Gatos	1.70	2.45
Wente Brothers, Livermore, 1953, 1954	1.67	2.80
Cal. Dry and Sweet Sauterne-Type (Sauvignon Blanc)		
Beaulieu Vineyard Chateau Beaulieu, Sweet	2.00	3.41
Charles Krug, Semi Dry	1.75	2.69
Novitiate of Los Gatos	1.70	2.25
Cal. Dry and Sweet Sauterne-Type (Semillon)		
Almaden Vineyards, Sweet	1.35	1.59
Almaden Vineyards, Dry	1.50	2.14
Charles Krug Dry	1.55	2.17
Paul Masson, Chateau Masson, Sweet	1.50	2.10
Novitiate of Los Gatos Dry	1.70	2.25
New York Rhine Wine		
Gold Seal Vineyards	1.45	1.85
Taylor Wine Company	1.55	1.85
Widmer's Wine Cellars Neapolitan	1.45	1.85
New York Chablis		
Widmer's Wine Cellars Neapolitan	1.45	1.85
New York Sauterne and Dry Sauterne		
Gold Seal Vineyards	1.45	1.85
Taylor Wine Company	1.55	1.85

EXHIBIT III (4)

	1958	1972
Ohio Dry Sauterne		
Meier's Isle St. George	1.86	2.19
Ohio Sweet Sauterne		
Meier's Isle St. George	1.86	2.19
New York Catawba		
Gold Seal Vineyards (1 qt., semi-sweet)	.97	1.69
Great Western Producers	1.55	1.95
Sweet		
Ohio Catawba		
Meier's Sweet	1.70	1.99

# Vintage

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DIGITALLY**

## 6. FRUIT IS THE BASIC RAW MATERIAL FOR WINES

Grapes are used in the production of 99% of American wines. The remainder comes from various fruits. American grape production can be divided into two categories: Western vineyards that have been developed from European grape varieties; Eastern vineyards generally planted with native American varieties. Wine products, for the purpose of this study, are classified either as table wines or as distilled wines. The table wines are either still or sparkling and contain up to 14% alcohol. Wines are identified by their color: red, rose or white and by a label name. There are three types of label names:

- . Generic, e.g., "California Burgundy" so names for the region in Europe where the prototype grape is produced.
- . Proprietal, e.g., Thunderbird, coined by the wine maker.
- . Varietal, e.g., Chardonnay, referring to the grape from which the wine is made. For a wine to bear the varietal name, it must contain at least 51 percent of that variety of grape. There are literally hundreds of varieties and no standardized system of nomenclature. More important ones are listed below:
  - Varietals used in California white table wine include:
    - . Sauvignon blanc
    - . Sweet sauvignon blanc
    - . Semillon
    - . Sweet semillon
    - . Light sweet muscat
    - . Grey riesling
    - . White riesling
    - . Sylvaner
    - . Gewurztraminer
    - . Chardonnay
    - . Pinot blanc
    - . Chenin blanc
    - . Folle blanche
    - . French colombard



- Varietals used in California red and rose table wine include:
  - . Cabernet
  - . Zinfandel
  - . Pinot Noir
  - . Red Pinot
  - . Barbera
  - . Gamay
  - . Grignolino
  - . Concord
  
- Eastern grapes are labrusca types, different from California varieties in their "foxy" taste, winter hardiness and later harvest season. The most common Eastern grape variety is the concord. Other varieties include:
  - . Catawba
  - . Delaware
  - . Elvira
  - . Ives seedling
  - . Niagara
  - . French hybrids
  - . Fredonia

Still wines comprise 80 percent of production; sparkling wines, 7 percent. The latter includes:

- . Champagne, which is made from any neutral white wine in the U.S. though some California wineries are concentrating on using the same varietals used in the Champagne District of France.
  
- . Sparkling Burgundy which utilizes the least attractive Burgundy grapes to make a sweet, effervescent wine.
  
- . Cold Duck which is a blend of Champagne and Sparkling Burgundy. A creation of the 1960's, now joined by Cold Turkey.

Table wines are produced in the Eastern and Western United States. Vineyards are usually close to the wineries which they supply. Most California wineries and some Eastern wineries own vineyards but winery produces enough on its own land to meet its needs. The rest is provided by independent growers on a year-by-year contract. Most of these contracts by custom do continue with the same grower year after year.

Distilled wines include brandy and fortified dessert wines. Brandy is a distillation of the finest of the grape crop or one of the other fruits listed on Exhibit VI, following this page. Dessert wines are fortified with brandy up to an alcohol content of 21 percent. They include port, sherry, and vermouth. Distilled wines are produced primarily in the West; California alone produces more sherry than Spain. Production of distilled wines in the East relies upon imports of brandy from California.

(1) The Production of Grapes is Expanding to Meet the Growing Demand for Wines

U.S. wine production in 1971 was 380 million gallons, up 44 percent from 1970. It takes about 10 pounds of grapes to produce a gallon of wine. In wine producing areas, wine grapes are replacing raisin and table grape vineyards and new vineyards are being planted in former orchards and agricultural cropland. California's acreage expansion has increased that State's production one-third in the last ten years. There too, most of the current expansion is occurring. By 1975, California is expected to have 223,000 acres bearing wine grapes, compared with 132,000 acres in 1970. Most of this acreage increase is centered around the Fresno area in the San Joaquin Valley. Established vineyards of average quality grapes are being replanted with premium quality varieties upon which demand is focused. In California, varietal acreage doubled from 1971 to 1972; most of this new acreage is in the San Francisco Bay Area. (Rising brandy production also has added to overall grape requirement for the California wine industry.)

New York State's total grape acreage is also expanding and Concord production is decreasing to make way for more French and American hybrid varieties. Imports of crush from Canada fill gaps in years of low New York State

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production. Expansion is occurring in the minor grape-producing states, but California continues to dominate as is shown on Exhibit VII, following this page.

(2) Despite Expanding Production, Grape Prices Have Been Rising

The annual average price for a ton of California grapes charts the upward climb:

	Grape Prices \$/Ton
1961	49.60
1962	51.40
1963	38.80
1964	52.40
1965	34.90
1966	38.20
1967	47.40
1968	50.70
1969	57.20
1970	73.60
1971	83.80

The expanded production has not been able to keep pace with expanding demand. It takes three to four years for a new vineyard to begin producing the fruit of the vine; five years to reach full production. Weather conditions play an important role in determining harvest size and quality. Small quality fluctuations have dire effects on independent growers. Adverse weather is a major reason that California's 1972 crop is the smallest in thirty years. Because of a severe spring frost and a summer "burn" in California,

EXHIBIT VII

Environmental Protection Agency

GRAPE PRODUCTION BY STATE, 1971

<u>State</u>	<u>1971 Crop (tons)</u>
California	3,510,000
New York	125,000
Missouri	4,200
Washington	75,500
Ohio	19,000
Pennsylvania	51,000
Michigan	68,000
Arkansas	<u>11,170</u>
TOTAL	3,863,370

## APPENDIX A (15)

grape prices are expected to remain high in 1973. Other factors contributing to high prices include:

- . Trend toward premium varieties. Varietals produce only an average two tons per acre compared with 12 tons per acre for the lesser grapes. Thus, the varietals command a premium price especially in years of a crop shortage: California's Chardonnay are expected to reach \$730 per ton--almost 10 times more than the average per ton cost of all grapes in 1971.
- . Amount of acreage in the United States suitable for premium wine is now severely limited. Land is less of a constraint for average grape types. Acreage expansion is limited to select areas where the climate and the soil are perfect for wine. The cost of such land has increased from \$500 to \$2,500 per acre in 10 years. One estimate is the average developed vineyard land in California is \$5,000 per acre. The highest for premium vineyards in the Napa Valley was \$10,000 per acre.
- . Most grapes for wine cannot be harvested by machine. California's vineyards are often on hillsides; many Eastern premium vineyards are too small for mechanization. Labor costs have been rapidly increasing recently as grape pickers are unionized. Heublein agreed with Chavez to use only union grapes. The majority of pickers are not unionized but an attempt to retard unionization by improving pickers' working conditions has also increased the price. Where possible new plantings are designed to accommodate mechanical harvesting and are being planted with permanent sprinkler systems.

A major exception to this trend is Concord grape production. Virtually all Concord picking is mechanized. 1970's good Concord crop was followed by a record crop in 1971, and Concord prices fell from \$165/ton in 1970 to \$125/ton in 1971.

## APPENDIX A (16)

In an attempt to circuit the domestic price rise, it appears that a few wineries in the New York area are importing grape juice concentrate primarily from Canada for wine production. There is no agreement as to whether this is taking place and if it would in fact be profitable.

By 1980, viticulturalists foresee increasing grape yields lessening the necessity for continued vineyard acreage expansion.

### (3) Fruit Wines are Enjoying a Growing Popularity

These so-called "pop wines" introduced in 1958 are sweet pure fruit or fruit-flavored and have a relatively low alcohol content. Fruit wines are usually known by proprietary names: Ripple, Thunderbird, Bali Hai. They are made from a wide variety of fruits plus some from honey and dandelions as shown on Exhibit VIII, following this page.

### 7. CURRENTLY 437 WINERIES ARE AUTHORIZED TO OPERATE IN THE UNITED STATES

A profile of the national wine industry on a state-by-state basis is presented in Exhibit IX, following Exhibit VIII.

Winery Size	Daily Average Crushing Capacity (tons)	Annual Average Production Capacity* (gallons)	
		Table/Fortified Brandy Wine	
Small	200	80,000	29,023
Medium	600	240,000	87,069
Large	1,000	400,000	145,116

\* Assuming, in the case of table and fortified wines, 10 pounds of grapes crushed for each gallon of wine produced; in the case of brandy, 43 pounds of grapes crushed for each proof gallon brandy produced.

