VILLA MILAN VINEYARD

Received
5/17/82
Rintfleisch

Fruit of the vine

May 10, 1982

John and Dorothy Garrett
P.O. Box 248
Milan, Indiana 47031
Phone 812-654-3419

Mr. G. R. Dickerson, Director
Bureau of Alcohol, Tobacco and Firearms
U. S. Department of the Treasury
1200 Pennsylvania Avenue
Washington, D. C., 20226

Dear Director Dickerson:

In accordance with the provisions of Treasury Decision ATF-60, American Viticultural Areas, we are petitioning that you establish a viticultural area named THE OHIO RIVER VALLEY VITICULTURAL AREA. This area, we believe, should include the entire valley of the Ohio River from Cairo, Illinois, to the 40th parallel. We will define the valley as that depression in the earth's surface through which the river flows as recognized by numerous state and federal agencies including the U. S. Department of Agriculture's Soil Conservation Service, the U. S. Department of Commerce's Ohio River Forecast Center and by the U. S. Army Corps of Engineers.

We recognize that this area is immense, approximately 30,000 square miles, and that growing conditions throughout this area are not exactly alike. We anticipate a need in the future to subdivide this area and perhaps recognize other viticultural areas that overlap with this one. We also recognize the need for viticulturalists to exercise care in selecting growing sites within this area. Yet, we will show that for over a century and a half the Ohio River Valley has always been recognized as one viticultural area.

In this petition we do not try to show that Ohio River Valley grapes make the best wine in the world. That is not our function here. What we will do, to the best of our ability, is show that the conditions under which our grapes grow are different than those of surrounding areas. We will show that these differences are based greatly on geophysical origins, climate, topography and to a lesser extent on soil.

First, let us look at the name of our proposed viticultural area, THE OHIO RIVER VALLEY.

In 1631, the Dutch mapmaker, Henricus Hondius, copied an earlier undated map of North America. In the wild interior of the continent he showed the location of the "Ohyui" River.[1] By the early 1700's, when German cartographer Johann Baptist Homann drew his map of the Louisiana Province of North America,[2] the Iroquian word "Ohyui" (Great River) had given way to its present spelling "Ohio". Homann's map also showed a notation after "Ohio", "Ou la Belle Riviere". A century and a half later Henry Wadsworth Longfellow would use that phrase in a poem lauding the merits of the Catawba grape that "Grows by the Beautiful River".[3]

Overwhelming additional evidence can be found showing that the name "Ohio River" has historically and currently been used to refer to that "Great River running its 981 mile crooked course from Pittsburgh, Pennsylvania, to Cairo, Illinois.

For the record let me point to the Northwest Ordinance of 1787. That statute, predating even our federal constitution, established a separate district north and west of the Ohio River. This Northwest Territory eventually became part or all of six of our United States including Ohio, named after the River itself.[4]

Current evidence that the name "Ohio River" is nationally known as referring to the area specified in this petition can be found on any U. S. Geological Survey map of the area, for example, U. S. Geological Survey Map NJ 16-3, Cincinnati.

To be exact however, we are using the name "Ohio River Valley" to refer to our proposed viticultural area. If further evidence is needed to clarify the difference any dictionary will show that the word "valley" only indicates a depression in the earth's surface through which a river or stream flows.[4]

Although this proposed viticultural area is quite long historically it has always been considered as one area. In fact, in his treatise on grape culture on the Ohio River, Robert Buchanan in 1854, pretty well defined the Ohio River Valley grape growing area as we do in this petition. Buchanan said:

> "The whole valley of the Ohio, between Pittsburgh and Cairo, and not north of lat. 40°, is thought to be favorable to vineyard culture; provided a proper selection of soil and position is made. The hills and hillsides should always be chosen, in preference to the plains."[5]

Buchanan's selection of the 40th parallel was by no means arbitrary. As we will show later, the length of the growing season north of this line is a natural boundary.

A brief history of viticulture along the Ohio will show unmistakenly that the boundaries of our proposed viticultural area are as specified in this petition.

The earliest history of grape growing on the Ohio was written by John James DuFour in 1826. DuFour wrote that when he first traveled the Ohio River he;

> "Found at Marietta a Frenchman who was making several barrels of wine every year, out of grapes that were growing wild and abundantly...".

Unfortunately for DuFour he did not follow the Frenchman's example. His first attempt to grow grapes was not along the Ohio but south of it in Central Kentucky 25 miles south of Lexington. His vineyards failed. In 1803, he moved his operations to Vevay, Indiana, right on the Ohio. Later in his narrative DuFour asserts that in 20 years on the Ohio he never missed a crop."[6]

DuFour may have been first to cultivate grapes on the river but it was Nicholas Longworth who made it come alive as a viticultural area. In his classic history of grape growing in the eastern United States, U. P. Hedrick calls Longworth "the father of American grape culture".[7] By coincidence, Longworth came to Cincinnati the same year that DuFour moved to Vevay but it was twenty years later that he planted a vineyard. In his Wines of America Leon Adams tells the story.

