

Towards A History Of Privatizing Public Lands In Michigan 1785-1860.

ABSTRACT

The pre-1860 history of federal and state efforts to privatize public lands in Michigan is covered under six operational and policy themes: (1) quieting Native American claims to their lands, (2) surveying and platting the state's land, (3) reviewing the federal and state offices administering the privatization process, (4) analyzing federal and state land policies, (5) discussing the role that speculators had in the privatization process, and (6) reviewing the effects that privatization had on the settlement of the state. Privatization was both a partial success and a deeply flawed process.

From its very beginning under the Land Ordinance of 1785 and the Northwest Ordinance of 1787, Michigan was a public land territory and state. (1) This meant that the new national government, even under the Articles of Confederation, was responsible for disposing all of the state's land except for a small number of private claims. Of course the various American Indian groups could claim sovereignty over the state's acres as well. Before Michigan could be settled, these sovereignty claims had to be resolved, the Native Americans themselves removed from their lands, and the land surveyed and then sold (patented).

Historians have largely overlooked the privatization of Michigan's lands during often-trying economic times, high population mobility, and weak governments. The major works are two unpublished doctoral dissertations (2) and an unpublished Master's thesis. (3) Although Kenneth Lewis and others have covered selected portions of the results attributable to federal programs, (4) few scholars have responded to Paul W. Gates' 1960 challenge that "a great deal of intensive research in the entry volumes of various land offices needs to be done preparatory to the history of [land] disposal in states like Michigan." (5)

The present article revisits this under-reported history, one that can be seen both as a partial success and as a deeply flawed process. Success refers to the federal government's privatization of nearly 14 million Michigan acres by 1860 as well as over 12 million acres granted to the state for its own follow-on sale or pass-through to private interests. (6) By 1860, 53 percent of the approximately 26 million acres in the 68 counties of Michigan's Lower Peninsula had been privatized by the federal government and another four percent was privatized from the various federal land grants given to the State. (7) While these large numbers represent a significant success, the privatization process also suffered flaws, including cases of fraud, consequences attributable to a weak credit system, and the major role that speculators played in the market for Michigan land. Large landowners claimed 57 percent of all Lower Peninsula land patented as of 1850. (8)

Rather than follow a traditional time line history of the major federal and state land-disposal laws, agencies and their programs, the present review focuses on six operational

and policy challenges that privatization programs had to address. First, we begin with the transfer of Native American sovereignty and native peoples themselves from lands they occupied and used. Second, completing the rectangular surveys was a major accomplishment performed under often very trying circumstances. Third, the national and state offices created to administer the privatization process accomplished much but there were also occasional problems, some of them quite serious. Fourth, the design of federal programs and mistakes by the State of Michigan together helped create barriers to patenting land by farmer-settlers. Fifth, in line with prior research, we discuss speculation and speculators. Finally, we revisit one of the founding purposes of privatization - - to encourage settlement. Neither the state nor the federal governments developed comprehensive settlement policies for Michigan in specific and nationwide more generally.

De-Settling the Original Populations

The 1785 and 1787 Ordinances acknowledged the physical presence and sovereignty of Native Americans in Michigan and elsewhere. (9) Early national legislation stated that "The utmost good faith shall always be observed towards the Indians; their lands and property shall never be taken from them without their consent, and in their property, rights, and liberty they shall never be invaded or disturbed unless in just and lawful wars authorized by Congress; but laws founded in justice and humanity shall from time to time be made for preventing wrongs being done to them, and for preserving peace and friendship with them." (10) The national government recognized the claims that Native Americans had to their vaguely demarcated domains. These claims had to be quieted, as was done in Michigan by six major treaties, not by congressionally enacted statutes. That is, Michigan's scattered acephalous bands were treated by Washington as foreign governments that could sign treaties involving the transfer of property rights that were not part of the Native Americans' unwritten legal systems--systems that seemed to recognize sovereignty and rights of use but not sole ownership nor land demarcated by clear boundaries. (11)

The first Indian cession was effected on August 3, 1795 (The Treaty of Greenville). (12) Beginning with the Treaty of Detroit in 1807, a series of treaties was initiated two decades after the Land Ordinance of 1785. (13) But quieting claims to sovereignty was not enough to encourage a large influx of white settlers. Under the threat or actual use of force as well as by deceptive if not dishonest means, the native populations were physically removed from the lands covered by these treaties. (14)

Rectangular Surveys

Land was not to be auctioned or sold until it had been surveyed. To accomplish this, the Land Ordinance of 1785 established the rectangular system of surveys. It took time to work out the administrative structures and technical procedures for implementing this ordinance. To this end, the Act of 1796 established the Office of the Surveyor General that in turn was to appoint a corps of surveyors- Private contractors performed actual on-the-ground surveys. These contractors were to divide land into congressional townships

each with 36 square miles (in theory). A township's position (its "number") was exactly located as north or south of a "baseline" and east or west ("range") of a prime meridian. Townships were in turn subdivided into 36 squares, each theoretically one square mile or 640 acres. The resulting sections were numbered from 1 to 36 beginning with Number 1 in the northeast corner of the township and from there running west to Section 6, dropping one section south to Section 7 and then running in a systematic zigzag manner to Section 36 in the far southeast corner of the township. An east-west, north-south and fractional (1/4 and 1/2) system is used to identify any specific parcel of land within a section. (15)

This system of man-made grids and the history of the rectangular survey are covered in a number of excellent volumes. (16) The borders of the grids were marked by blazes in forested areas. (17) The grid was displayed as a plat (map) so that prospective settlers and buyers could more easily find and accurately define acres of interest to them. As a help to different potential patentees, surveyors in 1815 were directed to "be careful to note" in their field books the "quality of the soil" relating to potential agricultural use. (18) Lumbermen were also beneficiaries of these notes, as surveyors were to locate at each corner of a section "witness" or bearing trees, and their size and species were to be noted. (19)

Most of Michigan's Lower Peninsula was surveyed by the time the Territory became a state in 1837. Over two-million acres were surveyed as early as 1819. This number jumped to over eleven million in 1833. From 1837 to 1840, all except 23 townships were surveyed in the lower 68 counties. These accomplishments refer primarily to township borders. Laying out of section lines within townships lagged. In 1837, the Commissioner of the General Land Office authorized the survey of section lines in all townships south of 30 North that "would command purchasers to a reasonable amount, if brought into market immediately after the survey shall be completed." (20) With some possible exceptions in the southwestern part of the state, the number of acres proclaimed for patenting was well ahead of sales demand.

These surveys provided patentees with a secure legal title to acres that had exact geographical coordinates. However, Michigan surveys and surveyors' notes were hardly fault free. As early as 1830, some Oakland County residents complained in a memorial to Congress that the surveys in their county "were so inaccurate that they were useless." (21) Land-buyers had to be aware that some surveys were complete frauds. Deputy Surveyor Austin Burt remarked in his re-survey of county 13N, R1W (Porter Township in Midland County) that "the old Survey was found to be mostly fraudulent." (22) As early as 1826, the Surveyor General's office located in Chillicothe, Ohio reported that "designing men" or purchasers of public land "with a view to deceive and mislead others" altered the marks and numbers of early surveys. Harvey Parke, a contract surveyor living in Pontiac was dismissed for his misrepresentations. (23) Large-scale fraud in complete surveys was discovered for 400 townships north and west of Saginaw. (24) Although Congress appropriated funds in 1845 "for extensive re-surveys to correct erroneous and defective surveys" in Michigan and three other states, problems remained as late as 1855. The Commissioner of Michigan's State Land Office noted in his annual report for 1855 that

the GLO re-surveys of "considerable tracts of land" forced the State to suspend its sales of a good quantity of swampland. (25)

That is, although it appears that a very large proportion of surveys met the legal specifications set for them, savvy land-buyers had to be wary. Still, field notes and plats helped reduce the cost and time of identifying good agricultural land and valuable timbered acres. And the patents themselves, as noted above, gave the owner secure legal title to the spatially-specific acres that were patented.

The Federal Government's implementing Agency

Several federal departments administered the national land privatization laws until the GLO was created in 1812 and placed under the Secretary of the Treasury before being transferred to the newly created Department of the Interior in 1849. This office was staffed by its Commissioner, Surveyor General, registers and receivers, superintendents of public sale and various support staffs in Washington and in an ever-growing number of local land offices dealing with speculators, settlers, land agents, landlookers, timber cruisers, lawyers, and dealers in land warrants, scrip and tax titles. Disposing of nearly 240,000 square miles in the five states of the Old Northwest, as well as land in other public domain states, was a major operation and an industry in itself. (26)

GLO had two major responsibilities. The first, preparing rectangular surveys, was a one-time only task (except for the re-surveying of approximately 400 Michigan townships northwest of Saginaw). The second and more enduring work was to process applications for patents, collect the established fees, and enter the approved sales in tract books.