# EXHIBIT VIII

## Environmental Protection Agency

### RAW MATERIALS FOR WINES, 1971

Kind	Total
(Gallons)	
Juice and concentrate:	
Grape. . . . .	30,918,651
Raisin . . . . .	---
Apple. . . . .	2,762,794
Blackberry . . . . .	201,377
Pear . . . . .	108,571
Cherry . . . . .	97,095
Raspberry . . . . .	46,197
Pineapple . . . . .	39,710
Peach . . . . .	36,677
Grapefruit . . . . .	31,217
Strawberry. . . . .	25,943
Rhubarb . . . . .	19,870
Orange . . . . .	18,409
Cranberry . . . . .	13,721
Loganberry . . . . .	11,796
Apricot . . . . .	4,546
Elderberry. . . . .	4,030
Current . . . . .	3,862
Dandelion . . . . .	1,225
Lemon . . . . .	676
Blueberry . . . . .	495
Honey . . . . .	266
Total . . . . .	34,347,130



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( ) Numbers in parentheses indicate sales or volume for all wineries with same name or for firm.

- 1/ "Authorized" according to Department of Treasury, Bureau of Alcohol, Tobacco and Firearms (BATF), *Bonded Wineries and Bonded Wine Cellars Authorized to Operate*, Publication No. 655, July 1, 1972.
- 2/ Other products include vermouth, special-flavored wine, vinegar.
- 3/ Small wineries have average crushing capacity of 200 tons per day. Where capacity data were not available, winery was estimated as small if fermenting capacity was below 0.5 million gallons; bottling capacity, below 3,000 cases per day; storage capacity, below 2.5 million gallons.
- 4/ Medium wineries have average crushing capacity of 600 tons per day during crushing season. Where capacity data were not available, winery was estimated to be medium if fermenting capacity was 0.5 to 5.0 million gallons; bottling capacity, 3,000 to 10,000 cases per day; storage capacity, 2.5 to 10.0 million gallons.
- 5/ Large wineries have average crushing capacity of 1,000 tons per day during crushing season. Where capacity data were not available, winery was estimated to be large if fermenting capacity was over 5 million gallons; bottling capacity, over 10,000 cases per day; storage capacity, over 10 million gallons.
- 6/ Owned by Wine Art of America.
- 7/ Owned by Heublein.
- 8/ 84 percent owned by National Distillers and Chemical Corp.
- 9/ Owned by Pop Wines, Inc.
- 10/ Owned by Nestlé.
- 11/ Owned by Brookside Enterprises, Inc.
- 12/ Owned by Eleven Cellars.
- 13/ A C. Mondari label.
- 14/ Distributed by Fromm and Sichel, subsidiary of Distillers Corps., Seagram's Ltd; Paul Masson Vineyards owned by Browne Vintners, subsidiary of Seagram's Corp.
- 15/ Owned by Cucamonga Winery Co.
- 16/ A cooperative controlled by grower-members.
- 17/ Owned by United Vintners, 82% of which is controlled by Heublein.
- 18/ Distributed by Brown-Forman Distillers.
- 19/ Owned by Schlitz Brewing Co.
- 20/ Owned by American Industries.
- 21/ An affiliate of Ranier (Brewing) Corp.
- 22/ Owned by Southdown Land Co.
- 23/ Owned by Schenley Distillers, Inc.
- 24/ Owned by Tiburon Vintners.
- 25/ Distributed by "21 Brands," subsidiary of Foremost-McKesson.
- 26/ Subsidiary of Coca-Cola Bottling Co. of New York.
- 27/ Owned by Crest View Winery (sales, \$6 million).
- 28/ Subsidiary of Glenmore Distillers.
- 29/ Subsidiary of Universal Foods.
- 30/ Controlled by Canandaigua Industries, Inc.
- 31/ Owned by Barry Wine Co.
- 32/ R. T. French Co.

Most of the wineries are small operations; only 40 are medium size; 39 are large. The large wineries account for most of the wine produced.

With rare exceptions, all wineries produce table wines; approximately 45 percent bottle distilled wines, but only 66 distill brandy. The wastes peculiar to distilled wines are produced at the winery where grapes are distilled for brandy. Often brandy purchased from one winery is used in another winery to fortify wine. Thus, all distilled wine bottled by New York State wineries contains California brandy. Most of the wineries that distill brandy also produce table wine making it difficult to classify a particular winery by type of wine. A few also produce related products, e.g. vinegar. Some wineries have bonded wine cellars. Such characteristics are indicated on Exhibit IX.

(1) The Number of Wineries is Growing

New wineries are being opened; established wineries are being revitalized by new capital; wineries abandoned during Prohibition are being reopened; all in response to the growing consumer demand for wine.

(2) The Wine Industry Is Dominated by A Few Firms

As shown in footnote references on Exhibit IX, following page 16, large firms have interests in some of the wineries. The role of large firms in the wine industry will probably increase in the future. Increasingly, distilled spirits firms are acquiring interests in the wine industry. For example:

- . Brown-Forman has an interest in Korbel Champagne
- . Heublein owns Regina and Inglenook Wineries
- . Seagram's controls Paul Masson

Other large firms are getting into the wine making. In 1970, Coca Cola Bottling Company of New York bought Mogen David. In 1971, Beringer Brothers Wineries became

a subsidiary of Nestle. Many of the smaller plants of both industries surviving in this age of conglomerates are very closely held.

When examined in terms of production, the importance of the few biggest firms is even more apparent. Gallo alone produces one-third of all wine consumed in the United States; Gallo and United Vintners (Heublein) account for over half. The others in the top ten are:

- . Guild Wine Co.
- . Canandaigua Industries
- . Taylor
- . Franzia Bros.
- . CWA (Eleven Cellars)
- . Almaden
- . Mogen David Wine Co.
- . Paul Masson

(3) The Majority of the Wineries Are Modern

Automated plants using stainless steel vats and a great deal of technology to assure a consistency in their product dominate the wine industry. Modernization was initiated as plants reopened after Repeal. Though only 50 percent of California's wineries are modern, these account for 75 percent of production. Eighty percent of all Eastern wineries are modern and these account for 80 percent of the East's production.

(4) The Range of Operations Centered in A Single Plant Varies Widely

Gallo is an example of a highly integrated operation: it makes the bottles, owns the trucks, and manages distribution to the retail level. Gallo is an exception, however.

Though many wineries do own vineyards and cellars, most are small operations. But some of the highest quality wines are produced by small, well established wineries. They include:

- . Louis M. Martini
- . Beaulieu
- . Korbel

The small plant is at a disadvantage in today's industry if it is unable to raise capital to expand or if it lacks the marketing skill to broaden distribution.

(5) The Trend in Wineries is to Consolidate Product Lines

Especially the small California wineries are finding it advantageous to specialize on a few varietals in which they excell. Even while a larger winery may be experimenting in the pop wine market, it is limiting the range of table wines offered under its label.

Both wineries are not limited to a particular product by their production line. For instance, with minor adjustments in equipment, a grape wine producer can make a fruit flavored pop wine.

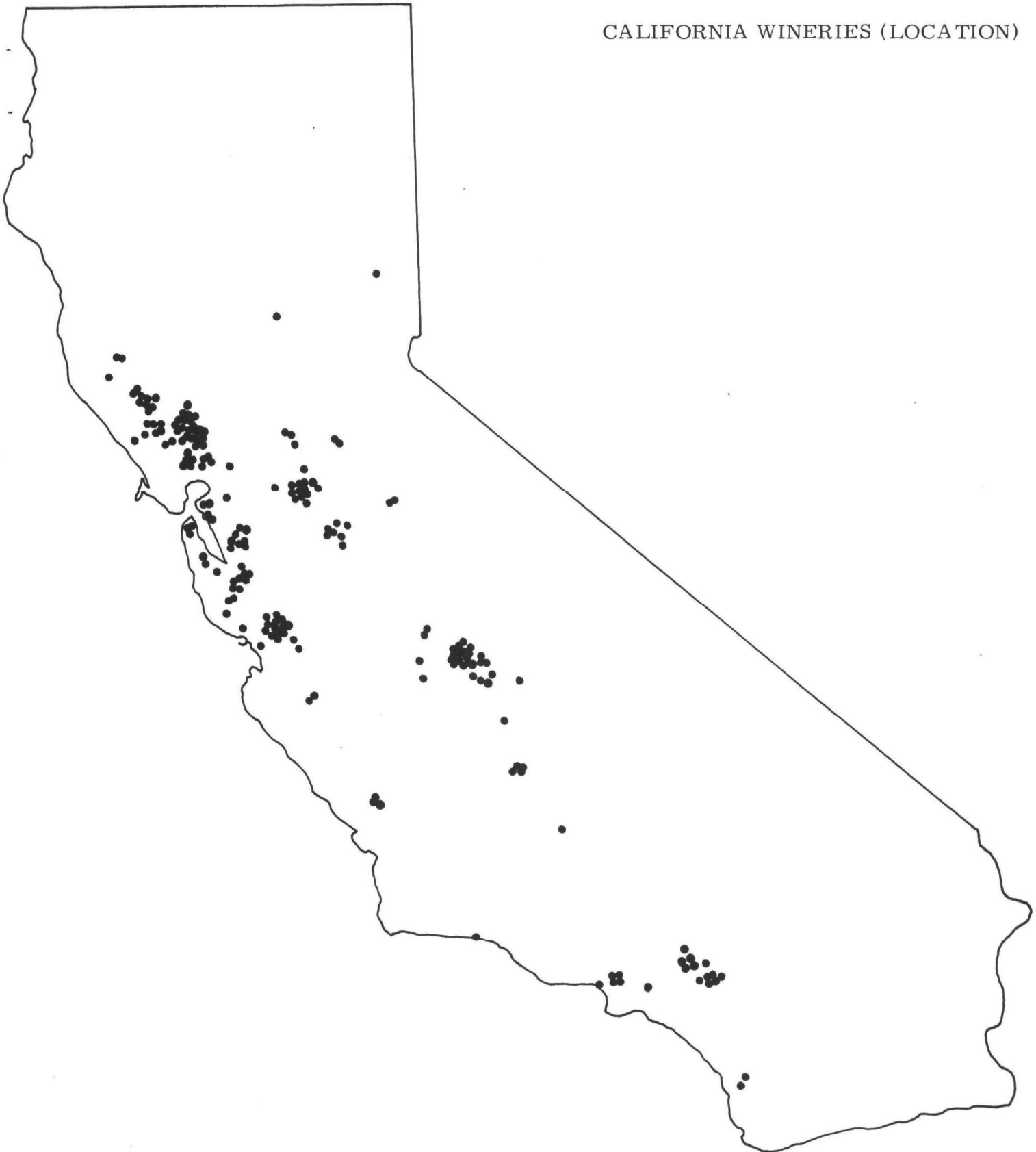
(6) The Wine Industry Is Concentrated Geographically