> "In 1823, Longworth planted a vineyard on Bald Hill, overlooking the Ohio River in the part of Cincinnati known as Tusculum...He imported thousands of vines from Europe, but they died, so he made his first wine from the native Alexander and Isabella. Then he heard of the 'wonder grape', the Catawba, grown by Major John Adlum of Georgetown, and in 1825 he obtained Catawba cuttings from Adlum. Three years later, when Longworth tasted the first Catawba wine pressed from his grapes, he quit his law practice and gave his full attention to winegrowing. By 1842 he was cultivating 1200 acres of vineyards at Tusculum, in the Delhi Hills, and on the present site of Eden Park, and began making America's first champagne."[8]

Henry Wadsworth Longfellow tasted some of Longworth's sparkling Catawba around 1854 and wrote the following stanzas:

Catawba Wine

"There grows no wine
By the haunted Rhine
By Danube or Quadilquiver
Nor on Island or Cape
That bears such a grape
As grows by the beautiful River.

For the richest and best
Is the Wine of the West
That grows by the beautiful River;
Whose sweet perfume
Fills all the room
With a benison on the giver.

And this song of the wine
This greeting of mine
The winds and the birds shall deliver
To the Queen of the West
In her garlands dressed
By the banks of the beautiful river."[3]

So, by the 1850's the Ohio was established as a viticultural area and Cincinnati was its center. Since 1851 growers up and down the river had been united in the "American Wine Growers Association" and in the following year Buchanan compiled his treatise on the cultivation of the grape in the valley of the Ohio. Buchanan prefaced his work by saying:

> "The cultivation of the grape in vineyards, for making wine, is now so important a branch of horticulture, in the valley of the Ohio, and especially in this vicinity, that a brief treatise on the subject may perhaps be considered useful."[5]

It should be noted that viticulture along the river was then so wide spread that Buchanan's book was actually a compilation of articles published in the previous ten years by other vineyardists from Ohio, Indiana and Kentucky.

Buchanan noted that the Ohio was already being called the "Rhine of America" because of the numerous vineyards up and down the river. The extent of this viticultural area is evidenced in his census of the Ohio River Valley vineyards in Cincinnati, Ripley, Maysville, Vevay, Charleston and Louisville. In all, Buchanan counted 1550 acres, which he admitted was low.[5]

Another, even more complete survey of the Ohio River vineyards was conducted in 1859 by E. M. Erskine, the Secretary of the British Legation at Washington. In his official report to the British government Erskine reported that the Ohio River was "studded" with vineyards. He allowed for up to 2000 acres along the Ohio River Valley.[7]

We have shown how far up and down the river our proposed viticultural area extends by citing historical authors. Let us show the breadth of the area by quoting a modern one, Leon Adams.* Adams lists Ohio River wineries and vineyards at Clarksville, Morrow, Neal's Corner, Manchester, Circleville, Springfield, Cardington, Houston, Peebles and Cincinnati in Ohio. In Indiana, Adams lists Ohio River Valley grape-wine activity at Cape Sandy, Madison, Dearborn County (New Alsace) and Vevay. And in Kentucky he points to a 35 year vineyard operation at Alexandria in Campbell County.[8]

Historically then, the Ohio River Valley Viticultural Area has been considered to extend the length of the river as far north as the 40th parallel and away from the river for a distance of about 25 miles.

---

* According to Wines and Vines, March 1980, pp 24-30, some people say Leon Adams dreamed up the American wine revolution. In 1931, Adams helped organize the forerunner of the California Wine Institute. He is now Executive Secretary of the Medical Friends of Wine. In addition to Wines of America he has written The Common-sense Book of Wine and The Common-sense Book of Drinking. "He is a merit award winner of the American Wine Society, a Grand Counseiller of the Academie du Vin de Bordeaux, a Commander d'Honneur of the Commanderie du Bontemps de Medoc et des Graves, and a member of the American Society of Enologists, the International Wine and Food Society, the Society of Bacchus, and the California Writers Club. He has served on numerous wine juries, as a United States delegate to the International Congress on Grapes and Wine, and as an advisor to the U. S. Department of State on American Wine. He was the first recipient of the Leon D. Adams Achievement Award established in 1979 by the Wine Industry Technical Seminar and the first to receive Wines and Vines Perpetual Trophy in 1979 for the best wine writing of the year." When he received the American Society of Enologists coveted Merit Award he became the "First man -- likely the only man -- ever to gain the 'grand slam' of the grape and wine industry." In 1980 he was named Wines and Vines Man of the Year.