Once the surveys were completed and land was put up for auction, local district offices of GLO processed patent applications and requests for information. Detroit had the first Michigan office in 1804 but it did not become fully operational until surveys were completed and land proclaimed available for auction. The first recorded sales were in 1818. New offices were added and district borders redrawn over time. Thirteen offices existed at one time or another. (27) These new offices were to help spread the workload and accelerate the processing time - - to make it more convenient for the buying public. The workload varied by year. "Michigan entered the Union as a child of the land office business," and demand for GLO services in 1836 exceeded the capabilities of the state's busiest district office, Bronson (now Kalamazoo). Five or six hundred clients queued up for service, and nationally the Washington office of the GLO was said to be three years behind in its work. (28)

These basic operating units had two officials in charge, a Register and a Receiver. Someone who wanted to make an "entry" indicated to the Register the desired tract of land. The resulting application led to the completion of a series of signed documents, including any monetary receipts required. If a military warrant or scrip was used, a certificate of location was required. The completed papers were sent to Washington and, if accepted, were returned to the district office and given to the applicant ("entryman"). The district office had already noted on its plat book that the specific acres were in the

entry process. This notation helped new buyers to identify only the land available for new entries. (29)

Newly proclaimed land was first offered at a public auction that was typically held in the autumn. To allow potential buyers an opportunity to review the information available in the district office and to personally inspect the land to be auctioned, the date of an auction was announced the prior spring. Land not sold at auction was then made available for private entry at the designated minimum price (which was \$1.25 an acre for land covered under the 1820 Act).

Land was put up for auction well before there was a demand for it. By 1820 only 67,362 acres were sold. (30) The minimum price at that date was \$2 per acre, and a buyer had to acquire a minimum of 160 acres (as of 1804) Credit was provided after a buyer made a down payment of one-fifth of the cost of the purchased land, with the remaining debt paid in each of the following three years. (31) Except for the credit feature, this was a policy to generate revenues for the federal government.

In 1836, one year before the Michigan Territory became the State of Michigan, slightly over four million federal acres were patented. This number dropped to 772,000 the following year. In his "Cyclical and Sectional Variations in the Sale of Public Lands, 1815-1860," (32) Arthur H. Coles was among the first if not the first economist to examine these yearly variations. His data are dollar receipts for federally-patented land but do not include land acquired through military warrants or state programs. Coles' figures also mask the significance of lower-priced land introduced by the Graduation Act.

While Coles reported the annual receipts from the sale of federal lands in public domain states, Dallas Lee Jones gave comparable acreage totals for Michigan. Researchers have proposed different reasons for annual variations - - for example, the influence of poor domestic harvests (as in 1856), similar variations in Europe, along with wars on the continent. Still others have argued for the importance of shifts in commodity prices more generally, the significance of transportation improvements, the central role played by speculators, and the effects that economic downturns had on the availability of money, the bankruptcy of financial institutions, changes in the value of real estate, and auctions of tax-delinquent acres. (33) There were multiple influences affecting the demand for public lands.

In Michigan itself, the "Michigan Fever" of the 1830s was followed by a slump in the following decade. During this slump, state administered programs privatized more acres than processed by GLO. The state's increasing importance can be partially explained by the lower prices charged by the state on some of its granted lands (more on this later). For example, Michigan's "internal improvement" lands (but not others) granted to the state in 1841 were sold in 1849 at well below the \$1.25 charged under the federal program in place since 1820. (34) Swamplands were sold at a lower price per acre as well, while other programs offered favorable credit terms

Still, even at the end of 1860, Michigan had ample supplies of unsold land. If patents were only issued for the 68 counties in the Lower Peninsula with their 26-million acres, then 54 percent of the Peninsula's acres were still available. But, of course, neither land sales nor the quality of agricultural soils and pine trees were evenly distributed throughout the state.

A caveat is in order here, as patent statistics reported by federal and state sources warrant skepticism. We are dealing with general orders of magnitude. That is how the estimates given in the Table below should be considered. Most importantly, the acreage numbers for pass-through patents are overstated

For example, more than 640 acres are reported to have been patented in a number of individual sections within Midland County. Most of these excesses seem to have resulted from conflicting claims by railroads and swampland for the same acres, and railroads themselves seem to have entered more than one patent for the same acres. Acres patented to individuals do not suffer the same problem, although the official records do contain an occasional discrepancy. (35)

Approximate Number of Acres Sold
Under Federal and State of Michigan Programs, By Decade

Decade Ending In	Federal Programs	State Programs	Total	Cumulative Total
1819	470,529		470,529	470,529
1829	390,904		390,901	861,433
1839	8,320,583	71,593	8,392,173	9,253,606
1849	419,184	498,666	917,850	10,171,256
1859	4,201,171	544,758	4,745,929	14,917,385
Total	13,802,368	1,115,017	14,917,385	

Source: Greffenius, Development of Michigan Public Land Policy, 219. (36)

With so large a workload and the reported low ethical standards of many Americans at the time, it is not surprising that GLO and the land disbursement system in general came under attack. According to one source, in Michigan (and in the country in general) "nearly every legislative land action was subjected to some form of mismanagement, inefficiency or fraud. The nature of the abuse varied from poor judgment and management to fraud and corruption of the rankest sort." (37) Similar criticisms made in Ohio could also be said of Michigan--that the disposal of public land in the state was "probably the worst example in the United States of sustained governmental failure either to develop a coherent public policy or to build an administrative structure capable of withstanding pressure from special interests." (38)

GLO did little to police the public domain. (39) Lumbermen were interested in the pine trees on the land, nor the land itself. To gain access to these trees, some lumbermen made fraudulent entries under both the federal preemption legislation and Michigan's own primary school lands. The federal preemption laws gave buyers a one-year grace period before a payment had to be made. This was sufficient time to cut the marketable timber before relinquishing the claim. (40) There are many other examples of chicanery,

especially relating to illegal logging. Timothy Jerome and George F. Williams were the principals in the "Isabella Land Swindle" that took advantage of Chippewa Indians. While this swindle was tied up in the courts, Jerome and Williams were removing valuable pine trees. (41) As one historian noted, "Like other early settlers, lumbermen often exhibited a certain disdain for the necessity of buying land. Joseph Smith, for example, supplied his mill from 1832 to 1835 with timber from government land." (42) One lumberman north of Saginaw recalled that "illegal logging was a common practice until the early 1850s." Federal agents who moved against "moonshine lumbering ... met fierce opposition." (43)

The State of Michigan's Implementing Agency

In the Enabling Act of June 15, 1836, Congress provided Michigan, upon its entry into the Union (on January 26, 1837) with section 16 of each township. The receipts from the sales of these acres were to be used to support primary schools. (44) Michigan began as a state with a land grant and the need to create an organization and regulations to administer the grant.

Initial responsibility for the public school lands was assigned to the Superintendent of Public Instruction, but because of this office's deficient accounting system, as well as additional land grants to the state, a state land office was created in 1843 with an appointed commissioner. In 1850 the commissioner became an elected officer. As with similar offices in other states, this agency was responsible for selecting "unlocated tracts, to manage, appraise, lease or sell these and other grants ..., to protect them from timber thieves, to make collections if land was sold on credit, to eject squatters, determine boundary disputes, and even to survey where the original lines were defective." Paul Gates goes on to list the responsibilities of state legislatures ("define policies, determine prices ... provide protection against corrupt use of authority ..."), courts, and the administrative officers who had to interpret and enforce these new responsibilities. (45) With so many responsibilities and the politicizing of the land office, it is not surprising that it would be criticized for mismanagement and fraud.

State governments formulated their own conditions for the disposal of land granted to them. According to one estimate, the federal government granted Michigan 1,621,164 acres by the end of 1849 and an additional six million acres during the 1850s--for a total of 7,637,852 acres. (46) Most of these grants were for dedicated purposes--for example primary and post-secondary education, canals and railroads (where the state acted as a pass-through agency for approved private companies), and public buildings. Other programs related to specific kinds of land--a small number of saline acres (46,080) and, over time, in excess of seven million acres classified as swamp. Another 500,000 acres that were granted to the state in 1841 were to be sold and the proceeds used for internal improvements.

Prices and credit arrangements differed by program. For example, rather than adopt the \$1.25 per acre upset price Congress set for lands disposed under the Act of 1820, Michigan set an initial minimum price of \$8 per acre, halving that to \$4 later on. (47)

Also, unlike federal land disposal programs after 1820, the state provided credit ranging from 50 percent to 90 percent during the 1840s. (48) With ever-more liberal credit terms, a purchaser only had to make a down payment of from 40 to 80 cents an acre, less than three times what federal land required at the time.

Congress added to the 500,000 internal improvement acres granted to Michigan in 1841 for "roads, railways, canals, improvements of water-courses, and draining of swamps." At least that is how the Commissioner of the General Land Office characterized 1,250,000 Michigan acres in his report to Congress in 1853. (49) Only land not already patented could be selected and sold under these internal improvement programs.