Of the nation's 437 wineries, 240 are in California, including twenty-eight of the thirty largest plants. These California plants produce three-fourths of all wine consumed in the United States. Within California, production is concentrated in the Napa and San Joaquin Valleys as shown on Exhibit X, following this page. New York State, especially the Finger Lakes region, is another area of concentration of wine production as shown on Exhibit XI, following Exhibit X. There, 10 percent of all the nation's wine is produced. Exhibit XII, following Exhibit XI, shows in which states the remainder of wine in 1971 was produced.

EXHIBIT X

Environmental Protection Agency

CALIFORNIA WINERIES (LOCATION)



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# EXHIBIT XII

## Environmental Protection Agency

### WINE PRODUCTION 1971 BY STATE

(in wine gallons)			
State	Still wines	Vermouth	Other special natural wines
Arkansas	782,948		
California	233,788,499	3,320,328	33,055,334
Colorado	1,915		
Connecticut		2,000	
Florida	141,032	240	
Georgia	818,716		343,911
Illinois	6,358,783		51,821
Iowa	25,584		
Kentucky			
Maryland	13,520		
Massachusetts			2,599
Michigan	1,852,173	337	406,980
Missouri	339,224		2,290
New Hampshire	2,576		
New Jersey	4,315,730	1,051,390	123,961
New Mexico	8,133		
New York	24,074,364	948,262	523,896
North Carolina			
Ohio	1,407,800	18,465	
Oklahoma	2,401		
Oregon	143,823		
Pennsylvania	33,906		
South Carolina	538,759		
Texas	3,835		
Virginia	2,666,199		7,912
Washington	1,486,979		1,000
Wisconsin	21,721		
Total	278,828,620	5,341,022	34,519,704

Source: Dept. of Treasury, IRS, Alcohol & Tobacco Summary Statistics, Publication 67(3-72)



8. APPROXIMATELY 8,000 PEOPLE ARE EMPLOYED BY  
THE WINE INDUSTRY

State-by-state data is not available, but from limited information, we can estimate that 70 percent of the wine industry employees are in California (25 percent at Gallo alone). With rare exception, small wineries which might be adversely affected by water pollution abatement standards are near larger operations that could be an alternative source of employment.

(1) Employment Is Increasing in the Wine Industry

Exhibit XIII, following this page, traces the trend of employment increases in the wine industry. Increases seem to be due to:

- . Increased U.S. wine consumption
- . New wine products (e.g., pop wines)
- . New wineries

(2) Production Workers Comprise Approximately 80  
Percent of the Work Force in Wineries

As shown in Exhibit XIV, following Exhibit XIII, the average winery employs 20 or fewer. Most of the production workers are in unskilled jobs in bottling and warehouse operations.

(3) Average Wages Received By Production Workers in  
the Wine Industry Has Been Increasing

Exhibit XV, following Exhibit XIV, depicts the upward climb of average wages of winery workers. It is based on reports of union contracts in California. It is noted that virtually all California winery workers are unionized.

# **EXHIBIT XIII**

## **Environmental Protection Agency**

### **WINE INDUSTRY EMPLOYMENT LEVELS 1965, 1969, 1970**

<u>Year</u>	<u>Number Production Of Employees</u>
1965	6,346
1969	6,856
1970	7,861

**\*Mid March estimates, Dept. of Commerce, Bureau of Census  
data.**

# **EXHIBIT XIV**

## **Environmental Protection Agency**

### **NUMBER OF EMPLOYEES PER WINERY, 1963, 1969, 1970**

<b>YEAR</b>	<b>1-3 employees</b>	<b>4-7</b>	<b>8-19</b>	<b>20-49</b>	<b>50-99</b>	<b>100-249</b>	<b>250-499</b>	<b>500+</b>
<b>1963</b>	<b>73</b>	<b>35</b>	<b>44</b>	<b>44</b>	<b>15</b>	<b>7</b>	<b>3</b>	<b>1</b>
<b>1969</b>	<b>43</b>	<b>35</b>	<b>53</b>	<b>37</b>	<b>15</b>	<b>15</b>	<b>2</b>	<b>1</b>
<b>1970</b>	<b>44</b>	<b>28</b>	<b>43</b>	<b>38</b>	<b>20</b>	<b>12</b>	<b>3</b>	<b>2</b>

**U.S. Dept. of Commerce, Bureau of Census Data, Mid March estimates.**

**EXHIBIT XV**  
**Environmental Protection Agency**  
**WINERY WAGES 1966-1972**

<b>YEAR</b>	<b>WAGE (in dollars PER HOUR*</b>
<b>1966</b>	<b>2.79</b>
<b>1967</b>	<b>2.90</b>
<b>1968</b>	<b>3.07</b>
<b>1969</b>	<b>3.25</b>
<b>1970</b>	<b>3.45</b>
<b>1971</b>	<b>3.97</b>
<b>1972</b>	<b>4.27</b>

**\* General Winery Employee Wages reported by California Dept.  
of Labor Statistic and Research.**

9. WHILE THE NUMBER OF WINERIES HAS BEEN  
DECREASING OVER THE LAST 15 YEARS, OPERATING  
MARGINS FOR THE FIRMS IN BUSINESS ARE WIDE

It is clear that the reduction in the number of producing facilities is not a direct reflection on the financial condition or potential of firms in either industry. Rather, closings have been due to:

- . Lack of access to expansion capital of small producers
- . Lack of marketing "know-how" (i.e., sound distribution systems) on the part of small producers
- . Trend to larger plants
- . Lack of necessity for a small plant to produce a unique product. (Most wineries can easily convert to pop wine production as demand grows.)

(1) Profitability Has Been High As Compared with All-Industry Norms

Data on profit margins for wineries are not readily available as over half are privately held or cooperatively owned. Yet, every indication points to wider margins than those enjoyed in the distilled spirits industry i.e., 50 percent (see Appendix B). One New York state firm that holds recognizable shares of certain segments of the wine market had a 43 percent margin in the late 60's. The Taylor Wine Company, also of New York state and until recently the only publicly held company doing business only in wines, had operating margins of over 32 percent from 1967 through 1970 and The Taylor Wine Company's net income has been well over 10 percent of sales for the last five years.

(2) Capital Requirements Are Increasing

The decade of the 70's promises accelerated consumption--according to industry estimates--of 60 percent. This means increased expenditures for:

- . Plant and equipment: Wine producers are expanding production capacity to meet the projected tremendous increase in consumption. Yet, 1971 production was only about one year's supply of total consumption.
- . Distribution: Wineries are faced with distribution expenditures/investments. As consumption increases, wineries must both expand and enlarge the distribution "pipeline" with the addition of more product.

All but the very largest wineries are faced with great difficulties in obtaining financing. As a consequence, some firms such as Franzia Bros., are going public and others are allowing themselves to be purchased by large non-wine firms to find the capital necessary for expansion. The sale of Almaden to National Distillers several years ago exemplifies this. It is apparent that pressures on smaller wineries will only increase in the next several years.

(3) Profitability Appears to be More Related to Marketing Skills Than Size Per Se

It is difficult to characterize any one segment of the industry as being more successful than another except to say that those producers with strong marketing talents fare the best. Included in this group are small, medium, and large producers.

Brand competition is tremendous in almost every product segment of the wine industry. This is due to the ability of each producer to produce virtually the same

product as his competitor. A recent example is in pop wines: the popularity of Boone's Farm spawned numerous imitators virtually overnight.

10. THOUGH THE OUTLOOK FOR THE WINE INDUSTRY IS GOOD, A FUTURE PROBLEM IS INCREASING DOMESTIC WINE PRODUCT TO MEET EXPECTED CONSUMER DEMAND

The wine industry in the United States appears to have everything going its way in the seventies. Consumption is expected to double for many reasons:

- . Per capita consumption is currently quite low in comparison with many countries
- . Frequency of use is also quite low
- . The "youth" market is most predisposed to drinking wine and it is the fastest growing market in numbers
- . The entertainment boom is also fostering wine consumption as an "occasion" drink

The problem basic to meeting a greatly increased demand is that of increasing production to meet it. Even though 1971 was a record production year with an increase of over 44 percent more than 1970, total production was barely more than a year's consumption. On the other hand, distillers have 6 or 7 years' consumption requirements on hand. As such, the industry must increase its production and storage capacities to be more in line with current and potential demand.

Increased production ultimately--in wine production much more so than in spirits--means more raw material (grape) production and/or use of imported crush. While U.S. producers are attempting to make the production investment necessary, it is possible that the acreage suitable for use in wine production is now severely limited.