The question now is, WHY? Why have viticulturalists and enologists alike for a century and a half talked of a single grape growing area that covers 30,000 square miles? To answer that question we must look at the geographical features that distinguish the Ohio River Valley Viticultural Area from surrounding areas.

Before doing this, however, let us admit there are differences between grapes grown near Evansville, Indiana, on sandy soil over sandstone and those grown on our vineyard in Milan with a shorter growing season in clay over limestone, and differences yet on a Kentucky site with a north facing slope. These differences only point to the need for subdivisions within the Ohio River Valley Viticultural Area. Each of our subdivisions has its individuality yet it shares in the identity of the Ohio River Valley, an identity based on history and current acceptance, as we have seen, and an identity based on climate, soil and topography.

Most authors suggest grapes can be successfully grown where there is a minimum of 150 frost-free days each year. For commercially desirable and profitable varieties, however, a period of 175 frost-free days can be said to constitute an optimal growing season.[9] The Concord, for example, requires at least 170 frost-free days for proper maturity.[10]

In 1965, the Ohio Development Department conducted a survey on where in Ohio grapes could be sucessfully grown. They used this line of 175 frost-free growing days to deliniate potential grape growing areas of their state. They developed a map adopted from the 1941 Yearbook of Agriculture, Climate and Man, Ohio. On this map the 175 frost-free day line is shown so dramatically following the Ohio that we are attaching a copy of this map to our petition as Appendix A even though our copy is only a photocopy of this now out-of-print publication.[9]

Even a casual glance at this illustration will show that the length of the growing season for a distance of many miles north of the Ohio River increases as the river goes north and where the river goes south (from the southwestern tip of Montgomery County to northern Adams and Scioto Counties) the length of the growing season shortens. A look at the Development Department's original source shows that same relationship of river to growing season continues down the river until this river effect is compounded by the Wabash River. There the 175 frost-free day growing season line shoots dramatically north.[11]

Unfortunately, even the Ohio River cannot bring southern climates unendingly north. As Appendix A shows this 175 frost-free day line finally crosses the Ohio River at Central Belmont County, Ohio, only slightly north of the 40th parallel. This we concede must be the northeasterly limit of our proposed viticultural area.

If we ask ourselves why does the growing season follow the river we arrive at the next climatic element effecting our viticultural area. Wind!

The best description of the wind and its effect on the Ohio River we have found is in Robert DeCourcy Ward's text, The Climates of the United States. He shows that the rest of the Eastern Province (that is, the eastern half of the country excluding the gulf states) is under prevailing winter winds from the west or northwest. The Ohio River Valley, however, has prevailing winds from the west or southwest. He explains this by showing how northwesterly winds are caught in the Ohio River Valley and turned into southwesterly breezes.[12]

This trough effect of the Ohio River Valley on the winds works in summer as well as winter. Ward explains this as the effect of southerly winds of the Mississippi River Valley dividing into two branches. One goes up the Missouri River Valley the other up the Ohio.[12] Viticulturally, in the summer we don't really care if the winds are from the south as long as the breezes blow sufficiently to dry morning dew as quickly as possible to aid in the control of fungus diseases, especially Black Rot, perhaps the most destructive grape disease in the eastern United States.[13] We do not mean to imply that the area of the Ohio is free from Black Rot as a result of these breezes. In fact, the humidity of the area and its abundant rainfall make Black Rot a severe problem here but the judicious selection of planting sites within the area can help catch these river breezes and make the disease manageable with a regular spray schedule.[14]

It is not our function in this petition to show that the Ohio River Valley is a perfect place to grow grapes or even the best. What we are challenged to show is that our area is different than surrounding areas. With that in mind let us examine three aspects of our geography; rain, soil and topography; and see how two otherwise negative factors combine with a favorable element to produce an acceptable and perhaps even an outstanding viticultural area.

Let us look first at the last of our climatic elements, rain. Ward describes a distinctive rainfall pattern he calls the "Ohio Type" that prevails throughout our proposed area. He shows this on a graph indicating monthly rainfalls of two and a half inches from January to mid-April. The rains increase to a peak of four inches in June, decline to two and a half again by September and remain relatively constant until the next April.[12] He says the total annual rainfall for the area averages 35 to 40 inches.

To see how this amount of rainfall measures up to our needs we look to A. J. Winkler of the world renouned viticultural research center of the University of California, Davis. Winkler divides viticultural areas into regions depending on their heat summation. Heat summation, as Winkler describes it;

> "Means the sum of the mean monthly temperatures above 50°F. for the period concerned. The base line is set at 50°F. because there is almost no shoot growth below this temperature. The summation is expressed as degree days."[15]

Using this formula for the period April to October and picking Cincinnati as representative of the Ohio River Valley we find we have an average of 3541 degree days in our proposed viticultural area. For this type of region Winkler says 24 to 30 inches of water are needed to produce grapes.[15] Cincinnati has an average annual rainfall of 39.34 inches,[16] or an average of 44% more than needed.