Unlike section 16 land that had definite boundaries, the state could select its internal improvement land among the highest quality soils and timbered acres not yet patented at the time. Instead of charging higher prices for these acres, we noted earlier that the state at one time (and perhaps one time only) lowered the price to only 30 or 40 cents per acre thereby making them much more attractive (financially) than either section 16 or the federal cash sales act of 1820. The Commissioner of the State Land Office reported that this low price helped explain the decline in the sales of the higher-priced Primary School lands. (50)

The federal Swamp Land Acts of 1849 and 1850 (followed by another Act in 1860) were the largest sources of pre-Civil War grants made to Michigan for its state government to manage and sell. These were to be "swamp and overflowed lands unfit for cultivation." Michigan used the federal surveyors' field notes to identify the land claimed under these Acts. In fact, surveyors only noted wet lands on the border lines they were laying. (51) Furthermore, if a survey was conducted during the winter, the survey team would have missed overflowed land that was frozen. That is, identification of swampland was open to interpretation.

Michigan prepared its own list of these lands and submitted them to Washington for approval. (52) In 1850, the state reported 4,544,189 of these acres and added another 2,719,535 acres over the next decade for a total of 7,273,724 acres in 1860. (53) As with the internal improvement acres, the state could only claim land that had not been patented.

Swamplands (and probably other state and federal lands) were to be sold in multiples of 40-acre units. (54) If not sold at auction, they were then made available through private sale (private entry). The buyer dealt directly with the state land office. With its large grant of swampland, the state should have had some wherewithal to fund infrastructure projects. Congress specifically intended that "all. proceeds from the lands ... be applied exclusively, as far as necessary to the purpose of reclaiming such lands by means of levees and drains." (55)

When first offered, swampland had a minimum price of 7.5 cents an acre. (56) This price was raised to \$1.25 an acre in 1858, the price that most such land was sold, according to the State Land Office. (The State Legislature approved new pricing in 1869, a date

beyond the present article's time frame.) As with Primary School lands, the state provided liberal credit terms: 25 percent down and a 10-year payment schedule.

Michigan received other large grants, especially for railroads and the St. Mary's Falls Ship Canal Company. Acting as a pass-through agency, the state was to transfer these lands to private companies that in turn sold acres to farmers, lumbermen and speculators. However, few such sales were transacted prior to the 1860 federal census. Congress approved concessions to nine railroad companies in 1856. Five of these were in the Lower Peninsula. (57)

The Grand Rapids and Indiana Railroad was eligible for 853,000 acres; a road linking Jackson, Lansing and Saginaw qualified for nearly 744,000, and the Flint & Pere Marquette could claim nearly 513,000. (58) A designated company had to complete twenty miles of road in order to receive the odd-numbered sections of land within six miles on either side of the line (but only among land not patented). Land designated as swamp and overflowed could be claimed. However, few of these acres seem to have been awarded to companies and then subsequently sold to private parties prior to 1860. Railway companies did claim land, and in some counties (including Midland), the issuing of new federal patents was suspended until the railroads completed their selections. Unlike the federal and state programs, prices could be adjusted according to the quality, vegetation and location of the land.

Similar flexibility was provided the St. Mary's Falls Ship Canal Company, as Congress on August 26, 1852 qualified the company for 750,000 acres anywhere in the state not already patented or given a special designation, such as mineral lands. (59) The state worked with the company in selecting its land. While the company received much of its land by 1855, Greffenius's search of Michigan records found that the selected land was not sold to the public until after 1860. (60) (The first ship passed through the canal on June 18, 1855.)

Michigan's land-disposal programs were not just a shadow of the federal ones. In at least two of its grant programs the state had a more proactive role in identifying higher quality agricultural and pine timber acres. First, potential patentees' information costs were significantly reduced under the Distribution Act of 1841 that granted Michigan 500,000 acres of federal lands to be sold by the state with the receipts to be used for internal improvements. The state contracted with John Ball, an experienced land looker with knowledge of the Grand River country. It took him a year to select more than 300,000 acres, mostly good agricultural land in the Ionia region of GLO. By 1844, over 492,000 acres were selected in ten counties in the southwest part of the state, as well as seven in the east, including Saginaw and Shiawassee. The first of these lands were offered for sale in 1843 but instead of the state selling directly to buyers, scrip for the land was issued to contractors as payment for improvement projects. As noted earlier, these contractors in turn sold the land free of minimum price levels that the state used for its other programs (such as the public school lands). (61)

Second, equal if not even greater care was presumably used by the Saint Mary's Falls Ship Canal Company for 560,000 (of its 750,000) acres, primarily pinelands "within a reasonable distance of good streams for floating logs." With the concurrence of the state, the company employed between 55 and 75 "experienced woodsmen, surveyors and lumbermen" working in 18 to 25 separate parties over an 18-months period in 1853 and 1854. Most of these lands were in 26 counties in the northern part of the Lower Peninsula. The company freely made its maps and field notes available to potential buyers. Given the confidence that the company had in its selections, it varied the prices from 5 to 15 dollars per acre depending on quality and quantity. Credit was also available. (62)

Any benefits potential buyers enjoyed from the state's own programs were offset by two linked major failures. First, the state was constrained in the contributions it could make to transportation and other infrastructure projects that would have improved settler access to land, and, second, the state's early failure to provide infrastructure, together with weak laws and oversight, ruined the state's credit standing and decimated Michigan's banking community. As a result, there was minimal bank credit for buying land or follow-on farm-making.

At its inception as a state, Michigan (as well as other new states) did not have the private capital to fund ambitious improvement projects, including railroads, canals and wagon roads. The state's solution was to borrow the needed funds--which it did through a \$5-million bond issue that pledged the state's credit to retire the debt. This borrowing was authorized in Article XII. 3 of the State's 1835 constitution (adopted two years prior to statehood). "Internal improvements shall be encouraged by the government of this state; and it shall be the duty of the legislature, as soon as may be, to make provision by law for ascertaining the proper objects of improvement in relation to roads, canals, and navigable waters, and it shall also be their duty to provide by law for an equal, systematic, economical application of the funds which may be appropriated for these objects." (63)

A combination of a banking crisis in 1837 (to be discussed below), unwise decisions by the state, purchases by land speculators, and wildcat banking all contributed to the ruin of the state's credit and its banking system. (64) In response to this history, the state's revised constitution of 1850 limited the state's debt to \$50,000 and (in Article XIV, Sec. 9) prohibited the state from becoming a party to or having an interest "in any work of internal improvement" or "in carrying on any work, except in the expenditure of grants to the state of land or other property." However, with its large grant of swampland, the state should have had some financial resources to fund infrastructure projects using the proceeds from the sale of these lands. Congress specifically intended that "all proceeds from the lands ... be applied exclusively, as far as necessary to the purpose of reclaiming such lands by means of levees and drains." (65)

Whoever the buyers were, their payments should have gone into draining the land, an effort that could have encouraged settlers to acquire land and begin farming. Michigan, however, worked around congress's intention by asserting "that no other system of drainage for a new county is so effectual as the construction of public highways." The

trunk lines that were to open undeveloped counties would, according to state leaders, meet congress's objectives by ditching, bridging and filling these new roads. (66) Historians have not yet explored whether the state's approach provided the intended benefits.

Cost and Credit Barriers to Farmer-Settlers

Potential farmer-settlers needed access to their own cash or to outside credit in order to pay for their newly acquired land. The amount of money required depended on both the minimum number of acres for the patent and the costs of farm-making (clearing the land for cultivation, building a farm residence, the price charged per acre, procuring equipment, seeds and livestock, and supporting one's family until the farm generated sufficient cash income to meet the needs of the settler's family).

The high minimum number of acres required under the pre-1820 provisions, as well as the minimum price of \$2 per acre, excluded potential farmer-settlers with modest financial means. Moreover, the federal government discovered that many buyers were unable to meet their annual loan payments. This situation (exclusion of buyers with modest resources and payment arrears) contributed to the passage of the Act of 1820 that dropped the minimum purchase to 80 acres and lowered the price to \$1.25 an acre but required full payment in specie at the time of purchase. In 1832, the required minimum acres were halved again to 40. Nearly all of the land patented in Michigan until 1847 and 1848 (with the implementation of the first of four Military Warrant Acts) was made under the provisions of the 1820 Act, as amended.

By reducing the minimum number of acres in a single patent from the original 640 in 1785 down to 40 in 1832, and by lowering the price per acre from \$2 down to \$1.25, Congress attempted to make it possible for the less affluent to purchase, settle and begin farming. Still, this was a regulated market not open to farmer-settlers who would have preferred 10 to 20 acres, not the 40-acre minimum specified by law.