A note on the investment necessary--at present, while there are a large number of firms producing wine, in reality most of the production is in the hands of two very large wineries--Gallo, an independent and United Vintners, a subsidiary of Heublein--and a few firms owned or controlled by distillers. These firms, by their size or the size of their parent firms, presumably, have good access to money markets for investment funds.

It is noted that the basic alternative to limited increases in domestic wine production is that of imports. And, particularly in the East, imports have been rising steadily. Imports have quadrupled between 1956 and 1971 to 13.5 percent of total U.S. sales. If shortages in production occur, it seems likely that imports will reach 20 percent of sales in a few years.

#### 11. THE WINE BOOM IS ON

The most remarkable feature of the wine industry is that it is changing/restructuring to meet the demands of the seventies and beyond. The entire alcoholic beverage industry has always (since Repeal) been legally controlled at each stage--supplier, wholesaler, and retailer. As a consequence, the component industries--wine, spirits, and beer--have buried themselves in "traditional" practices as apparently dictated by the laws and regulations under which each must live. It appears, at present, that the wine industry is ready to break--however so cautiously--with tradition, as it experiences its biggest boom period to date. Every



factor--with the possible exception of increased grape production--seems to be going in favor of wine producers. Several trends in the wine industry are appearing now:

- . Centralization of distribution--mass wine distributors will become more and more important as wholesalers cease being order-takers and become positive marketers. Centralization also refers to the 50 top metropolitan areas accounting for two-thirds of the nation's wine consumption and the consequent limited number of wholesalers handling very large volumes. Suppliers also will demand that wholesalers be more attentive to wines.
- . Nationalization of Distribution and Demand--wines will be promoted and sold on a national basis more than ever before.
- . Mergers and Acquisitions of producers of non-alcoholic producers are entering the wine field--Pepsi Co., Nestle, and Coca Cola Bottling of New York in 1971. In addition, a very high proportion of total case volume is controlled by just a few suppliers--two may control more than half the total market.
- . Retailing--the number of retailers will hardly change even though sales will double. Yet, chain retailers will sell more and more proportionately of total sales. The chain retailers will emphasize price as a component of value--thus enhancing competition with spirits for the consumer's dollar.

The sum of these trends is that the wine industry--although one of man's oldest--is in its infancy in the United States. The current outlook holds that great jumps in consumption will bring a more sophisticated industry in terms of distribution and suppliers at all levels.

**APPENDIX B**  
**THE DISTILLED SPIRITS INDUSTRY**

## **I N D E X   O F   E X H I B I T S**

	<b><u>Following Page</u></b>
<b>I.     PRICE PROGRESSION FOR DISTILLED SPIRITS PER CASE OF 12 FIFTHS</b>	<b>6</b>
<b>II.    RETAIL PRICE OF LEADING BRANDS OF DISTILLED SPIRITS, FIFTHS</b>	<b>7</b>
<b>III.   DISTILLED SPIRITS MANUFACTURING PROCESS</b>	<b>10</b>
<b>IV.    DISTILLED SPIRITS: MATERIALS USED, OTHER THAN FRUIT, BY KINDS, BY STATES, 1971</b>	<b>11</b>
<b>V.     AUTHORIZED U.S. DISTILLERIES</b>	<b>12</b>
<b>VI.    KENTUCKY DISTILLERIES (LOCATION)</b>	<b>15</b>
<b>VII.   U.S. DISTILLERIES (LOCATION)</b>	<b>15</b>
<b>VIII.   DISTILLED SPIRITS PRODUCTION, 1971</b>	<b>15</b>
<b>IX.    EMPLOYMENT LEVELS 1965, 1969, 1970 IN THE DISTILLED SPIRITS INDUSTRY</b>	<b>16</b>

I N D E X   O F   E X H I B I T S (Continued)

	<u>Following Page</u>
X.     NUMBER OF EMPLOYEES PER DISTILLERY, 1963, 1969, 1970	16
XI.    DISTILLERY WAGE LEVELS 1970-1972	17

## APPENDIX B (1)

### A PROFILE OF THE DISTILLED SPIRITS INDUSTRY

This appendix presents a profile of the distilled spirits industry, defining and describing the industry in the following terms:

- . Product types
- . Distribution system
- . Consumption
- . Pricing
- . Production processes
- . Raw materials
- . Plants and their locations
- . Employment
- . Operations results
- . Current problems
- . Changes in current status

1. DISTILLED SPIRITS ARE PRODUCED FROM FERMENTED MASHES OF GRAIN (OR SUGAR BY-PRODUCTS IN THE CASE OF RUM).

Mashes of grain (of sugar by-products in the case of rum) are fermented and distilled to produce distilled spirits which contain 40-50% alcohol. Specific product classifications are as follows:

- . Whiskey
- . White whiskey (gin, vodka)
- . Rum
- . Cordials
- . Bottled mixed drinks and beverage ethyl alcohol

2. MORE WHISKEY IS PRODUCED AND CONSUMED IN THE UNITED STATES THAN ALL OTHER DISTILLED SPIRITS COMBINED, BUT THE MARGIN IS NARROWING

- (1) Whiskey is an Alcoholic Beverage Distilled From a Fermented Mash of Grain at Less Than 190 Proof, Bottled at Not Less Than 80 Proof

Among the American style whiskeys described in the Internal Revenue Service labeling regulations (27 CFR 5.21) are rye, bourbon, wheat, malt, rye malt, and corn whiskey. Any of these whiskeys aged under prescribed conditions or unrectified mixtures of any of these can be labeled "straight" whiskey.

"Blended whiskey" must contain at least 20 percent by volume of 100 proof straight whiskey and separately or in combination, whiskey or neutral spirits; the mixture bottled at not less than 80 proof. Two new whiskeys, the production of which was authorized in 1968, came to retail sale on July 1, 1972: "light whiskey" and "blended light whiskey." Unlike the straight whiskeys which, with the exception of corn whiskey, must be aged in new charred oak barrels, light whiskey is aged in used or uncharred new oak cooperage. Blended light whiskeys are less than 20 percent by volume of 100 proof straight whiskey. Bottled-in-bond whiskeys are straight whiskeys that are the product of one distillery and one distilling season, aged at least four years, and bottled at 100 proof in an Internal Revenue Service bonded warehouse under Federal Government supervision.

- (2) The Market For Distilled Spirits is Restricted to Adults Who Buy Their Beverages From Legitimate Retailers

It is against industry principle to attempt to increase per capita consumption or to convert non-drinkers to drinkers. The industry did not seek the new market of the newly emancipated adults aged 18 to 20 years. The size of the market has grown as the adult population has increased, as dry areas have gone wet (Mississippi was the

## APPENDIX B (3)

last state to go wet, in 1966), and as family income, especially disposable income, has increased. Trade sources have indicated that high rates of gain in annual levels of apparent consumption have been scored since 1955 as the result of another combination of economic and social changes.

- . Home entertainment boom
- . Dining out trend
- . Movement of population to the cities where there is a more liberal attitude toward the use of alcoholic beverages
- . Movement to the suburbs with increases in leisure time business entertainment

Adult per capita consumption of distilled spirits has increased steadily from the 1955 low of 1.95 wine gallons to the 1971 all-time legal high of 3.06 wine gallons. Previous adult per capita consumption had fluctuated considerably from year to year.

Total consumption of distilled spirits increased from 350 million gallons in 1968 to 407 million gallons in 1971, a gain of 16 percent. From 1970 to 1971 consumption increased by 3.2 percent, a rate significantly lower than that for wine.

(3) Domestic Whiskey Captured 52 Percent of the Market for American Liquor or 38 Percent of the Market for all Liquor in 1971

The domestic whiskey market share decreased significantly since 1962 when whiskey accounted for 56 percent of the total liquor market. Introduction of the new "light" whiskeys is intended to improve the competitive position of American whiskeys vis-a-vis imported whiskeys (Scotch and Canadian) and the white whiskeys (gin and vodka), and rum which have enjoyed high rates of gain in recent years.

## APPENDIX B (4)

Blended whiskey sales which had remained static-- 27 to 28 million cases per year--for 14 years, slipped below 26 million cases in 1971. "Blended lights," unlike spirit blends, are quite similar to Scotch and Canadian which have more than doubled their sales in the last decade.

Straight bourbon is the top-selling distilled spirit in the United States and is likely to hold that position in the immediate future. Consumption of straight whiskey (98 percent of which is straight bourbon) is estimated at 28.8 million cases for 1971, down from 29.2 in 1970 and 29.8 in 1969--the 15-year high. Established statistical trends for the 1966-71 period project a 1976 market of 30.2 million cases. Apparent consumption of bottled-in-bond whiskey declined to 2 million cases in 1971, steadily down from its 1956 high of 5 million.

Whiskey consumption patterns are closely tied to population distribution as is the case with wines.

### (4) Gin and Vodka, the White Whiskeys, Made Gains in Sales in the Last Ten Years

Most of the gin marketed in the United States is of the type called "dry" gin, or "London dry" gin, unsweetened and colorless, having a slightly perfumed odor dominated by that of juniper oil. It is the product of distillation from mash or redistillation of distilled spirits, and is not aged. The four leading domestic gins--Gordon's, Gilbey's, Fleischmann's, and Seagram's are bottled at 90 proof.

In the 1962-1971 period the sale of domestic gin rose from 28.8 to 36.5 million gallons annually; that of imported gin from 1.6 to 4.1. In the same period vodka sales rose from 23 to 57 million gallons per year. Vodka enjoys several competitive advantages:

- . Extreme versatility
- . Relatively low price
- . Appeal to persons who drink frequently but do not like the taste of traditional beverages



## APPENDIX B (5)

Vodka is a neutral spirit, bottled between 80 and 110 proof without distinctive character, aroma, or taste.