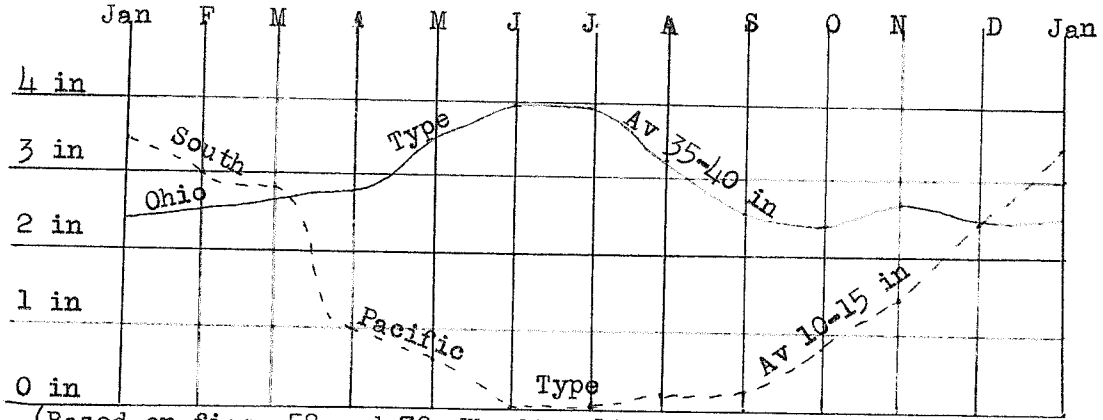
Even if we speak in meteorological terms rather than use viticultural definitions the Ohio River Valley can be shown to have excessive rainfall. Ward says;

> "The following rainfalls may be considered excessive: 10 in., or more, in a month; 2.50 in., or more, in twenty-four hours; 1 in., or more in an hour. It must be noted that these amounts are often reached and exceeded, and are in no way to be regarded as unusual in many sections of the country."[12]

A look at the precipitation records for Cincinnati (again used as an example of the area) shows that the Ohio River Valley has exceeded 2.50 inches of rain in twenty-four hours at least once in every month of the year except October[16] and can, in fact expect a twenty four hour rainfall

of three inches every two years.[17] In addition, Cincinnati has a 50-50 chance of having a 1.4 inch rainfall in one hour each year, which has a statistical probability of occurring between May and September.[18]

Before seeing what this means let me return to our earlier described "Ohio Type" rain pattern and compare it below on a chart also showing what Ward calls the "Southern Pacific Type" rain pattern which dominates the grape growing regions of California.



(Based on figs. 58 and 70, Ward's Climates of the United States)

Now we can see that the excess of our rainfall comes not in the winter when vines are more able to tolerate standing water but in the middle of the growing season. It is at this time that the vine roots are most susceptable to saturated soil and indeed may die from lack of aeration.[15] This is the first negative factor we will discuss here. We will speak of soil next and then of how grapes in the Ohio River Valley are able to cope with these factors because of topography.

Dozens or even hundreds of soils can be found in our proposed viticultural area and to say the Ohio River Valley has the same soil throughout would be wrong. But, an identity of soil groups can be found. Throughout the Ohio River Valley from Pittsburgh to Cairo Gray-Brown Podzolic soils are dominant on the hilly uplands, ridges and slopes. According to the U. S. Soil Conservation Service[19] as you get away from the Ohio River Valley this soil group is no longer dominant except in the flat lands of the Indiana and Ohio Till Plain. The permeability of Gray-Brown Podzolic soils is moderate to slow.[19] This is negative factor number two.

One of the prime requisites in growing grapes is to have good soil drainage.[14] If we have a great deal of soil with only moderate or slow permeability and we have excessive rains how can we grow grapes in these soils? It is because of the very fact that they are on the high grounds from which the excessive rainfall will naturally drain. This topography is the favorable element that combined with otherwise negative factors help distinguish the Ohio River Valley from surrounding areas and make it an acceptable or even outstanding viticultural area.

The topography of our area is a very distinct unit. The river, the terraces, escarpments, hills and valleys are all elements of an area refashioned by erosion in the 110,000 years since the furthest advances of the glaciers of the ice age.

(It is important to point out that areas north of the Ohio River Valley were subjected to another, much more recent, period of glaciation that flattened the landscape like a giant bulldozer.[20] Although there has been erosion here too it has not had the time to proceed to the extent it has in the Ohio River Valley. To the south of our area we find land never touched by the glaciers[21] and so their character is different both in topography and soil.)