Despite the 1820 Act's lowering the barrier to becoming a fanner, a large proportion of Americans were still excluded from following this occupation. However, this exclusion was largely due to the cost of farm-making, not the cost of the land itself. Forty acres of land at \$1.25 an acre--or \$50--was within the reach of 90 percent of the population in 1860. (67) However, the total cost of land and farm-making to develop and cultivate that land was about \$1,200 for a 40-acre Midwest farm, \$2,000 for 80 acres, and \$3,000 for 160 acres. (68) If the farmer bought land under the 1820 per acre price of \$1.25, then \$50 was spent for 40 acres (leaving \$704 for other farm purposes). On the basis of these costs, 40 percent or more of the population was too poor to participate at the 40-acre level, the "minimal viable size for a family farm that provided the sole source of support." An 80-acre farm was beyond the means of 54 to 74 percent of the population. "Even tenancy on an 80-acre farm lay beyond the means of 5 to 25 percent of the population." Atack and Bateman state that a "midwesterner should have had at least 80 acres" to be profitable. (69)

To help lower the entry costs to farming and to mitigate the need for credit, two new sets of laws were approved unrelated to raising revenue for governments. First, Congress approved a series of acts awarding military veterans and their survivors with warrants (scrip) that could be used to purchase land or, beginning in 1852, to sell the scrip on the open market. Second, the Graduation Act of 1854 reduced the price of an acre according to how long the land had been on the market unclaimed. Both sets of these laws had significant implications for Michigan.

Congress approved Military Bounty Land Grants in 1847, 1850, 1852 and 1855. All four acts provided scrips for 40 and 160 acres. Two acts provided scrip for 80 and 120 acres. (70) "Wholesale traffic in military bounties" began in 1852 when Congress made all warrants assignable. (71) Fifty million of the sixty million acres in warrants issued nationwide before the Civil War were "taken up by purchasers." (72)

The price of warrants was listed by financial news services. Except for the period February 1853 through May 1856, the median monthly warrant price never exceeded a dollar an acre. (73) Oberle estimated that 2,264,000 Michigan acres were patented using these warrants. (74) Juxtaposing his estimates with those provided by the GLO and others indicates that warrant sales exceeded cash sales by more than three to one after the introduction of this new system.

Beginning in 1854, two years after bounty land warrants were made assignable (freely sold on the market), the Graduation Act reduced the price of land according to the number of years it had remained on the market unsold. After ten years, the price of an unsold acre was reduced to \$1; after 15 years the price dropped to 75 cents an acre; the price was reduced to 25 cents after twenty years and only 12.5 cents after thirty years. (75) As all of Michigan had been surveyed by 1854, this meant that up to approximately 8,785,890 of unpatented acres were covered by the Graduation Act. And as there was no limitation on the number of acres one person could buy (after an initial 320-acre cap was lifted), this Act was of particular benefit to lumber interests and speculators.

Although the prices of some state lands were reduced and thereby lowered the cost barrier to becoming a farmer-settler, there was still an absence of credit to cover the costs of farm-making. The 1837 crisis that fundamentally altered the state's approach to providing infrastructure that might have encouraged more farmer-settlers also nearly eliminated all banks in the state. Michigan's General Banking Law of March 15, 1837 allowed any twelve landowners to create a banking association by applying to a county clerk or treasurer. The required capital stock of \$150,000 was to include thirty percent in specie. This free banking law was an invitation to dishonest sell-serving locals to enhance their own land holdings and investments. (76) One analysis of twelve free banks in 1838 found that 75 percent of their loans went to the directors and stockholders. "Unimproved real estate was the principal collateral for loans and was thus the ultimate backing for the currency they circulated. Banks were frequently organized by lending money to their promoters to complete the purchase of their shares. The promoters then pledged these stocks for the loans they received to buy them." (77) County tax assessors contributed to

these hoaxes by overvaluing the unimproved land that borrowers used as collateral for the loans they made to themselves. (78)

Michigan's banking system was of minimal assistance to farmer-settlers and to those who needed credit to acquire land. The banking crisis of 1837 that led to the state's bond debacle and the loss of good credit standing also eliminated most of Michigan's banks. Only one of the 67 banks chartered in Michigan between 1835 and 1846 "preserved an untarnished credit record." (79) The U.S. Treasury Department reported only six Michigan banks in 1851 and only four in 1855. (80) Thompson's Bank Note and Commercial Reporter listed nine state banks (including an insurance company) operating in Michigan in August 1854. Only two of these nine issued notes as large as (but not larger than) \$10. (81) Even these were of uncertain value, as bank notes were typically discounted against gold and foreign currencies, Michigan had to rely primarily on private bank notes issued by out-of-state institutions, and these notes were generally valued at their face value only within a 50 to 100-mile radius of the issuing bank. (82) As a result of the absence of an adequate financial infrastructure, Michigan had the least bank money per capita of the five states in the Old Northwest between 1820 and 1860. (83) And since private banks, not the state or federal governments, issued paper notes, this meant higher transaction costs and uncertainty in land and other market transactions. In 1861, there were 1,601 state-chartered banks nationwide. They issued about 10,000 differently designed circulating notes. (84)

Despite this unfriendly environment for decision-making, one author writing in 1975 wrote that there was no evidence in the literature "that shortage of credit and currency exerted a restraining influence on the growth process of Michigan." (85) If this were true, where then did yeoman farmers find the funds necessary to buy their land and begin developing it?

We know of five sources but not how many settlers drew on each. First, as already mentioned, the State of Michigan provided credit under its own privatization programs. Speculators were often the beneficiaries of these programs. For example, the deed books for Midland County show that John Larkin, perhaps the county's wealthiest resident, was the grantee for 40 swamp land acres in 1858 and 270 acres in 1859, as well as 160 acres of primary school land. The credit terms for one of these sales read "received there from the said purchaser is the sum of one hundred and sixty dollars and that the consideration to be paid for the said purchaser is the sum of four hundred and eighty dollars to be paid at any time hereafter at the option of the purchasee but the interest of seven per centum from the whole amount of principal unpaid to be paid annually on the first day of March or within sixty days thereafter in each and every year ..."

Speculators and grantees were a second source of capital. The St. Mary's Falls Ship Canal Company is known to have extended credit. Third, of course, farmers used the proceeds from the sale of their farms back east (or elsewhere) to finance the purchase of Michigan land and to begin farming it. Fourth, prominent local Michigan men bought and sold mortgages in their own county. Midland resident John Whitman's name appears in the county's early deed books as having funded mortgages and later to have sold them to

other investors. Fifth and finally, there were both informal and formal means by which eastern investors provided mortgage funds for Michigan land-buyers, including farmer-settlers. (86) It is possible that Michigan's usury laws (which every antebellum state except California had) might have discouraged this source of credit. However, the interest rate caps could be evaded by "placing the nominal value of the debt above the actual sum." (87) There was also a national market for bankruptcy and tax-auctioned lands. For example, the Midland deed books record that Frederick Shaw of New Bedford, Massachusetts bought the land of Mathor and Susan Larue when this couple failed to make their mortgage payments. These were typically short-term balloon mortgages. (88)

Speculators

The founding fathers had ambivalent attitudes toward speculation and speculators. In his letter of 1787 to George Washington, Richard Henry Lee warned that a "strong toned government" was necessary for the Northwest Territory because of the "uninformed, and perhaps licentious people" who would take advantage of a situation without clearly defined property rights. (89) On the other hand, Americans in and out of government were large speculators. George Washington, Thomas Jefferson, Patrick Henry, Supreme Court judges, congressmen, senators, governors and men with money were early land speculators before and after the Revolution. (90) At a later time, Daniel Webster owned extensive land holdings in Michigan, Illinois and Missouri. (91) Some land was already owned or at least claimed by pre-Revolutionary settlers--for example, French-Canadian settlers bordering Lake St. Clair in Michigan. But there were also fabricated claims ranging up to 130,400 acres. (92) A federal Board of Land commissioners created in 1812 found "incredible forgeries, fraud, subornation and perjuries" in Illinois. (93) Richard Henry Lee's fears of licentious people were well founded. Michigan had its share of these individuals.

Federal land programs, according to some researchers, actually allowed if not encouraged large-scale speculators rather than farmer-settlers. Certainly the evidence points to the effects that speculators have had on land markets in general and the patenting of federal lands in particular. For example, pure speculators were behind the robust sales in 1836 and in other years. Their buying was fueled by reports of large capital gains already realized and anticipated in the immediate future. John Gordon refers to a number of these gains in the chronicle he kept during his search for Michigan land in 1836. One man expected to make a 1,000 percent gain over five years. Another claimed his capital increased from \$5,000 to \$500,000 prior to 1836. Gordon himself wrote that the state had "great opportunities for making a fortune by investing in Public Lands." (94) His was a widely held opinion, as one source claimed that speculators bought 81 percent of the land sold in the Branson (Kalamazoo) area from 1834 to 1837. (95) Statewide, seventy parties entered 955,000 acres before 1860, an average of 13,643 acres per buyer. (96) Jones listed six large speculators, one from Massachusetts and the rest from New York. Gates mentioned three speculators from Maryland (Charles and William Carroll and Daniel Fitzhugh), as well as the Wadsworths from Connecticut. (97)

While the connotation is that speculators had negative effects on the market for land and farmer-settlers, some researchers have argued just the opposite. Instead of speculators being the force behind shifts in the number of acres being patented, one economist claimed that land sales in the 1850s reflected "real economic forces rather than purely financial speculative motivations." Rising agricultural prices after 1850 were claimed to be the driving force. (98) Two other economists looking at whether large-scale speculators reduced national income by withholding potential agricultural land from production found virtually no such effects in 1850. (99) Still other researchers have argued that the inequalities of wealth (including land) in neighboring Ohio were not particularly oppressive. (100) Moreover, speculators extended credit and thereby became the "means by which cash-poor people bought land and made improvements." (101) And, finally, Allan Bogue and others have argued that "speculators did not constitute a distinct class: nearly everyone speculated on one level or another." That is, farmer-settlers with modest financial resources could buy additional 40-acre parcels for speculative or farming purposes. As Gates noted, the "pioneer farmer was well aware that in the end his profits would come largely from rising land values," a conclusion supported by Atack, Bateman and Parker's analysis of rates of return realized by Michigan farmers in 1860. Without capital gains, there was a negative 0.5 return. Capital gains gave a positive 5.8 rate of return. (102) Speculation, according to these authors, was part of if not central to the patenting decisions that farmers made.