Consumption of these beverages follows population.

### (5) Sales of Rum More Than Doubled From 1962 to 1971

Most rum consumed in the United States is light in flavor, the product of relatively rapid fermentation of sugar-cane juice or blackstrap molasses. Distilled at proofs between 180 and 190, it is bottled at 80. Of the 13.8 million gallons entering trade channels (apparent consumption) in 1971, 10.6 million gallons were produced in Puerto Rico, 0.2 in the Virgin Islands, 2.8 in the states, and 0.2 in foreign countries.

Rum is heavily advertised. In 1970 magazine and newspaper expenditure promoting rum and rum brands averaged \$.89 per case. Most rum drinkers are under 35 years of age. Bacardi is the major brand with 63 percent of the market. As is the case with other distilled spirits, consumption is tied to population.

### (6) Cordials Have Posted Consistent Annual Sales Gains for 15 Years of 6-7 Percent

High and low proof cordials and liqueurs (the words are synonymous in trade usage), varying widely in quality, compete for the favor of the consumer. Government statistics for cordials include prepared, pre-mixed cocktails, sloe gin, flavored vodka, and kirschwasser; but inclusion of these products only skews the statistics by a small percentage.

Cordials are liquid products obtained by mixing or redistilling neutral spirits, brandy, gin, or other distilled spirits with, or over fruits, flowers, or other natural flavors or extracts in addition to sugar or dextrose. Some are bottled at 100 proof--40 proof is required.

Sales volume of this heterogenous group is now very high and propsects favorable. In 1971, 25.2 million gallons of cordials entered trade channels compared with 12.1 in

1962. Most cordials consumed in the United States are domestic in origin. Imports, which are mostly high-priced specialties, supplied about 11 percent of consumption throughout the decade. Consumption patterns are in line with population with particularly heavy sales around Christmas time.

(7) The Market for Bottled or Canned Prepared Cocktails in 1971 Was 1.6 Million Cases; That for Beverage Ethyl Alcohol, Less Than a Thousand

The market for prepared cocktails is evenly split between the bottled and canned beverages, the latter, a recent packaging innovation. The estimated size of the market has grown slowly in the past decade and the low rate of gain is projected to continue, but the total value is insignificant--1/2 of 1 percent of the total domestic production.

3. THE DISTRIBUTION OF DISTILLED SPIRITS IS CONTROLLED BY THE STATES

The distribution patterns for distilled spirits are distinctly different in "controlled" and "open" states, as is explained in Appendix A.

4. THE PRICE OF DISTILLED SPIRITS HAS BEEN RELATIVELY STABLE OVER THE LAST FOURTEEN YEARS

(1) The Retail Price of Distilled Spirits is Established in a Manner Similar to That for Wine

As is the case in wine, the distiller establishes the price class of his brands through the price to wholesalers or state liquor commissions. Exhibit I, following this page, shows the price progression from distiller to consumer in New York for blended and straight whiskeys. The initial price of blends is less because neutral spirits require no aging. But traditionally, the distillers' markup for

# EXHIBIT I

## Environmental Protection Agency

### PRICE PROGRESSION FOR DISTILLED SPIRITS PER CASE OF 12 FIFTHS

Proof	<u>Straight Bourbon</u> 80	<u>Blended a/ Whiskey</u> 80	<u>Gin</u> 90	<u>Vodka</u> 80
Whiskey <u>e/</u>	\$ 2.13	\$ 1.44	-	-
Neutral Spirits <u>e/</u>	-	0.96	\$1.17 <u>b/</u>	\$ 1.00 <u>b/</u>
Warehousing	0.85	0.30	-	-
Rectification Tax (\$0.30 per proof gallon)	-	0.57	-	-
Federal Excise Tax (\$10.50 per proof gallon)	20.16	20.16	22.68	20.16
Bottling & Packaging <u>e/</u>	1.59	1.59	1.59	1.59
Advertising <u>c/</u>	1.00	1.00	1.00	1.00
Distiller's Total Cost	25.73	25.33	26.44	23.75
Distiller's Markup	11.81	12.21	5.99	5.68
F.O.B. Price	37.54	37.54	32.43	29.43
Freight <u>d/</u>	2.00	2.00	2.00	2.00
New York State Tax	2.50	2.50	2.50	2.50
Wholesaler's Cost	42.04	42.04	36.93	33.93
Wholesaler's Markup (20%)	8.40	8.40	7.38	6.78
Retailer's Cost	50.44	50.44	44.31	40.71
Retailer's Markup (30%)	15.13	15.13	13.31	12.21
Retail Case Price	65.57	65.57	57.60	52.92
Retail Bottle Price	\$ 5.55	\$ 5.55	\$ 4.80	\$ 4.41

- Not Applicable

a/ Blended whiskey is 35% straight whiskey; 65% neutral spirits;  
we assume the straight whiskey is aged

b/ Include cost of processing

c/ 1971 average

d/ Estimated

e/ Assumes distillery is large plant

Source:

## APPENDIX B (7)

blends is higher so the consumer's price for blends and straights is about the same. In most locations the progression of markups from distiller to retailer is well known and in the past has tended to remain generally stable. There is strong evidence, however, that retailer markup maintenance is breaking down where regulations permit due to the growth of high volume retail outlets and competition from wines. However, New York State maintains a minimum resale price which is 12 percent over retailer cost and California vigorously enforces Retail Fair Trade Minimum prices. Thus, the distiller can "control" retail prices in these two states in addition to the monopoly states.

### (2) The "Des Moines Warranty" is Effective in Maintaining a Single Low-Price F.O.B. to the Control States

In the price progression detailed for a typical open state, New York, the F.O.B. price for a typical blend and typical bourbon whiskey was \$37.54 per case of fifths. The necessity for maintaining a margin for dealing in the open states implies that the control states will buy for less than \$37.54 at all times. Note that Pennsylvania, the largest buyer of distilled spirits in the world, cannot bargain for a better price than Idaho. The markup on delivered cost varies from Mississippi's 17 percent to Oregon's 87.5 percent. Most of the control states add various other charges (flat amounts or additional percentages per bottle or case) to arrive at the per package selling price.

### (3) Prices for Distilled Spirits Have Risen Only Moderately Since 1955

An examination of the New York prices in 1955 and 1972, as displayed in Exhibit II, following this page, reveals

## EXHIBIT II

### Environmental Protection Agency

#### RETAIL PRICES OF LEADING BRANDS OF DISTILLED SPIRITS, FIFTHS\*

		1955	1972
Blended Whiskey	Seagram 7. Crown	4.50	5.55
Light (Blended) Whiskey	Four Roses	Non Existent	5.55
Straight Whiskey	Old Crow	4.95	5.55
Bonded Whiskey	Old Forester	6.59	7.39
Scotch Whiskey	Haig	6.19	7.25
Canadian Whiskey	Seagram V. O.	6.15	7.40
Gin	Gordon's	4.05	4.95
Rum	Bacardi	4.45	5.39
Brandy	Christian Brothers	4.78	5.39
Vodka	Smirnoff 80 Proof	4.16	5.40
Blackberry Cordial	De Kuyper	4.37	5.49
Manhattan	Hiram Walker	3.87	4.60

\* 1955 New York, October 1972, New York Metropolitan Market  
Suggested Retail Prices

## APPENDIX B (8)

an average increase of 25 percent in prices of typical brands of 10 domestic distilled spirits, quite remarkable because:

- . Consumer product prices rose 50 percent in the same period
- . There was an increase in the New York State tax in 1962 from \$1.50 to \$2.25

The price of the two imported products rose an average of 19 percent in the same period. There were five annual decreases in the duty on Scotch and Canadian Whiskey from 1967 through the final reduction in January 1972. Scotch went from \$1.02 to \$.51 and Canadian from \$1.25 to \$.62 per gallon--net per proof gallon. The tariff on spirits that are less than 100 proof is charged as if they were 100 proof. Excise taxes are calculated on actual proof.

- (4) The Consensus of Persons Close to the Industry is That Consumer Resistance to Price Increases Takes the Form of Brand Switching Rather Than Type Switching

The type(s) of alcoholic beverages chosen by a consumer is governed by a complex series of personal, social, and economic factors:

- . Family customs
- . Ethnic background
- . Status seeking
- . Response to advertising
- . Peer group customs
- . Disposable income
- . Taste preferences

To express price resistance, a consumer will switch to a cheaper brand of his accustomed beverage, rather than make the large psychological jump to a different beverage.

Industry people like to think that most consumers, after expressing their resistance for three or four months, return to their accustomed brand.

(5) Price Stability in the Market for Distilled Spirits Has Been Maintained by Various Economic and Social Changes

Domestic whiskey prices have not been raised as much as they might have been due to the strong competitive pressure from Scotch and Canadian Whiskey and gin, rum, and vodka. The imported and white whiskey brand owners were motivated to hold prices down to solidify and enlarge their recent gains. High annual rates of gain in apparent consumption of distilled spirits allowed all segments of the industry to absorb cost and tax increases and yet remain profitable. In addition, 1955 prices were high relative to costs and to the value of other consumer goods. Also, spirits' prices have been held in check by the growing preference for wine.

Another reason for price "stability" is that mandatory "Fair Trade" laws have been abandoned. Only California vigorously enforces such a law. Voluntary fair trade laws have been weakened by the steady shift of population and sales volume to large metropolitan areas. In these areas, retail stores are close together with proximity increasing price competition.

Large chain stores (grocery, drug, and department) have become part of the retail structure for distilled spirits. These stores build volume for their entire operation by

price cutting and loss-leader merchandising, thus helping to keep all prices lower than otherwise. After factors in keeping prices lower over the last decade include:

- . There is an oversupply of bourbon and of the new light whiskey. The seven year inventory which the industry carries is too large as whiskeys over four years of age do not appreciate in value faster than they evaporate and, in general, over-aged whiskey is not in demand.
- . Private label brands compete on the strength of price alone
- . All segments of the industry may have now used up all the slack they had in 1955

The Federal Price Freeze had little effect on the price structure by-the-package at retail because prices have been checked by competitive pressure for the last few years anyway.