Before the ice age what is now the Ohio River existed only as segments of other rivers and streams. All of the waters in this part of the country eventually flowed north through the Beaver, Teay* and Old Kentucky Rivers. High ridges existed between segments of what is now the Ohio. As the glaciers blocked the northward flow of these rivers they backed up forming great inland lakes. The greatest of these, Lake Ohio, began at what is now Cincinnati and ran up river for hundreds of miles. Pittsburgh at that time was 300 feet below the waters of Lake Ohio.[22]

Eventually the dammed up waters reached elevations which allowed them to begin eroding new, southwesterly channels. As the great ice sheetbegan to melt enormous amounts of water were released. It has been calculated that as the glaciers melted they released water equal to 160 feet of rain a year.[21] One can only imagine the torrents of water, ice chunks, sand, gravel and even boulders rushing downhill from the ridges parallel to the river splashing, smashing sculpting deep wide creek beds which in turn poured their billions of gallons of water and debris into the lakes of the Ohio. This deluge crushed the lake "dams" and deepened and widened the new river's valley to roughly its present shape and location.

So, in one stroke (measured in geological eons) the slopes, creaks, main tributaries, the escaprments, valleys and the Ohio River were formed as we see them today. Therefore, when we speak of the Ohio River Valley we are speaking of all the ground that was, and is, drained directly into the Ohio River or would had not a creek or other river formed there as a tributary of the Ohio. Specifically, we are talking about what the U. S. Department of Agriculture's Soil Conservation Service, the U. S. Department of Commerce, the U. S. Army Corps of Engineers and eleven other federal agencies plus eleven states or commonwealths refer to as the Ohio River Minor Tributaries Hydrological Sub-Basin of the Ohio River Basin[23] with only minor adjustments to include those portions of the Ohio's main tributaries that share in the geological characteristics of the Ohio River Valley Viticultural Area.

Before we get too involved with the boundaries of the proposed Ohio River Valley Viticultural Area let us return to the geographic features that set this area apart from surrounding areas. We have spoken of climate, soil groups and have touched on topography. More, however, needs to be said of topography for it is to the slopes along the river that the prudent viticulturalist looks for the best growing sites.

It is no accident that a list of great viticultural areas of the world sounds like a list of rivers in a geography book -- Rhine, Moselle, Loir, Rhone, Napa, Niagra, Hudson. Author after author advises the would-be grape grower to look to the high grounds near water. The poet Vergil said two thousand years ago, "Bacchus is partial to broad sunny slopes." Frederick Muench writing in the mid-nineteenth century advised:

---

*The Teay flowed north and west through what is now the Kanawha and Scioto Rivers which were connected by that portion of the Ohio between Point Pleasant, West Virginia, and Portsmouth, Ohio.

> "In the vicinity of the ocean, or of large lakes and rivers, the air seems to possess a peculiarily mild quality, which the vine particularly needs, and accordingly we find it in the greatest perfection on dry, even rocky and somewhat precipitous ground, not far from large bodies of water.[24]

Dennis Overstreet's 1980 publication, Wine Secrets, has an illustration showing the advantages of slopes along rivers. Among those he lists:

1. "A southern slope receiving the morning sun";
2. "A western barrier protecting vines from rain bearing winds";
3. "A nearby river creating an even microclimate";
4. "A south slope warms faster than level ground".

Getting more specific, let's look at how a slope can offer protection from an unseasonal frost. One of the basic laws of meteorology is that relatively cold air tends to sink, and crowd under warmer air, thus forcing it to rise.[26] James Utzinger of Ohio State University's Department of Horticulture translates this into vineyard site selection advice:

> "The most frost free sites are those above the level of surrounding areas. Such sites provide air drainage as cold air drains from the higher elevation to lower areas."[27]

Applying another climatic law, i. e., "Surface winds commonly blow from colder areas to neighboring warmer areas," shows another advantage to slopes. On an early July morning, for example, when there is no general wind to dry the overnight dew the sun warming the slopes will create microclimatic breezes mixing the cooler valley air with that of the slopes.

Finally, one last climatic law. "Slopes inclined sharply toward the midday sun are warmer in summer than those not so inclined.[26] This can aid in the ripening of grapes and in reducing the high acid content usually associated with grapes grown in the eastern United States.[15]

In summary then, the Ohio River Valley Viticultural Area is geographically different than surrounding areas in that:

1. A 175 frost-free day growing period follows the river to just beyond the 40th parallel;
2. Unlike the rest of the Eastern Province of the United States the prevailing winter winds are from the southwest;
3. There is a distinctive rain pattern in the area even named the "Ohio Type";
4. Only in the Ohio River Valley is the Gray-Brown Podzolic Soil Group dominant on the slopes and hill tops;
5. The whole Ohio River Valley was created in the same geological age by the erosion caused by the melting of the glaciers;
6. The slopes of the area provide drainage for excessive rains; air drainage for frost protection; catch general winds and create localized breezes to control moisture loving fungus problems; and create warm areas to promote ripening.