While there were small-scale speculators, there were also larger ones who bought land throughout Michigan as well as in other states. Their holdings included pinelands and proven agricultural acres in already settled farming townships in the state's southern tiers of counties. A few owners attempted to promote new villages by issuing clearly false information--for example, that "It is confidently believed from the great natural and acquired advantages of Allegan that it will ere long rank with the first cities of the west." (103) Promoters of Oscoda County in the northeast part of the state claimed the county had four-foot tall alfalfa and head-high rye. (104) Settlers who relied on these dishonest promotions were victims of their own unwise decisions.

At least the larger speculators and lumbermen did not rely (at least not entirely) on rumors and claims. With one alleged exception, large buyers were said to have either personally examined the sites they bought or contracted the selection (and subsequent management) to experienced landlookers and timber cruisers. (105) According to Benson, "[l]umbermen and speculators seldom, if ever, bought pinelands without careful study." (106) William and Charles Carroll (father and son) were the exception when in 1836 they purchased unseen all the unsold land in several townships in Monroe County. Jones reported that most of the 40,000 acres involved in this transaction were low and swampy. (107) The surveyors' field notes available to these brothers should have alerted them to how unwise a decision they were making.

Larger-scale speculators in later years could reduce their acquisition costs by using lower-priced military warrants. In fact, the Commissioner of the General Land Office estimated that 90 percent of all military warrants were used for land speculation. However, Benson estimated, on the basis of her sample of 147 Michigan townships in 49

Lower Peninsula counties, that military bounty land warrants in the state were used primarily to acquire pinelands. (108) Michigan attracted many large lumber interests. Some lumbermen from Maine and New York began investigating and purchasing Lower Peninsula pinelands as early as 1836. (109) Based on her sample of townships, Benson found 320 buyers of 304,811 timbered acres (952 acres per buyer). These large purchases were well ahead of logging operations. And no doubt some purchasers were speculators who hoped to sell their land and the trees on it to other lumbermen, or at least to sell the logging rights. In any case, military warrants had only a minimal impact on farm-formation in Michigan.

Still, the concept of speculation has been associated with large purchasers of farmable land. According to one study, a speculator was "an individual who purchased large acreages of unimproved lands intending to sell after land values had risen sufficiently to make their sale remunerative and was not interested in working the land as a personal enterprise or in building up a long-term tenant estate. (110) This definition emphasizes both motivation and settlement, presumably by a farm family. One Canadian study limited the concept of speculation to people or institutions owning at least 400 acres of land and engaged in at least three transactions beyond their immediate family. (111)' One might add that plots should be non-contiguous. But these definitions incorrectly exclude farmer-settlers who bought more land than they could farm or anticipated farming. There were large numbers (probably a good majority) of such farmers in Michigan. They were both cultivators and speculators.

Settlement Strategy

The United States did not adopt an integrated settlement strategy such as the Canadians developed over time with the construction of "colonization roads," financial guarantees for railroad companies, and specific searches for land with good agricultural potential. (112) Moreover, the lack of federal credit provisions shifted the responsibility for any such features to the states and their residents. Michigan incorporated credit features in its own disposal programs, although the state's private sector financial system did not bring acclaim to Michigan or credit to new settlers.

As noted earlier, the state's large grant of swampland should have provided the wherewithal to fund infrastructure projects. Congress specifically intended that "all proceeds from the lands ... be applied exclusively, as far as necessary to the purpose of reclaiming such lands by means of levees and drains." (113) The state promoted the sales of these lands, as it promoted immigration. (114) In a flyer dated June 3, 1858 and titled Great Land Sale, About 5,000,000 Acres of State Land to be Offered at Public Sale, the State Land Office claimed that these were "not only the best grain and grassland" but also of "the most valuable pine" and other timber. Speculators were encouraged, as "great bargains will by many undoubtedly be made." Land was available in 48 Lower Peninsula counties, with most acres in the middle and northern-tier ones. As was the St. Mary's Falls Ship Canal Company sale, this swampland promotion was of much greater interest to lumbermen than to settlers, although the latter were offered more attractive credit terms. In fact, an 1868 U.S. House of Representatives committee found that half of all

swampland nationally was in the hands of speculators, (115) still, the sale of these lands should have provided the State of Michigan with funds to support settlement-friendly infrastructure projects. (116) As noted earlier, the state intended to use the proceeds from swampland sales for ditching, bridging and building roads.

SUMMARY

The Land Ordinance of 1785 and the Northwest Ordinance of 1787 laid the predicate for the creation of the State of Michigan and the steps necessary to privatize its land and encourage settlement. An initial step was to remove the sovereignty claims of Native Americans and then to physically remove these people themselves. Before land could be sold (patented), a procedure was needed to locate its exact geographical coordinates as a way to provide secure legal title to a patent. This challenge was accomplished by rectangular surveys, only a portion of which seemed to have been technically deficient or fraudulent. In the course of the surveys, the private contractors who performed this work were required to note the suitability of soils for agriculture as well as the trees and vegetation of interest to lumbermen.

Implementing privatization required the building of large administrative staffs that were to employ transparent procedures and make the results of land surveys publically available. The General Land Office at the federal level and Michigan's own State Land Office differed in their programs and privatization requirements. Federal programs did not provide credit, while Michigan (in the absence of a strong private sector financial system) did extend credit. Some lands granted to the state were for dedicated purposes, including internal improvements. Several large grants were congressionally approved pass-throughs to private transportation-related companies.

Demand for land and the number of patents processed varied over time in response to various domestic and international events. Surveys and patenting were not fault-free, as there were complaints about mis-management and fraud in both programs.

While the number of acres patented in Michigan is impressive, the privatization process was plagued by both policy and implementation problems. On the policy side, the initial federal privatization objectives were to raise revenues to retire the national debt and support the general government while at the same time encouraging the settlement of public land states. (117) Settlers in turn would provide state and local governments with tax revenues for infrastructure and other public purposes. The revenue objective was subsequently abandoned, and the settlement objective never became part of a more general policy that provided credit to farmer-settlers or an infrastructure that would facilitate access to land and the products harvested from it. Moreover, neither the federal nor state programs recognized that land was a heterogeneous resource that differed by soil, the vegetation it supported, climate (growing season) and access to markets. All land under the same basic legislation had the same initial minimum per-acre price.

It is not surprising that the privatization process did not always go as anticipated. In part this was because of the large number of acres and the demand for them. This demand

created a heavy administrative burden on agencies responsible for implementing a changing array of some 3,000-plus land laws (118) at a time when business practices did not give high priority to ethical and lawful practices. This imbalance between demand and the systems to satisfy the demand was not just a problem peculiar to the federal government, for Michigan's own privatization programs had problems parallel to those experienced by the national government. Michigan, for example, did not adopt an integrated settlement strategy that included transportation infrastructure, the drainage of swamp land, and a financial system that would provide farmers with mortgage loans and working capital. While the federal programs were criticized for facilitating rampant speculation, (119) some of Michigan's programs actually encouraged speculators.

The cost of land was a minor portion of the total costs a settler incurred in farm-making. Therefore, government programs to reduce the cost of land itself did not eliminate the cost barriers to becoming a farmer-settler. (120) In fact, a good percentage of Americans were excluded from becoming farmers. The barriers to market entry might have been lower if Michigan had a strong banking and credit system. In fact, the state's own early near-bankruptcy helped weaken the private financial sector, one that did not contribute to the privatization of Michigan lands and the development of a financially secure sector of farmer-settlers.

From its inception, America was peopled by speculators. Michigan had its share of these risk-takers who took advantage of national and state land policies. But it is not clear whether speculation had all the negative effects attributed to this pejorative term. Yes, there were bunkum peddlers, but farmer-settlers were themselves speculators. In fact, capital gains from speculation converted a negative rate of return on farming to a positive one.

Despite the deficiencies and failures of both the federal and state laws and implementing agencies responsible for transferring Michigan's public lands to private ownership, the privatization process was truly a monumental task that achieved many of the objectives set for it.

(1) Michigan became a state in 1837.