5. ALL DISTILLED SPIRITS ARE MADE FROM ONE BASIC PROCESS

One basic process depicted in Exhibit III, following this page, is used to produce all kinds of distilled spirits. Across the top of it is a brief description of each step of the process. Along the bottom is an identification of waste products--liquid and solid--emanating from the various production steps.

The various types of spirits produced in this process result from the use of different raw ingredients and/or flavoring, blending, aging, and cutting among other discretionary steps in the production process.



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6. GRAIN IS THE BASIC RAW MATERIAL FOR DISTILLED SPIRITS

Corn is the major grain used in the production of distilled spirits. Other grains which are distilled to produce spirits are shown on Exhibit IV, following this page. Listed below are the types of distilled spirits products, their basic grain ingredient, and relative importance:

- . Bourbon is distilled from a fermented mash of not less than 51 percent corn. The balance is generally rye and barley malt. The new light whiskey is distilled from more corn to produce a higher alcohol content. Rye is distilled from a mash of grain containing at least 51 percent rye grain. Together these whiskeys account for 60 percent of the distilled spirits produced in the United States.
- . Gin, made from neutral spirits flavored with juniper berries, represents 11% of production.
- . Rum, distilled from molasses or other sugar cane products, represents 1% of U.S. production.
- . Vodka, made from neutral spirits customarily distilled from grain (not potatoes), represents 17 percent of U.S. production.
- . Cordials or Liqueurs are distilled from herbs, fruits, flowers or other real and imitation flavoring materials.

(1) Only One Percent of the U.S. Grain Crop is Used in Distilled Spirit Production

The farmlands of the Great Plains States are the source of most of the grain distilled by the spirits industry. A few isolated distilleries in Kentucky depend on local farm production. The majority of the grain is purchased on the Chicago grain market. The distilleries of one firm may purchase their grain supplies together (one firm owns 11 grain elevators in Indiana and Illinois), but there is no industry-wide cooperative bidding and purchasing.

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It takes about 11 pounds of grain to produce a proof gallon of liquor, i.e., a gallon 50 percent by volume. The quantity of the total crop used by the industry is so small that its demand has no effect on price and supply (except, perhaps for those few Kentucky distilleries depending on local sources). The cost of the grain input represents such a small portion of the total costs of producing a fifth of bourbon that the fluctuations in grain prices have little effect upon the production costs of a distillery.

(2) The Quality of Grain Used for Distillation is Essentially an Average Quality Feed Grain

The relative price of grains may have some effect on the production of neutral spirits for vodka or gin. Any grain can be used to produce neutral spirits and so a rise in the price of corn, relative to sorghum might cause a shift from corn to sorghum in neutral spirits production. Often however, the label on name brand vodka or gin proudly specifies "neutral spirits distilled from American grain," probably initiated when Publicker was making neutral spirits from molasses imported from Cuba.

During World War II distilleries were cut off from grain supplies. Grain production potential in the United States is now so high that it seems unlikely the industry would be restricted from grain supplies again.

7. CURRENTLY 72 DISTILLERIES ARE AUTHORIZED TO OPERATE IN THE UNITED STATES INCLUDING THE VIRGIN ISLANDS, HAWAII, AND PUERTO RICO

A profile of the national distilled spirits industry on a state-by-state basis appears in Exhibit V, following this page. For

## EXHIBIT V (1)

## Environmental Protection Agency

## AUTHORIZED\* U. S. DISTILLERIES

LOCATION	DISTILLERY	OPERATIONS											DIS- TILL- ERY SIZE	SALES (\$ MIL- LION)	EM- PLOYEES
		Distiller—industrial	Distiller—beverage—grain	Distiller—beverage—fruit	Distiller—beverage—rum	Bonded Whse—industrial	Bonded Whse—beverage	Rectifier and Bottler	Bottler—non-rectifier	Bottler-in-Bond	Denaturer	Bottler—industrial			
<b>CALIFORNIA</b>															
1. Union City	The American Distilling Co. <u>4/</u>	X				X	X		X			X			
2. Menlo Park	Heublein, Inc. <u>4/</u>	X			X	X						X	X		
<b>CONNECTICUT</b>															
3. Hartford	Heublein, Inc. <u>15/</u>	X			X	X	X					X	X	( 583)	(4850)
<b>FLORIDA</b>															
4. Lake Alfred	Todhunter <u>4/ 5/</u>	X	X	X	X	X	X				X	X	X		
5. Auburndale	International, Inc. Jacquin-Fla. <u>4/ 5/</u>	X	X	X	X	X	X				X	X	X		
<b>GEORGIA</b>															
6. Albany	Viking Distillery	X	X		X	X	X	X					X		
<b>HAWAII</b>															
7. (North Kono)	Hawaiian Distillers		X		X								X		
8. (Maui)	Joseph E. Seagrams & Sons, Inc.			X	X								X		
<b>ILLINOIS</b>															
9. Pekin	American Distilling Co.	X	X			X	X	X		X	X			X	
10. Peoria	Hiram Walker & Sons, Inc.	X	X			X	X	X		X		X		X	
<b>INDIANA</b>															
11. Lawrenceburg	Joseph E. Seagrams & Sons, Inc.	X	X			X	X	X						X (1150)	
12. Lawrenceburg	Schenley <u>7/</u> Distillers, Inc.	X	X			X	X	X	X					X ( 689)	(6400)
<b>IOWA</b>															
13. Muscatine	Grain Processing Corp.	X	X			X	X					X		X 85	1116
14. Clinton	Fleischmann <u>8/</u> Distilling Corp.	X	X			X	X						X		( 600)

\* "Authorized" according to Dept. of Treasury, Bureau of Alcohol, Tobacco & Firearms, Distilled Spirits Plants Authorized to Operate, Publication No. 654, July 1972.

( ) Numbers in parentheses indicate sales or employees for all distilleries of that firm

1/ Small-sized distilleries have daily average mashing capacity of 2000 bushels & production capacity of 10,182 proof gallons daily

2/ Medium-sized distilleries have daily average mashing capacity of 6000 bushels & production capacity of 30,545 proof gallons daily

3/ Large-sized distilleries have daily average mashing capacity of 20,000 bushels & production capacity of 50,909 proof gallons daily

4/ Distillery is small part of total operations and therefore not representative of plants sized or sales.

5/ Distill citrus wastes to qualify for Florida tax break

6/ Largest distillery in the United States

7/ Largest distillery of Glen Alden Corp.

8/ Fleischmann is a subsidiary of Standard Brands.

## EXHIBIT V (2)

		OPERATIONS											DIS- TILL- ERY SIZE				
LOCATION	DISTILLERY	Distiller—industrial	Distiller—beverage—grain	Distiller—beverage—fruit	Distiller—beverage—rum	Bonded Whse—industrial	Bonded Whse—beverage	Rectifier and Bottler	Bottler—non-rectifier	Bottler-in-Bond	Denaturer	Denaturer—rum	Bottler—industrial	Small 1/ Medium 2/ Large 3/	SALES (\$ MIL- LION)	EM- PLOYEES	
KANSAS																	
15. Atchison	Midwest Solvents Co., Inc. <u>9/</u>	X	X			X	X						X		X	10	235
KENTUCKY																	
16. Louisville	Schenley Distillers, Inc.		X				X	X		X					X	( 669)	(6400)
17. Louisville	Schenley		X												X		
18. Louisville	Nat'l Distillers & Chem. Corp.		X				X							X			
19. Bardstown	Barton Brands, Inc.		X				X		X	X				X		( 120)	( 650)
20. Lawrenceburg	Joseph E. Seagrams & SONS, Inc.		X				X							X			
21. Owensboro	Fleischmann Distilling Corp.		X				X							X			
22. Bardstown	Barton Brands, Inc.		X				X	X		X				X			
23. Beam	James B. Beam Distilling Co. <u>9a/</u>		X				X							X		( 130)	( 625)
24. Frankfort	Old Grand Dad Distilling Co. <u>10/</u>		X				X		X	X					X		
25. Cynthiana	Joseph E. Seagrams		X				X							X			
26. Shirley	Stitzel Weller		X				X		X	X					X		200
27. Louisville	Nat'l Distillers & Chem. Corp.		X				X								X		
28. Hodgenville	Joseph E. Seagrams		X		X		X							X			
29. Owensboro	Glenmore Distilleries Co.		X				X	X		X				X			
30. Frankfort	Old Crow Distillery Co. <u>10/</u>		X				X		X	X					X		
31. Frankfort	Old Taylor Distilling Co. <u>10/</u>		X						X						X		
32. Bardstown	Waterfill & Frazier Distilling Co.		X				X	X		X				X			
33. Anchorage	Grosscurth Distillers Co.		X				X		X	X				X			
34. Bardstown	Heavenhill		X				X	X		X				X		15	275

9/ Subsidiary of McCormick Distilling Corp.10/ Subsidiary of National Distillers & Chemical Corp.9a/ Subsidiary of American Brands

EXHIBIT V (3)

