

The Planning Commission is pleased to announce that we will return to in person meetings this April 7th. Please note that we do expect all attendees to respect mask and social distancing requirements. We also request that you refrain from attending in person if you are coughing, running a fever, or not feeling well. Zoom attendance has been provided to accommodate maximum resident participation as in person seating will be limited. Thank you for your respectful compliance in these matters.

Whitewater Zoom is inviting you to a scheduled Zoom meeting.

Topic: Planning Commission

Time: Apr 7, 2021 07:00 PM Eastern Time (US and Canada)

Join Zoom Meeting

<https://zoom.us/j/92502461970?pwd=Tis4aFVpbE1ROWF2TTJQTkV6S0FZUT09>

Meeting ID: 925 0246 1970

Passcode: 480838

One tap mobile

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Find your local number: <https://zoom.us/u/aclifaJb05>

WHITEWATER TOWNSHIP PLANNING COMMISSION

AGENDA FOR REGULAR MEETING, April 7, 2021

7:00 p.m., Whitewater Township Hall

Via ZOOM and in person

5777 Vinton Road, Williamsburg, MI 49690

Phone 231-267-5141/Fax 231-267-9020

1. Call to Order/Pledge Allegiance
2. Roll Call of Commission Members
3. Set/Adjust Meeting Agenda
4. Declaration of Conflict of Interest
5. **Public Comment:** Any person shall be permitted to address a meeting of the Planning Commission. Public comments shall be carried out in accordance with the following rules and procedures:
 - a. Comments shall be directed to the Commission, with questions directed to the Chair.

- b. Any person wishing to address the Commission shall speak from the lectern and state his/her name and address.
- c. Persons may address the commission on matters that are relevant to township planning and zoning issues.
- d. No person shall be allowed to speak more than once on the same matter, excluding the time needed to answer Commission members' questions.
- e. Public comment shall be limited to 3 minutes.

- 6. Public Hearing: None
- 7. Approval of minutes of March 3, 2021 and March 24, 2021
- 8. Correspondence: Letter from Ms. Mueller and letter from Michael Corcoran
- 9. Reports/Presentations/Announcements/Comments
 - a. Zoning Administrator, Hall
 - b. Chair, Mangus
 - c. Township Board Representative, Not Available
 - d. ZBA Representative, Not Available

10. Unfinished Business:

- a. Major Home Occupation – minor adjustment to 25.22D
- b. Township Master Plan
- c. Draft Marihuana Ordinance

11. New Business:

- a. Master Plan presentation by Chris Grobbel

- 12. Next Meeting May 5, 2021
- 13. Public Comment
- 14. Commission Discussion/Comments
- 15. Continuing Education
- 16. Adjournment

Tabled Items: RC District, Event Barns

Whitewater Township will provide necessary reasonable auxiliary aids and services to individuals with disabilities who are planning to attend. Contact the township clerk at 231-267-5141 or the TDD at 800-649-3777.

WHITEWATER TOWNSHIP PLANNING COMMISSION
MINUTES FOR REGULAR MEETING via ZOOM
March 3, 2021

Call to Order at 7:00 p.m.

Roll Call: Via Zoom: Mangus in East Bay Twp; Dean in Williamsburg; Wroubel in Williamsburg

In person: Jacobson

No Board Representative or ZBA Representative available

Also in attendance: Recording Secretary MacLean

Set / Adjust Agenda: Address New Business before Old Business

Declaration of Conflict of Interest: None.

Public Comment: Michael Corcoran, represents Northpoint Farms, appreciate your work on the marihuana ordinance. Requesting a special meeting be held as allowed by the Township zoning ordinance. The ordinance was passed in November, took effect in December and the client would like to move forward on this.

Public Hearing a:

Site Plan Review and Special Land Use Review – Commercial Campground in the RC-Recreational zoning district as listed in Article XI, Section 11.11.B. Parcel #28-13-008-003-01, 4575 Moore Rd., Williamsburg, Michigan.

Request to operate a Commercial Campground subject to Article XXV, Section 25.21.D. Article XI, Section 11.11.B lists Commercial Campgrounds as a use permitted by special use permit subject to site plan review.

Applicant/owner: Robert Evina, 546 M-72 SE, Kalkaska, Michigan.

Agent: Mansfield Land Use Consultants, PO Box 4015, Traverse City, Michigan

Published in the Traverse City Record Eagle February 14, 2021.

Notices sent out to property owners within 300' of property.

Open public hearing at 7:09 p.m.

Presentations: Zoning Administrator, Hall: Staff report included in packet. It follows chronological order of the process. They are in the appropriate zoning district. Standards are included in the packet along with ZA comments. Recommend that the PC approve after deliberation.