Before defining the specific boundaries of the proposed Ohio River Valley Viticultural Area let us point out that Treasury Decision ATF-60 provides that our boundaries are to be "based on features which can be found on United States Geological Survey (U.S.G.S.) maps of the largest applicable scale". Our Ohio River Valley Viticultural Area is bounded by the high ridge lines on each side of the river that determine where the Ohio River Minor Tributaries Hydrological Sub-Basin is located as adjusted to include those portions of the main tributaries of the Ohio River that share its viticultural characteristics. These boundaries would be difficult to plot on U. S. Topographical Maps in the scale of 1:250,000 as recommended by the Bureau of Alcohol, Tobacco and Firearms[28] or even on larger scale maps and still be understandable to the general public.

To facilitate this task Mr. George McKee, Hydrologist, Reservoir Control Center, Ohio River Division, U. S. Army Corps of Engineers, Cincinnati, has taken the map of the Ohio River Minor Tributaries Hydrological Sub-Basin as shown in the Ohio River Basin: Comprehensive Survey[21] and redrawn its outline on a map showing the ridge lines of the Ohio River Basin published by the U. S. Department of Commerce, Ohio River Forecast Center, Cincinnati. (See Appendix B.) Mr. McKee's lines are shown in red. On this same map we have drawn straight lines in black that we believe maintain the integrity of the hydrological boundaries of the Ohio River Viticultural Area (including those portions of main tributaries that should also be included) and yet make them easily found on U.S.G.S. maps or even on most highway maps available to the general public.*

Next, we have taken these lines and transferred them to U.S.G.S. maps in the scale of 1:250,000 listed below:

Canton, NK 17-11
Clarksburg, NJ 17-2
Charleston, NJ 17-5
Columbus, NJ 17-1
Huntington, NJ 17-4
Cincinnati, NJ 16-3
Louisville, NJ 16-6
Vincennes, NJ 16-5
Evansville, NJ 16-8
Winchester, NJ 16-9
Belleville, NJ 16-4
Paducah, NJ 16-7
Dyersburg, NJ 16-10.

Copies of these maps are included with the boundaries described below prominently marked in compliance with paragraph 9.3, Part 9, ATF-60.

Finally, the Ohio River Valley Viticultural Area shall be that area enclosed by the straight lines drawn from a point on the east bank of the Mississippi River due east of Hines Landing, Cape Girardeau County, Missouri, to Water Valley, Union County, Illinois; thence from Water Valley to the intersection of State Route (SR) 142 and SR 14 at McLeansboro, Hamilton County, Illinois; from there to Oatsville, Pike County, Indiana; from Oatsville to the intersection of U. S. Highway 460 and SR 162 in Spencer County, Indiana; thence to the intersection of SR 64 and SR 66 in Harrison County, Indiana; thence to New Marion, Ripley County, Indiana; from New

---

* Where our boundaries follow the Mississippi River our line is, of course, not straight.

Marion to Clarksburg, Decatur County, Indiana; from Clarksburg to Ridgeville, Warren County, Ohio; from Ridgeville to Chapman, Jackson County, Ohio; from Chapman to Hesboro, Hocking County, Ohio; from Hesboro to Tacoma, Belmont County, Ohio; from Tacoma to East Finley, Washington County, Pennsylvania; from East Finley to Jarvisville, Harrison County, West Virginia; from Jarvisville to Grandeeville, Roane County, West Virginia; from Grandeeville to Atenville, Linclon County, West Virginia; from Atenville to Isonville, Elliott County, Kentucky; from Isonville to Berlin, Bracken County, Kentucky; from Berlin to Dry Ridge, Grant County, Kentucky; from Dry Ridge to Crest, Hardin County, Kentucky; from Crest to the intersection of SR 56 and U. S. Highway 41 at Sebree, Webster County, Kentucky; thence to Era, Christian County, Kentucky; from Era to Grand Rivers, Livingston County, Kentucky; from Grand Rivers to the intersection of U. S. Highway 641 and SR 408 at Benton, Marshall County, Kentucky; thence in a straight line from the intersection of U. S. Highway 641 and SR 408 through Wickliff, Ballard County, Kentucky, to the east bank of the Mississippi River; thence in a line following the east bank of the Mississippi River to the point of beginning on the east bank of the Mississippi River due east of Hines Landing, Cape Girardeau County, Missouri.