			OPERATIONS												DIS- TILL- ERY SIZE		
LOCATION	DISTILLERY	Distiller—industrial	Distiller—beverage—grain	Distiller—beverage—fruit	Distiller—beverage—rum	Bonded Whse—industrial	Bonded Whse—beverage	Rectifier and Bottler	Bottler—non-rectifier	Bottler-in-Bond	Denaturer	Denaturer—rum	Bottler—industrial	Small 1/ Medium 2/ Large 3/	SALES (\$ MIL- LION)	EM- PLOYEES	
35. Louisville	Joseph E. Seagrams	X				X	X		X								
36. Meadowlawn	Old Boone Distilling Co.	X				X		X	X					X			
37. Loretto	Star Hill Distilling Co.	X				X	X		X					X		50	
38. Nicholasville	Kentucky River Distilling Co. 10/	X				X		X <sup>a</sup>						X			
39. Owensboro	Medley Distilling Co.	X				X	X		X					X			
40. Lawrenceburg	Austin, Nichols Distilling Co. 12/	X				X	X		X					X			
41. Bardstown	Willett Distilling Co.	X				X		X	X					X			
42. Ben F. Medley & Co.		X				X	X		X					X			
43. Fairfield	Joseph E. Seagrams	X				X								X			
44. Lawrenceburg	Hoffman Distilling Co.													X			
45. Deatsville	T.W. Samuels Distillery, Inc. 13/	X				X	X		X					X	7		
46. Frankfort	Schenley Distillers Inc.	X				X	X		X						X		
47. Clermont	James B. Beam Distilling Co. 9 <sup>a</sup> /	X				X	X		X					X			
48. Louisville	Glenmore Distilleries 14/	X				X		X	X					X	( 144)	(1280)	
49. Louisville	Brown Forman 15/	X				X								X	( 219)	(1900)	
50. Louisville	Distillers Corp. Brown Forman Distillers Corp. 15/	X				X	X		X					X			
MARYLAND																	
51. Baltimore	Joseph E. Seagrams	X	X			X									X		
52. Baltimore	Joseph E. Seagrams	X	X			X	X							X			
53. Lansdowne	Majestic Distilling Co., Inc.	X				X	X		X					X			
MASSACHUSETTS																	
54. S. Boston	Felton & Sons, Inc. 14/	X	X		X	X	X	X			X	X	X		4	60	

- 11/ Taken over by an importer  
12/ Subsidiary Ligett & Meyers  
13/ Foster Trading Co.  
14/ Subsidiary of Glenmore Mfg, Whiskey Holding Co.  
15/ Early Times Distillery Co.

## EXHIBIT V (4)

LOCATION	DISTILLERY	OPERATIONS											DIS- TILL- ERY SIZE	SALES (\$ MIL- LION)	EM- PLOYEES
		Distiller—industrial	Distiller—beverage—grain	Distiller—beverage—fruit	Distiller—beverage—rum	Bonded Whse—industrial	Bonded Whse—beverage	Rectifier and Bottler	Bottler—non-rectifier	Bottler-in-Bond	Denaturer	Denaturer—rum	Bottler—industrial		
<b>MISSOURI</b> 55. Weston	McCormick Distilling Co.		X				X X			X				X	
<b>NEW JERSEY</b> 56. Linden	Distillers Co., Ltd.		X				X X							X	( 500)
<b>NEW YORK</b> 57. Peekskill	Fleischmann Distilling Corp. 4/		X				X X							X	
<b>OHIO</b> 58. Cincinnati	Nat'l Distillers & Chem. Corp.		X			X X X				X				X	
<b>PENNSYLVANIA</b> 59. Philadelphia	Continental Distilling Corp. 16/	X	X	X	X	X X								X	
60. Philadelphia	Publicker Industries, Inc.	X	X	X	X	X X							X	( 40)	(2000?)
61. Schaefferstown	Pennco Distilleries Inc. of Pa.		X	X		X X		X					X		
62. Schenley	Schenley Distillers Inc.		X			X X X		X				X		X	
63. Philadelphia	Publicker Industries, Inc.	X	X	X		X X			X X			X X			
<b>TENNESSEE</b> 64. Lynchburg	Jack Daniel Distillery 17/		X			X		X X						X	50
65. Tullahoma	Tenn. Dickel Distilling Co. 19/		X			X X								X	
<b>VIRGINIA</b> 66. Sunset Hill (Herndon)	A. Smith Bowman Distillery 12/		X			X		X X					X	8	50

16/ Publicker Industries is subsidiary of Crowell Collier &amp; Macmillan

17/ Subsidiary of Brown Forman



## EXHIBIT V (5)

LOCATION	DISTILLERY	OPERATIONS											DIS- TILL- ERY SIZE	SALES (\$ MIL- LION)	EM- PLOYEES
		Distiller—industrial	Distiller—beverage—grain	Distiller—beverage—fruit	Distiller—beverage—rum	Bonded Whse—industrial	Bonded Whse—beverage	Rectifier and Bottler	Bottler—non-rectifier	Bottler-in-Bond	Denaturer	Denaturer—rum	Bottler—industrial		
<i>VIRGIN IS.</i> 67. St. Thomas 68. St. Croix	Meyer's <u>18</u> / Virgin Is. Rum Distillery Ltd. <u>19</u> /			X	X										
<i>PUERTO RICO</i> 69. San Juan 70. San Juan 71. San Juan 72. Medicitia	Bacardi Corp. Puerto Rico <u>19</u> / Distillers Inc. Old San Juan Distilling Co. <u>18</u> / Distilleria Serralles Inc.			X	X									74	331

18/ Subsidiary Joseph Seagrams Sons Inc.19/ Subsidiary Schenley Inc.

the purpose of this study, the EPA classification of distilled spirits producers according to size has used:

<u>Distillery Size</u>	<u>Daily Average Crushing Capacity (bushels)</u>	<u>Daily Average Production Capacity* (proof gallons)</u>
Small	2,000	10,182
Medium	6,000	30,545
Large	20,000	50,909

Of the 72 U.S. distilleries, 24 are large; 14 are medium-sized; 34 are small. Large plants account for most of the U.S. production.

Of 72 distilleries in operation in the United States including the Virgin Islands and Puerto Rico, eight distill both grain and fruits. Plants distilling only fruit brandy are considered to be a segment of the wine industry and are discussed in Part A. Only a few isolated rum distilleries are located in the continental U.S.; most are in Puerto Rico and the Virgin Islands. The wastes from rum are very different from those of grain spirits. Molasses, a by-product of the sugar industry, is the raw product of rum production. Some of the distilleries also produce industrial alcohol on a separate line. (The process for this product is similar to that for producing beverage alcohol except that any raw product containing starch or sugar can be used.) One distillery may rectify and redistill spirits produced at another distillery.

(1) The Number of Distilleries is Declining

The number of distilleries on the other hand appears to be declining. Big firms are buying small plants and consolidating them. Old-fashioned operations are unable to compete in a field dominated by modern technology.

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\* Assumes 56 pounds per bushel and 11 pounds of grain used per proof gallon of spirits produced; 260 operating days per year.

(2) The Distilled Spirits Industry is Dominated by a Few Firms

Fifty-five distilleries are owned or controlled by one of the large firms in the industry. Many of the small distilleries are owned by a large firm; as in the case of wineries, the larger firm deliberately keeps some of the distilleries it controls small for marketing (prestige) purposes.

Ten firms account for 90 percent of U. S. distilled spirits production:

- . Seagrams (Distillers Corp.)
- . National Distillers
- . Hiram Walker
- . Schenley Industries
- . Heublein
- . Brown Forman
- . Publicker Industries
- . Glenmore Distillers

Of these, four: Distillers' Corporation Seagrams, Schenley Industries, National Distillers, and Hiram Walker, alone account for almost 80 percent of U. S. production.

(3) Most Distilleries Are Modern

Though some fine name labels claim they make whiskey like they always have for 200 years, the distilleries industry is dominated by automated plants using stainless steel vats and a great deal of technology to assure a consistency in their product. Modernization was initiated as plants reopened after Repeal. Currently, 75 percent of all U. S. distilleries are modern.

(4) The Range of Operations in a Single Distillery  
May Be Narrower than its Authorization Indicates

It appears that the operations of many distilled spirits plants are more limited than their equipment or their authorization. Grain distillation may not in fact take place at several of the plants listed on Exhibit V. Operations may concentrate on redistillation, rectifying, and subsequent product finishing steps. In some other plants, distillation may take place but only on a limited basis for a part of the year. (Most distilleries close down one month each year for repairs and employee vacations. Within three days after reopening, the largest distillery has resumed full-scale operations.)

(5) The Trend in Distilleries is to Consolidate Product  
Lines

As in the case of wineries, product line consolidation continues. Even those distilleries experimenting with the new white whiskeys, generally are concentrating sales efforts for their regular whiskey on less, rather than more, labels.

Like wineries, distilleries are not limited to a particular product by their production line. With minor adjustments in equipment, a plant traditionally used to distill bourbon can be used to produce vodka.

(6) The Distilled Spirits Industry is Geographically  
Concentrated in Kentucky

Over half of the distilleries are located in Kentucky, and most of these in the Louisville area. (See Exhibit VI, following this page.) Kentucky's production represents about 60 percent of the total national production of distilled spirits. A few large plants are located in near-by states as shown on Exhibit VII, following Exhibit VI. And the contribution of those states to national distilled spirits' production is shown on Exhibit VIII, following Exhibit VII.

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DIGITALLY**

8. APPROXIMATELY 20,000 PEOPLE ARE EMPLOYED BY  
THE DISTILLED SPIRITS INDUSTRY

State-by-state data is not available, but from limited information, we can estimate that approximately 30 percent of the distilled spirits industry employees are in Kentucky, over half of these in Jefferson County alone. With rare exception, small plants which might be adversely affected by water pollution abatement standards are near larger operations that could be an alternative source of employment.