(2) Ruben Greffenius, *Development of Michigan Public Land Policy* (University of Michigan Ph.D. dissertation, 1968) and Karl Reynold Hostord, *Evolution of the Organizational Structuring and Land Resource Responsibilities of the Department of Natural Resources in Michigan, 1785-1978* (Ph.D. Dissertation, Michigan State University, 1979). Hosford relies heavily on Greffenius's dissertation.

(3) Dallas Lee Jones, *The Survey and Sale of the Public Land in Michigan, 1815-1862* (Master's Thesis, Cornell University, 1952). Also see Rose Lockwood Moore, *Of Berry Pickers, Shanty Boys, and the Jack Pine Bird, Patterns of Settlement and Subsistence in Nineteenth Century Oscoda County (Michigan)* (Master's Thesis, Western Michigan University, 1990).

(4) See Kenneth E. Lewis *West to Far Michigan, Settling the Lower Peninsula, 1815-1860* (East Lansing, Michigan State University Press, 2002). His chapter 5, titled "The Transfer of Land" provides a useful overview of different Native Americans, the initial legal framework for

privatization, the surveying of Michigan lands, and some of the federal land grants to the State. His chapter 6, titled "The Settlers' Acquisition of Land" also provides information on everything from state banks to the influence of speculators. Also see references in Willis E Dunbar & George S. May, *Michigan, A History of the Wolverine State* (Grand Rapids, William B. Eerdmans, 1995, Third Revised Edition).

(5) Paul W. Gates, *Farmer's Age Agriculture 1815-1860* (Armonk, NY, M. E. Sharpe, 1989), 432. The best (but scattered) history of land policies in Michigan can be found in Gate's magisterial *History of Public Land Law Development* (Washington, Superintendent of Documents, 1968). Gates is the dean of scholars on American public land policies. Susan E. Gray seems to be the only response to Gates' challenge. See her *The Yankee West, Community Life on the Michigan Frontier* (The University of North Carolina Press, 1996). She refers to early patents taken in Kalamazoo County. Also see Moore, *Of Berry Pickers*. The present author will be reporting on the results of his review of all patents in one mid-Lower Peninsula county.

(6) These 12 million refer to all grants as of around 1968. Gates, *History of Public Land Law Development*, Appendix C.

(7) Greffenius, *Development of Michigan Public Land Policy*, 219. Another source reported that the Federal government disposed of about two-thirds of all patentable land in Michigan while the state was responsible for the other third. Barbara E. Benson, *Logs and Lumber, The Development of Lumbering in Michigan's Lower Peninsula 1837-1870* (Mount Pleasant, Clarke Historical Library, Central Michigan University, 1989), 27. Privatization was followed by settlers. For example, the 71,580 families enumerated in the federal census of 1850 doubled to 143,587 ten years later. The number of farms increased during the same decade from 34,089 to 62,422. These settlers, however, accounted for less than half of all patented acres.

(8) Joseph Kennedy, *Agriculture of the United States in 1860* (Washington, Government Printing Office, 1864), 222. Compiled from *Statistics of the State of Michigan, Compiled from the Census of 1860* (Lansing, John A. Kerr, 1861), 309. She refers to the Lower Peninsula only. However, it is not possible to distinguish between lands held by speculators and those patented by lumbermen.

(9) Contrary to some popular conceptions of a hunter and gather economy, many of the woodland Native Americans, including the Hurons, "were able to keep extensive cornfields productive for a dozen years or more without resorting to what modern farmers depend upon ..." New "white" settlers were not the first to farm Michigan's soils. Wilbur R. Jacobs, "The Indian and the Frontier in American History - A Need for Revision," in David Ward ed., *Geographic Perspectives on America's Past* (New York, Oxford University Press 1979), 73. In addition to the preparations required before privatization could commence, the 1785 and 1787 ordinances covered other important features. For example, primogeniture and entail were made illegal in order to avoid the development of a feudal land system. Two tax features were specified as well: states could not tax federal property, and non-residents were not to be taxed at a rate higher than what was imposed on residents. These pre-constitutional statutes were, however, silent on how land was actually to be privatized with regard to the prices to be charged and the minimum number of acres required of a patent. These details were specified in later statutes.

(10) Thomas McIntyre Cooley, *Michigan, A History of Governments* (Boston, Houghton, Mifflin, 1906), 128. Peace and friendship were not assured, as unrest among these native peoples in 1815 threatened to delay land surveyors working in Michigan and Illinois. Malcolm J. Rohrbough, *The Land Office Business, the Settlement and Administration of American Public lands 1789-1837* (Belmont, Ca, Wadsworth, 1990), 66.

(11) John Thornton draws parallels between African and Native American lack of concepts of the private ownership of land. See his *Africa and Africans in the Making of the Atlantic World. 1400-1800* (Cambridge, Cambridge University Press, 1998, second edition).

(12) It involved a strip six miles wide along the Detroit River as well as all of Mackinac Island. Dunbar and May, Michigan, 100-01.

(13) Jones, *The Survey and Sale of the Public Land in Michigan, 1815-1862*, 4-6. For a history of treaties with Michigan Native Americans, see Helen Hornbeck Tanner, "Mapping the Grand Traverse Indian Country, The Contribution of Peter Dougherty," in *The Michigan Historical Review* (31, 1, Spring 2005), 44-91; Patrick Russell LeBeau, *Rethinking Michigan Indian History* (East Lansing, Michigan State University Press, 2005); Erminie Wheeler-Voegelin, *Indians of Northern Ohio and Southeastern Michigan* (New York, Garland Pub., 1974). For a brief history of early treaties, Indian reservations, Treaty cessions and the removal of Native Americans, see Dunbar and May, Michigan, 97-100. The early cessions included provisions allowing Native Americans to remain on "lands reserved for their use" but by the 1830s, "the government had adopted a policy of moving all the Indians ... to areas west of the Mississippi." For later policies, see Dunbar and May, Michigan, 155 ff. For other accounts, see Lewis, *West to Far Michigan*, Chapter 5 and Charles E. Cleland's *Rites of Conquest, The History and Culture of Michigan's Native Americans* (Ann Arbor, University of Michigan Press, 1992).

(14) Cleland's chapter 6 in his *Rites of Conquest* is titled "Not the Feelings of Their Hearts." Henry Schoolcraft was accused of trickery in his negotiations with the Saginaw Chippewa. Michael A. Leeson, *History of Saginaw County, Michigan* (Chicago, Chapman, 1881), 157- For an international comparative history of land-taking from indigenous peoples, see John C. Weaver, *The Great Land Rush and the Making of the Modern World, 1650-1900* (Montreal, McGill-Queen's University Press, 2003). If the native Michigan populations did not fully appreciate the expansive forces against them, it is clear that these forces did not understand Native Americans in general and those in Michigan in particular. Even as late as the 1860s, the Saginaw-area Native Americans (Chippewa) were considered "semi-civilized" who, like other Native Americans, were seen as hunters and gatherers with only limited agriculture and no permanent settlements. James Mills, *History of Saginaw County, Michigan* (Saginaw, Seeman & Peters, 1918), 26. Some Americans argued that not only was the land not being used but the Chippewa were at times "at war with other nations." (Quoted by M. Montford in her *Ethnic and Tribal Identify Among Saginaw Chippewa*, (Unpublished M.A. Thesis, Michigan State University, 1990), 28-29. They were seen as a physical threat to white settlers. And, in fact, the first surveyor sent to Midland County "was killed by the Indians in 1831." Dorothy Lang-don Yates, *Salt of the Earth, A History of Midland County Michigan* (Midland: The Midland County Historical Society, 1987), 13. Yates does not reference the source for this information.

(15) Both patent and deed records indicate occasional deviations from this locational system.

(16) Andro Linklater, *Measuring America, How an Untamed Wilderness Shaped the United States and Fulfilled the Promise of Democracy* (New York, Walker & Company, 2002); C. Albert White, *A History of the Rectangular Survey* (Washington, Superintendent of Documents, 1983); E. Wade Hone, *Land & Property Research in the United States* (Salt Lake City, Ancestry, 1997).

(17) According to one source, a "hardwood stake was driven into the ground at each section corner, with about a foot length left showing above the ground." Dunbar and May, Michigan, 155. John Gordon wrote in the diary he kept during his 1836 visit to Michigan that "The 4 sides of sections are marked by blazed trees and the comers ... have 4 trees numbered ..." John M. Gordon, "A Speculator's Diary," Justin Kestenbaum, ed., *The Making of Michigan 1820-1860, A Pioneer Anthology* (Detroit, Wayne State University Press, 1990), 135.

(18) Hugh Prince, *Wetlands of the American Midwest, A Historical Geography of Changing Attitudes* (Chicago, University of Chicago Geography Research Paper No. 241, 1997), 137. Soils were to be classified as first, second, or third quality for agricultural purposes. Canadian surveyors were also specifically instructed to look for good agricultural land. John Laddell, *They Left Their Mark, Surveyors and Their Role in the Settlement of Ontario* (Toronto, Dundurn, 1993), 135. Also

see Lowell O. Steward, *Public Land Surveys, History, Instructions, Methods* (Ames, Iowa, Collegiate Press, 1935), 146 and Prince, *Wetlands of the American Midwest*, 197.