In closing let me acknowledge the help I have received in preparing and checking the accuracy of this petition. To the following I am indebted: Professor of Horticulture Garth A. Cahoon of Ohio State University's Ohio Agricultural Research and Development Center; Professor of Pomology Carl W. Haeseler of Pennsylvania State University's Erie County Field Research Lab; The Ohio Wine Producers' Association, Kenneth Schuchter of Valley Vineyards, Morrow, Ohio, President; The Indiana Wine Grower's Guild, Ben Sparks of Possum Trot Vineyards, Unionville, Indiana, President; Henry Gray, Ph.D., Head Stratigrapher, Indiana Geological Survey, Bloomington, Indiana; Doug Daggy, District Conservationist, U. S. Department of Agriculture, Soil Conservation Service, Versailles, Indiana; and especially to Mr. George McGee, Hydrologist, Reservoir Control Center, Ohio River Division, U. S. Army Corps of Engineers, Cincinnati, Ohio, who in drawing the map of the Ohio River Minor Tributaries Sub-Basin and checking our straight line representation of this area saved us at least several weeks of work.

Sincerely,

John A. Garrett

John A. Garrett

Att: Appendices A and B
Bibliography
Encl: U.S.G.S. Maps cited above

BIBLIOGRAPHY

1. Hondius, Henricus, America Septentrio Nalis, Amsterdam, 1631

2. Homann, Johann Baptist, The Mississippi Region or Louisiana Province of North America, Company of the West, circa 1718

3. DeChambrun, Clara Longworth, The Making of Nicholas Longworth, Ray Long and Richard R. Smith, New York, 1933 pp 32-33

4. Colliers Encyclopedia, P. F. Collier and Son, New York, 1958, Vol. 15, p 17 and Dictionary, p 1141

5. Buchanan, Robert, The Culture of the Grape and Winemaking, Moore Anderson and Co., Cincinnati, 1854, pp 72, vi-vii, 61

6. DuFour, John James, The American Vine-Dressers Guide, Cincinnati, 1826, pp 18-24, 113

7. Hedrick, U. P., etal, The Grapes of New York: Report of the New York Experiment Station for the Year 1907, J. B. Lyon Co., Albany 1908, pp 22, 53

8. Adams, Leon D., The Wines of America, McGraw Hill, New York, 1978, pp 94, 107-109, 182-185

9. Economic Research Division, Development Department of the State of Ohio, The Ohio Grape-Processing Industry, January 1965, pp 19, 21 (Map 2)

10. U. S. Department of Agriculture, Farmers' Bulletin No. 2123, Growing American Bunch Grapes, Washington, 1973, p 1

11. Yearbook of Agriculture, Climate and Man, Indiana, 1941, p 858

12. Ward, Robert DeCourcy, The Climates of the United States, Ginn and Company, Boston, 1925, pp 141-145, 149, 188, 232

13. Spotts, R. A., Black Rot: The Organism and Its Control, Proceedings, Ohio Grape-Wine Short Course 1974, Ohio Agricultural Research and Development Center, Wooster, Ohio, p 66

14. Cahoon, Garth A., etal, Grape Growing: Ohio State University Bulletin 509, Ohio Agricultural Research and Development Center, Wooster, Ohio, 1981 p 4

15. Winkler, A. J., etal, General Viticulture, University of California Press, Berkeley, 1974, pp 61, 395, 392-393, 155-156

16. National Oceanic and Atmospheric Administration, U. S. Department of Commerce, Climates of the States, Water Information Center, Inc., New York, 1974, Vol. 1, pp 306, 308

17. U. S. Department of Commerce, Weather Bureau, Technical Paper No. 40: Rainfall Frequency Atlas of the United States for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years, Washington, D. C., 1961, p 95

BIBLIOGRAPHY

18. U. S. Department of Commerce, National Oceanic and Atmospheric Administration NOAA Technical Memorandum NWS HYDRO-35, Silver Springs, Maryland, 1977 p 15

19. Soil Conservation Service, U. S. Department of Agriculture, Handbook 296, Land Resource Regions and Major Land Resource Areas, Washington, D. C., 1972, pp 49-57, 75

20. Shimer, John A., This Sculptured Earth: The Landscape of America, Columbia University Press, New York, 1959, pp 82-83

21. Wright, G. Frederick, The Ice Age in North America, D. Appleton and Co., New York, 1890, pp 346-347, Map opposite p 175

22. Fowke, Gerard, The Evolution of the Ohio River, Hollenbeck Press, Indianapolis, 1933, pp 23-24, 236-240

23. U. S. Department of Agriculture, Soil Conservation Service, Ecomomic Research Service, Ohio River Basin: Comprehensive Survey, Cincinnati, 1966, Title page and Appendix F, Agriculture, Plate 1

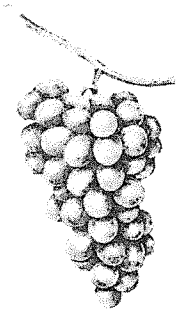
24. Muench, Frederick, School for American Grape Culture, Conrad Witter, St. Louis, 1865, p 18