(1) Employment is Declining in the Distilled  
Spirits Industry

Exhibit IX, following this page, shows the recent employment decline in the distilled spirits industry. This recent trend has been explained by:

- . An overproduction in the late 1960's
- . The general economic recession
- . The disappointing sales of the new "light" whiskeys
- . Trends in consumer taste toward nonwhiskeys and imported whiskey types

(2) Production Workers Comprise Approximately 80  
Percent of the Work Force in Distilleries

As shown in Exhibit X, following this page, majority of distilleries employs 50 to 250 people. In the typical large modern distillery employing about 2000, fewer than ten men per shift can run the distillery. Most of the production workers are in unskilled jobs in bottling and warehouse operations.

**EXHIBIT IX**

**Environmental Protection Agency**

**EMPLOYMENT LEVELS 1965, 1969\*, 1970  
IN THE DISTILLED SPIRITS INDUSTRY**

<u>YEAR</u>	<u>PRODUCTION EMPLOYEES</u>
1965	17,171
1969	19,469
1970	18,980

**\*Mid March estimates, Dept. of Commerce, Bureau of  
Census data.**

## EXHIBIT X

### Environmental Protection Agency

#### NUMBER OF EMPLOYEES PER DISTILLERY, 1963, 1969, 1970

##### EMPLOYEES

YEAR	1-3	4-7	8-19	20-49	50-99	100-249	250-499	500
1963	7	6	5	33	18	17	9	12
1969	8	3	13	26	26	26	12	9
1970	6	5	15	27	24	26	12	10

Source: U. S. Dept. of Commerce, Bureau of Census Data,  
Mid-March estimates



(3) Average Wages Received By Production Workers in Both Industries Have Been Increasing

As Exhibit XI, following this page, shows, the average wage levels for production workers in distilleries averages around \$4 per hour; wage levels are high relative to the national average considering the level of skills required by these jobs. The work week averages five days. In addition, most distillery workers enjoy a month's vacation when the plant is closed in the summer for maintenance--unusual among American workers. All except a very few workers are members of a single national union.

9. WHILE THE NUMBER OF DISTILLING PLANTS HAS BEEN DECREASING OVER THE LAST 15 YEARS, OPERATING MARGINS FOR THE FIRMS IN BUSINESS ARE WIDE

It is clear that the reduction in the number of producing facilities is not a direct reflection on the financial condition or potential of firms in either industry. Rather, closings have been due to:

- . Lack of access to expansion capital of small producers
- . Lack of marketing "know-how" (i. e. , sound distribution systems) on the part of small producers
- . Excess capacity
- . Trend to larger plants
- . Lack of necessity for a small plant to produce a unique product (with only one standard process in the distilled spirits industry, any plant can produce a specific product)

**EXHIBIT XI**

**Environmental Protection Agency**

**DISTILLERY WAGE LEVELS,  
1970-1972**

	1970	1971	1972
<b>Total Employees (1000's)</b>	23.2	22.9	N/A
<b>Women (1000's)</b>	7.5	7.5	N/A
<b>Production Workers (1000's)</b>	18.1	17.3	N/A
<b>Average weekly earnings</b>	\$147.75	\$164.42	N/A
<b>Average hourly earnings</b>	\$3.75	\$4.09	N/A
<b>Average weekly hours</b>	39.4	40.2	N/A

**Source: U. S. Dept. of Labor**

(1) Profitability Has Been High As Compared with All-Industry Norms

Standard & Poor's reports that distillers have enjoyed profit margins approximately 50 percent higher than those of its aggregate of 425 industrials.

Distillers as a group have had net income ratios (of sales) of approximately 50 percent more than Standard & Poor's 425 industrials. However, some distillers have experienced reductions in income ratios as they have been forced into price competition among brands, diversified into other areas offering lower returns, and/or have had heavier expenditures for brand promotion. This tendency to reduced profits may become the rule primarily due to price competition.

(2) Capital Requirements Are Increasing

The decade of the 70's promises accelerated consumption--according to industry estimates--of 6 percent for distilled spirits. This means increased expenditures for:

- . Plant & Equipment: In distilled spirits, however, production in the late sixties was probably too great and stocks on hand are now at 6 or 7 years volume of consumption. Increases in production will be geared to various products as demanded by consumers.
- . Distribution: Distillers push brands--new or established--to create or increase markets. Besides promotional expenditures, heavy product inventories are needed and must be invested in years in advance due to aging.

Standard & Poor's reports that currently most distilleries are financing these expenditures internally.

(3) Profitability Appears to be More Related to Marketing Skills Than Size Per Se

It is difficult to characterize any one segment of the spirits industry as being more successful than another except to say that those producers with strong marketing talents fare the best. Included in this group are small, medium, and large producers.

However, some distillers have experienced reductions in income ratios as they have been forced into price competition among brands, diversified into other areas offering lower returns, and/or have had heavier expenditures for brand promotion. This tendency to reduced profits may become the rule primarily due to price competition.

Brand competition is tremendous in almost every segment of the industry. As an example, there are over 55 brands of bourbon for which newspaper advertisements were placed in 1971. Since the products within each category are only marginally different, the distillers' marketing organizations are all-important in creating sales. On the one hand, advertising helps "pull" sales through retailers; while, on the other, sales are "pushed" through the retailers by heavy reliance on price-cutting "deals" which permit the retailer to pay less for a given brand while giving him a higher gross profit margin as he sells to the consumer. In addition, distillers supply in-store advertising aids and allowances either directly or through their wholesalers.

10. THE OUTLOOK FOR THE DISTILLED SPIRITS INDUSTRY IS GOOD THOUGH SOME PROBLEMS LOOM AHEAD

As previously noted, distilled spirits consumption is expected to rise, though not as dramatically as wine consumption. Industry sources temper the estimates of increased sales with some anticipated problems and/or caveats.

(1) Distilled Spirits May Be Hurt By the Wine Boom and a Price/Profits Squeeze

Ironically, the distilled spirits industry may be hurt the most in coming years by the phenomenal increase in wine consumption. While spirits and wines can be complementary products in that a consumer may enjoy spirits before a meal and wine with it, they are really substitutes for each other. Today's trends to lighter taste, lower proof in spirits consumption can easily and logically carry the consumer into the wine market and out of the spirits market. Additionally, this is reinforced by the "youth" market which has turned on to wine more than any other market. As the youth market matures, it may very well stay with wine and not "graduate" to spirits.

Another problem identified by the industry itself--as has been for years--is that of taxes. The industry, always burdened by excise taxes at the Federal, state, and, often, local level, has always been afraid that excessive taxation will drive its consumers away. The fear of rising taxes is real enough--government spending at all levels continues to rise. It is apparent that the industry will attempt to meet/solve the taxation problem through lobbying at all levels of government.

A third industry-identified problem is that of a price-profit squeeze. That is, the industry--particularly at the retail level and because of product-by-product comparisons--has made price a component of the value a consumer now seeks in purchasing spirits. Of course, the industry itself cannot take total credit or blame for this development; it is surely a reflection of the "consumerism" trend of recent years which has made price a component of the value of each and every thing that the consumer buys. Regardless of real cause, the lowering of price levels is shown in that average prices of product types (e.g., Scotch or Bourbon) have come closer together and average prices within categories have dropped. This is perhaps due to heightened competition among the various product types. The trend toward lighter whiskey has brought about a general diversification movement--an adding to product lines perhaps beyond true consumption or demand and with resulting price competition.

In addition to these problems, another far-reaching one is that of the rise of chain retailing operations. Until recently, most open states have forbidden chain retailers--i.e., one individual or corporation could not own more than one license for a retail store. Many states are now "liberalizing" their laws and regulations to permit chains. The feared net effect--by the distillers--is that chain retailers will ultimately influence consumer demand more than either they (the supplier) or the wholesalers.

As real as these problems are to the industry that sees them, it must be noted that these problems are either of its own making or "normal" in that any given industry has certain problems facing it at any given time. In particular, the price-profit "squeeze" for the distillers is:

- . More one of changing consumer preferences and consumer awareness of price as an essential element of value in an industry where brands are only marginally different in characteristics.
- . One of the industry's own preception vis-a-vis its own traditional higher-than-average profit margins.

#### 11. THE DISTILLED SPIRITS INDUSTRY IS ADOPTING A DEFENSIVE POSTURE TOWARDS THE FUTURE

For an industry characterized by a limited number of domestic producers--38 firms operating 72 distilleries--yet with retail sales of over \$10 billion and a projected 6 percent rise in consumption during the seventies, the distilled spirits industry seems to be cautious. At present this is due to several factors:

- . Public relations problems--traditionally, the industry is cautious about marketing its products to certain segments of the population; the industry is not certain how it can approach the 18-20 and 18-24 market as has the wine industry. Denied radio and TV promotion, the

spirits industry is limited to print and outdoor advertising to reaching an audience more receptive to advertising on radio and TV. Additional public relations problems are found in the tax area. Alcohol has been viewed as governmental revenue source since Repeal. The industry--although active lobbyists at levels of government--has a continuing problem of attempting to keep taxes from the point of discouraging sales or shifting demand to lesser taxed product lines such as beer and wine.

- . Profitability--although largely a self-defined problem (i. e., lower profitability than it has been accustomed to), the industry is attempting to come to grips with price competition at the retail (and ultimately back at the supplier) level.
- . Distribution--chain retailers will be the dominant force in the industry by the end of the seventies--thus, dictating demand more than the suppliers.
- . Inventories--at present, distillers are holding a 6-7 year supply in storage. Recent over-production has accounted for this. Readjustments will have to be made as storage is costly both in maintaining the facilities for storage and in evaporation losses over time.
- . The Wine Boom--if wine gains are realized, projected spirits gains may not be achieved because of the substitution effect the products have for each other. As mentioned above, the spirits industry will have to find some way to reach the "youth" market of the seventies to prevent or stymie substitution.

The above trends notwithstanding, the spirits industry has a challenge in the seventies that it can realistically seek to meet and overcome. Its pressures are primarily marketing oriented and not financial at present.