(19) Thomas Vale, *Plants and People, Vegetation Change in North America* (Washington, DC, Association of American Geographers, 1982), 57.

(20) Jones, *The Survey and Sale*, 26-27, as well as 17-20. For dates that sales began in different counties, see his page 40. For a history of surveys, see Linklater, *Measuring America*.

(21) Jones, *The Survey and Sale*, 67. Surveyors often worked under very difficult conditions - - of unbearable mosquitoes, thick underbrush, swampy land, and winter snows and cold. My comparison of notes kept by several surveyors working in Midland County suggests that even honest workers differed widely in the number of observations they made and probably in the accuracy of them.

(22) From Vol. II, page 52 in the surveyors' original notes available in the archives of the Bureau of Land Management in Springfield, Virginia.

(23) Norman C. Caldwell, *Surveyors of the Public Lands in Michigan, 1808-2000* (Owosso, Michigan, N. C. Caldwell, 2001), 17.

(24) The township names can be found in the non-indexed files RG 67-27 of the Michigan State Archives.

(25) Annual Report of the Commissioner of the State Land Office (Joint Document No. 4 dated December 1, 1855, State of Michigan, Legislature, 1855), 11.

(26) For a history of GLO, see Milton Canover, *The General Land Office, Its History, Activities, Organization* (Baltimore, Johns Hopkins Press, 1923). The five states were Michigan, Ohio, Indiana, Illinois and Wisconsin.

(27) For the names and dates of these thirteen and sources relating to them, see Harry Yoshpe and Philip Brower, *Preliminary Inventory of the Land-entry Papers of the General Land Office* (Washington, National Archives, 1949). Congressional action was required to make additions and changes. See, for example, *Law of the United States of a Local or Temporary; Character and Exhibiting the Entire Legislation of Congress .Which the Public Land Titles in Each State and Territory Have Depended* (Washington, Government Printing Office, 1884), Vol. 1,202,213,219. '

(28) Rohrbough, *The Land Office Business*, 197. Douglas H. Gordon and George S. May, eds., "Michigan Journal, 1836, John M. Gordon," *Michigan History* (43, 3, September, 1959), 283.

(29) For a brief summary of these operations, see Yoshpe; and Brower. *Preliminary Inventory of Land-Entry Papers*, 2-3,

(30) Harriette M. Dilla, *The Politics of Michigan 1865-1878* (New York, AMS Press, 1970 reprint), 240. Jones, *The Survey and Sale*, 17.

(31) Dunbar and May, 9 93.

(32) The title of his article in the *Review of Economic Statistics* (Cambridge, MA, Harvard University Press, 1927) 41-53 and reprinted in Vernon Carstensen, ed., *The Public Lands, Studies in the History of the Public Domain* (Madison, University of Wisconsin Press, 1968).

(33) For details, see Gates, *History of Public Land Law Development*. His chapter IX examines the effects of the Panic of 1837. Hugh Rockoff reported that the stock of money fell 18.5 percent between 1856 and 1857. See his "Banking and Finance, 1789-1914" in Stanley Engerman and

Robert Gallman, *The Cambridge Economic History of the United States* (New York, Cambridge University Press, 1996), 667. Also see James W. Oberly, "The Demand for Public Land, 1847-1860." Appendix D in his *Sixty Million Acres, American Veterans and the Public Lands before the Civil War* (Kent, Ohio: Kent University Press, 1990). He argues that the Graduation Act was largely a southern phenomenon and therefore had little effect on the demand for land in the North - - but that for "each rise of one cent in the wholesale price of wheat, nearly 79,000 additional acres of public lands were located by private individuals the next year ..." (176). For the effects that crop failures in Europe had on the price of U.S. wheat and corn, see Roy Rob-bins, *Our Landed Heritage, The Public Domain 1776-1936* (Lincoln, University of Nebraska Press, 1962), 197. For a general economic history of pre-Civil War America, see Jeremy Atack and Peter Passell, *A New Economic View of American History* (New York, Norton, 1994).

(34) According to the 1850 Annual Report of the Commissioner of the State Land Office, "a large quantity of internal improvement lands" was being sold "at the low price of from thirty to forty cents per acre." Other years might have had a different pricing policy. Annual Report of the Commissioner of the State Land Office (Joint Document No. 5 dated December 1, 1849, State of Michigan, Legislature, 1850), 6. A complete listing of these micro-filmed reports are available at the Law Library of the Library of Congress in the CIS US Serial Set Index, Part I, American State Papers and the 15-34th Congresses 1789-1857, Subject index, L-Z and Part II, 35th-45th Congresses 1857-1879 Subject Index, 1-Z (Washington, Congressional Information Service, n.d.). For Part I, see pages 998-1002, 1126-31. For Part II, see pages 630-31, 694-98. For a different account of the alienation of internal improvement lands, see Lewis, *West to Far Michigan*, 101.

(35) These observations are based on my review of Midland County's tract books archived in the Bureau of Land Management's Eastern State Office in Springfield, VA. Thanks to Jennifer Spencer of this office for her kind assistance in accessing these books and other materials.

(36) Greffenius suggests that Michigan's internal improvement lands listed as sold may have not been alienated--that is, sold to private owners. Instead, the state provided contractors with scrip for land in lieu of cash payments. *Development of Michigan Public Land Policy*, 219. I have not found information on how long it took for companies to sell the land to pay for their expenses.

(37) Greffenius, *Development of Michigan Public Land Policy*, 240.

(38) Harry N. Scheiber, "Land Reform, Speculation, and Governmental Failure, The Administration of Ohio's Canal Lands, 1836-60," *Prologue* (VII, 1975), 85.

(39) Lucile Kane, "Federal Protection of Public Timber in the Upper Great Lakes States," in Carstensen, *The Public Lands*, 441. For congressional opposition to federal enforcement efforts, see Gates, *History of Public Land Law Development*, 191.

(40) Benson, *Logs and Lumber*, 20. For state efforts to avoid similar mischief in the purchase of primary school lands and the credit provisions associated with these lands, see Annual Report of the Commissioner of the State Land Office (Joint Document No. 4 dated December 1, 1855, State of Michigan, Legislature 1855), 7.

(41) Yates, *Salt of the Earth* 27-28.

(42) Benson, *Logs and Lumber*, 248.

(43) Benson, *Logs and Lumber*, 18.

(44) Gates, *History of Public Land Law Development*, 296. This Act also provided 72 sections for what became the University of Michigan, 5 sections for public buildings, 46,080 acres of saline lands, and 5 percent "of the net proceeds from land sales for roads and canals."

- (45) Gates, History of Public Land Law Development, 336.
- (46) Greffenius, Development of Michigan Public Land Policy, 149 (Table VI). Also see Gates, History of Public Land Law Development, 325, 384-85, 804-06.
- (47) Benson, Logs and Lumber, 29. University land was to be sold for \$20 per acre but lowered later to \$12.
- (48) Benson, Logs and Lumber, 29.
- (49) For a complete listing of these microfilm reports, see footnote 34.
- (50) See footnote 34.
- (51) Only the surveyors' notes on township boundaries are in the archives of the Bureau of Land Management.
- (52) Annual Report of the Commission of the State Land Office, 10-11.
- (53) Gates, History of Public Land Law Development, 323.
- (54) Benson, Logs and Lumber, 29.
- (55) 9. U.S. Statutes 519; 11. U.S. Statutes 251; 12. U.S. Statutes 3.
- (56) Jones, The Survey and Sale, 95, Benson, Logs and Lumber, 29.
- (57) For a brief description of each road, see Thomas Donaldson, The Public Domain, its History, with Statistics (45th Cong., 3d sess. House. Ex.doc 47, pt.4), 798-800. Also see Graydon M. Meints, Michigan. Railroads & Railroad Companies (East Lansing, Michigan State University Press, 1992). Gates lists 1,695,510 acres, but over time the total rose to 3,134,058. Gates, History of Public Land Law Development: .379, 384.
- (58) Hosford, Evolution of the Organizational Structuring, 51. Greffenius, Development of Michigan Public Land Policy, 174.
- (59) Three other canal grants were approved in 1865 and 1866. Donaldson, The Public Domain, 258. This publication gives one of the earliest summaries of patent totals.
- (60) Greffenius, Development of Michigan Public Land Policy, 219.
- (61) Jones, The Survey and Sale, 68, 203-04. No information is available on how much was actually in scrip form.
- (62) Saint Mary's Falls Ship Canal Company, 560,000 Acres Pine Lands in the State of Michigan (Detroit. H. Barnes, 1857). Also, Ronald Maybee, Michigan's White Pine Era, 1840-1900 (Lansing, Michigan Historical Commission, 1960), 16. For mineral lands under the same grant, see Irene D. Neu, "The Mineral Lands of the St. Mary's Falls Ship Canal Company" in David Ellis, ed., The Frontier in American Development (Ithaca, Cornell University Press, 1969), 162-191. The present author discovered that despite the company's employment of experienced timber cruisers, only 57 percent of the company's 117 sections patented in Midland County contained pine trees.
- (63) For a history of the debt and associated problems, see John D. Haeger, The Investment Frontier, New York Businessmen and the Economic Development of the Old Northwest (Albany, State University of New York, 1981), Chapter 11 "Eastern Capitalists and State Debts."