25. Overstreet, Dennis, Wine Secrets, Gossett and Dunlap, New York, 1980 p 6

26. Visher, Stephen Sargent, Climatic Laws, John Wiley and Sons, New York, 1924, pp 10, 39, 37

27. Utzinger, James D., General Considerations for Vineyard Site Selection, Proceedings, Ohio Grape-Wine Short Course, 1973, Ohio Agricultural Research and Development Center, Wooster, Ohio, p 6

28. Linthicum, John A., Specialist, Research and Regulations, Branch, Bureau of Alcohol, Tobacco and Firearms, letter to John A. Garrett, March 10, 1982



VILLA MILAN VINEYARD

Fruit of the vine

July 30, 1981

John and Dorothy Garrett
P.O. Box 248
Milan, Indiana 47031
Phone 812-654-3419

John Linthcum
Bureau of Alcohol, Tobacco and Firearms
BATF Room 6237
Washington, D. C. 20226

Dear John:

At your suggestion we compiled information from the Bureau of Census on sizes and locations of vineyards in our proposed Ohio River Valley Vitucultural Area. We agree there are areas at each end of the area unsuited to grape growing.

Attached is a listing of Counties included in our area that the Bureau of Census shows as having significant quantities of grapes. As you can see no Illinois or Pennsylvania Counties are included.

We, therefor, agree we should modify our proposed boundry. Please show the boundaries of our proposed area beginning on the east bank of the Wabash River at Interstate Highway 64; thence in a straight line to Oatsville, Pike County, Indiana; then following the boundary originally shown in our petition to Tacoma, Belmont County, Ohio; from Tacoma modify our boundary to go in a straight line to Valley Grove, West Virginia; from Valley Grove to Jarvisville, Harrison County, West Virginia; then, following again the boundary in our original petition to Grand Rivers, Livingston County, Kentucky; from Grand Rivers modify our boundary again to go from Grand Rivers to the confluence of the Ohio and Wabash Rivers; from there following the east bank of the Wabash River to the place of beginning.

Sincerely yours,

John A. Garrett

John A. Garrett

PS:

Per our telephone conversation this afternoon feel free to adjust these boundaries to exclude portions of Illinois accidentally included in the proposed viticultural area.

OHIO RIVER VALLEY GRAPE PRODUCTION
by County
(From the Bureau of the Cen us 1978 Census of Agriculture)

	Farms	Acres	Vines
Indiana			
Posey	4	16	8351
Vanderburg	3	13	5867
Spencer	4	10	4922
Perry	3	1	139
Crawford	4	1	322
Harrison	10	6	1573
Floyd	15	6	1855
Clark	8	5	1343
Jefferson	4	10	4868
Switzerland	5	7	2599
Ohio	3	4	670
Dearborn	13	40	24483
Gibson	5	3	500
Orange	3	7	2413
Washington	8	8	3625
Jennings	3	1	253
Ripley	11	9	4432
Franklin	4	9	1835
Total	110	156	70050
Ohio			
Hamilton	12	7	3014
Clermont	12	15	8995
Brown	14	68	30316
Adams	11	16	7484
Scioto	5	1	58
Lawrence	8	3	627
Athens	9	9	3942
Washington	12	13	5717
Monroe	17	16	7596
Belmont	5	13	7842
Butler	9	2	337
Warren	22	89	55140
Clinton	7	43	25877
Highland	8	9	3302
Pike	4	1	498
Jackson	6	23	10425
Hocking	6	1	197
Guernsey	8	3	1359
	176	332	172,726

	Farms	Acres	Vines
Kentucky			
Daviess	12	3	1349
Breckenridge	3	*	58
Bullitt	9	4	992
Jefferson	8	3	1101
Trimble	5	5	2390
Gallatin	4	1	219
Boone	8	5	1681
Kenton	6	16	6996
Campbell	8	12	4864
Lewis	4	1	350
Greenup	6	1	279
McLean	3	*	65
Grayson	9	1	361
Hardin	11	6	1799
Nelson	8	4	1686
Shelby	6	2	428
Henry	7	4	1781
Owen	3	*	118
Grant	4	2	482
Carter	5	1	144
Lawrence	4	1	250
	133	72	27395
West Virginia			
Cabell	5	2	1017
Mason	4	1	165
Jackson	9	2	495
Wood	6	3	1328
Wetzel	4	1	483
Marshall	16	10	4524
Ohio	6	1	720
Lincoln	7	3	1101
Putnam	8	1	287
Wirt	4	1	213
Roane	4	1	192
Ritchie	3	*	21
Harrison	5	1	197
Marion	9	3	1212
Monongalia	9	4	1272
	99	34	13227

* Less than an acre

Total all states			
	518	594	283,398