(64) Among the several accounts of the causes and consequences of these events, see Ronald E. Seavoy, "Borrowed Laws to Speed Development, Michigan 18.35-1863," *Michigan History* (1975), 39-68.

(65) 9. US. Statutes 519; 11. US. Statutes 251; 12. US. Statutes 3.

(66) LeRoy Burnett, "Roads, Railroads, Recreation, Swamplands and the Building of Michigan," *Michigan History* (72, 4, 1988), 32.

(67) Jeremy Atack and Fred Bateman, "Yeoman Farming, Antebellum America's Other 'Peculiar Institution,'" in Lou Ferleger, ed., *Agriculture and National Development on the Nineteenth Century* (Ames. Iowa State University Press, 1990), 3R33.

(68) The figures for 109 40-acre Michigan farm indicated that \$754 for the (undefined term) farm, \$47 for implements, and \$171 for livestock. An 80-acre farm required \$1,556 for these same expenses, while the 160-acre unit required \$3,285. Atack and Bateman, "Yeoman Farming," 31-33.

(69) Atack and Bateman, "Yeoman Farming", 33, 45.

(70) James W. Oberly is a major source of information and analysis of the national acts. See his, *Sixty Million Acres*, Table 1 (page 3) for a summary of the number of different sue warrants for the four national acts.

(71) Benson, *Logs and Lumber*, 22.

(72) Oberly, *Sixty Million Acres*, 162.

(73) Oberly, *Sixty Million Acres*, 170.

(74) Calculated from Oberly's Table 14. Oberly, *Sixty Million Acres*, 86-87.

(75) I assume that the previously-referenced studies by Atack and Bateman used \$1.25 per acre in their financial feasibility analyses.

(76) For some of the illegal tricks banks employed, see Theodore H. Hinchman, *Banks and Banking in Michigan* (New York, Arno Press 1980 reprint of 1887 edition), 32-33; Gray, *Yankee West*, 45-46; and for general histories of banking in Michigan see Harold Reinholds, *The Free Banking Law, The Michigan Experience* (Ph.D. dissertation, Michigan State University, 1975) and Carter Harry Golembe, *State Banks and the Economic Development of the West, 1830-44* (Ph. D. Dissertation, Columbia University, 1952). For a personal account of one Michigan county's bogus banking practices and the distress caused, especially among "the poorest classes of farmers," see Caroline M. Kirkland, *A New Home or Life in the Clearings*, edited by John Nerber (New York, G.P. Putnam's Sons, 1953) first published in 1839. Chapters 31 and 32.

(77) Seavoy, "Borrowed Laws", 45. Overvaluing would have increased the property taxes of owners, a possible reason why so many owners defaulted during difficult economic times. (Based on the author's search of Midland County's deed books.)

(78) For examples, see Seavoy, "Borrowed Laws," 45.

(79) Seavoy, "Borrowed Laws," 50.

- (80) For a list of banks, their location, capital and date they filed for organization with the Secretary of State, see Hinchman, Banks and Banking, 30-31, as well as 31-32 for private associations providing exchange and some banking functions.
- (81) Thompson's Bank Note and (Commercial Reporter (New York, American Banker), August 21, 1854. This same source also listed retired banks, as well as three "private bankers" in its March 19, 1859 issue.
- (82) William Parker, "The Finance of Capital Formation in Midwestern Development, 1800-1910," in Thomas Weiss and Donald Schaefer, eds., American Economic Development in Historical Perspective (Stanford, CA, Stanford University Press, 1994), 169.
- (83) Donald R. Adams, "The Role of Banks in the Economic Development of the Old North-West" in Klingaman and Vedder, Essays in Nineteenth Century Economic History, 22.3.
- (84) Hinchman, Banks and Banking, 56.
- (85) Reinhold, "The Free Banking Law," 102-03.
- (86) Prince, Wetlands of the American West, 162.
- (87) Weaver, The Great Land Rush, 249-50.
- (88) Jeremy Atack, Fred Bateman, and "William Parker, "The Farm, the Farmer, and the Market," in Engerman and Gallman, the Cambridge Economic History of the United States, 274.
- (89) Gates, History, 72-7.3.
- (90) Linklater, Measuring America, 148-50; Gary Nash, The Unknown American Revolution (New York, Viking, 2005) 171-2. In his letter of 1767 to his agent William Crawford, George Washington wrote "Any person ... who neglects the present opportunity of hunting out good lands, and in some measure making them for his own, in order to keep others from settling them, will never again regain them. From Weaver, The Great Land Rush, 88.
- (91) Gates, History, 124.
- (92) Gates, History, 91.
- (93) Gates, History, 91. He (p. 92) reported that Michigan had 280,769 acres of "confirmed private land claims" from pre-Revolutionary settlers.
- (94) Gordon and May, "Michigan Journal," Michigan History (43, 1, March, 1959), 10-14 and elsewhere in his journal published in three different issues of Michigan History.
- (95) Reinholds, The Free Banking Law, 91.
- (96) Gates. The Farmer's Age, 81.
- (97) Jones, The Survey and Sale, 134-35. Gates, History of Public Land Law Development, 168. The Carrolls were from a large slave-holding family in Maryland. See the various references to this family during the formative years of America in Gary Nash, The Unknown American Revolution (New York, Viking, 2005).
- (98) Stephen Schoene, as reported in Oberly, Sixty Million Acres, 163-64.

- (99) Robert Fogel and Jack Rutner as referenced in Robert Swierenga, "Quantitative Methods in Rural Landholding," *Journal of Interdisciplinary History* (1983,13, 4), 802-03.
- (100) Lee Soltow, "The Growth of" Wealth in Ohio, 1800-1969," in David Klingaman and Richard Vedder, eds., *Essays in Nineteenth Century Economic History, The Old Northwest* (Athens, Ohio, Ohio University Press, 1975), 191-207.
- (101) Andrew Cayton and Peter Onuf, *The Midwest and the Nation, Rethinking the History of an American Region* (Bloomington and Indianapolis, Indiana University Press, 1990), 36.
- (102) Gates, *The Farmers Age*, 399. Atack, Bateman, and Parker, "The Farm, the Farmer, and the Market," 278.
- (103) <http://www.lib.cmich.edu/clarke/mpown.htm>.
- (104) Moore, *Of Berry Pickers*, 88.
- (105) See for ' example, *Michigan Farmer* (1853) 7.
- (106) Benson, *Logs and Lumber*. For the careful and systemic procedures followed by one umber cruiser, see her description on page 27.
- (107) Jones, *The Survey and Sale*, 137.
- (108) Benson, *Logs and Lumber*, 22-23.
- (109) Benson, *Logs and Lumber*, 12, 235-37.
- (110) Alan G. Bogue and Margaret Beattie Rogue, "'Profits' and the Frontier Land Speculator," in. Carstensen, *The Public Lands*, 389.
- (111) John Clarke, *Land, Power, and Economics on the Frontier of Upper Canada (Montreal and Kingston, McGill-Queen's University Press, 2001)* from the online bibliographies of EH. NET reviewed by Douglas McCalla.
- (112) For a review of Canadian settlement policies in the 1840s, see Laddell, *They Left Their Mark*, 133-35, 144.
- (113) 9. U.S. Statutes 519; 11. US. Statutes 251; 12. U.S. Statutes 3.
- (114) For Michigan's role in encouraging immigration, a pamphlet titled *The Emigrant's Guide to Michigan* in both German and English. See Dunbar and May, *Michigan*, 247.
- (115) Prince, *Wetlands*, 147.
- (116) A history of state budgets has yet to be written.
- (117) Virginia's Act of cession in 1783 stated that the revenue from privatizing its territory covered by the Northwest Ordinance "shall be considered as a common fund for the use and benefit of such of the United States that are or might become members of the confederation." Pad W. Gates, *History of Public Land Law Development* (Washington, Superintendent of Documents, 1968), 285.
- (118) Congress approved approximately 3,500 laws dealing with public lands between 1785 and 1880. Vernon Carstensen, ed., "Introduction" in his *The Public Lands, Studies in the, History of the Public Domain* (Madison, University of Wisconsin Press, 1968), xxii.

(119) Horace Greeley, among others, warned against extremely large land holding and the creation of an American land-owning aristocracy and "a modified feudalism." Greeley referred to the Graduation Act. See Robbins, *Our Landed Heritage*, 170.

(120) GLO reduced information costs to potential patentees by requiring surveyors to report the soils and vegetation along the lines being surveyed. GLO and the State of Michigan also reduced transaction costs by establishing local land offices.

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