Received several emails: Kim: Reading of comments received:

Letter in support - Shirley and Rick Palatte (sp).

Letter in support Kim and Deane Elliott.

Letter in opposition to campground, Brenda Irish Heintzelman. Current driveway and buildings need to be addressed.

Letter in support, project brings people in and then they leave, small footprint. John Hinkle.

Letter in support, best way to preserve property, small footprint. Becky Barker.

Hall: received a couple emails in response to the public hearing notice.

Mansfield presentation: Doug Mansfield: started working on this project in 2019. Property zoned RC that provides for campgrounds. The state regulates and licenses campgrounds. Has a lot of state and other open land around it. Moore Road is a public road. There are wetlands with a valley and a pond and woods. Good soils for septic systems. There will be a contact station for busy times. There will be 40 sites on 74 acres. The campground is not going to be a normal campground. We have created a different experience for clientele. The township fire chief has made his recommendation and finds it suits the needs for emergency service access. The campground will run May to October only. Owner info will be available in case of a nuisance. No ATVs will be allowed to run on the property, no fireworks allowed. The stae calls for a 10 o'clock quiet time. Several years ago small cottages were put up as a private/family campground. Worked out a declaration of deed restrictions to address the private campground with the township zoning department. This is a good use of the property. Look forward to working with the various agencies and answering any questions.

Public Speaking in favor of proposed site plan: None.

Public Speaking in Opposition to proposed site plan: Brenda Irish Heintzelman, 4074 Moore Rd., Williamsburg:

Speaking on my own behalf and on behalf of my father, who live right across the road. We contacted the township a few years ago about building a second home. We were told this is a very low density area. We were talking about 2 homes on 39 acres. Here we are talking about 40. We are hearing about benefits to the community. The only benefit I can see is to

the land owner. I see no benefit to the neighbors. At what cost is this land owner going to be the only beneficiary? What cost to wildlife? How close will the structures be to our home? How close will the campfires be? We did not build here to be near party central. Many of our neighbors are in FL currently. What investigation has been done on behalf of the neighbors who will likely lose value in their property? Who wants to be near a campground - answer nobody.

Anyone wishing to speak on the proposed site plan who has not already commented: None
Close public hearing at 7:39 p.m.

Public Hearing b:

Site Plan Review and Special Land Use Review – Major Home Occupation in the A1- Agricultural zoning district as listed in Article VI, Section 1.10.G. Parcel #28-13-109-010-00, 10937 Elk Lake Rd., Williamsburg, Michigan.

Request to operate a Major Home Occupation in an Accessory Building as a special land use subject to site plan review subject to provision in Article XXV, Section 25.22.C.

Applicant: Paul and Susan Hubbell, 10937 Elk Lake Rd., Williamsburg, Michigan

Applicant: Steve and Sadie Merchant, 10114 Elk Lake Rd., Williamsburg, Michigan

Published in the Traverse City Record Eagle February 14, 2021.

Notices sent out to property owners within 300' of property.

Comments received: None

Open public hearing at 7:40 p.m.

Presentations: Hall: Staff report included in packet. Received one call regarding basic information. Please pay particular attention to the staff report. Major Home Occupations require a Special Land Use. Recommend approval based on sound, substantiated decisions.

Merchant, Sadie and Steve: Reading through of application information. Encouraging people to shop local and promoting agri-tourism. Small farmers adapting to current life situations. Preserve farmland. After discussion with the zoning administrator we would like the flexibility to be open seven days a week and more flexible hours. Will need to discuss signs, permanent and temporary.

Mangus received some general phone calls with no leanings for or against.

Public Speaking in favor of proposed site plan: None.

Public Speaking in Opposition to proposed site plan: None

Anyone wishing to speak on the proposed site plan who has not already commented: None

Close public hearing at 7:48 p.m.

Approval of Minutes:

MOTION by Dean, second by Jacobson to approve February 3, 2021, Meeting Minutes.

Roll call: Jacobson-yes; Mangus-yes; Wroubel-yes; Dean-yes. All in favor. Motion carried.

Correspondence: None

Reports:

Zoning Administrator Report, Hall: Annual report to township board, included in packet. Encourage training for ZBA, PC and Board. The one ZBA case in 2020 was not representative of an issue in zoning in the township.

Chair's Report, Mangus: None.

Township Board Rep., Not Available

ZBA Representative,: Not Available

Committee Reports: None.

Additional Items: None.

New Business:

1. Site Plan Review and Special Land Use Review – Commercial Campground

Discussion of Appeal: There is currently an approved existing drive with a private campground. We had a preliminary review of this over a year ago.

Dean: Just for clarification, Evina was before the PC previously. Evina addressed the previous “issues” with the zoning department and had reached an agreement.

Dean: Agree to maintain a dust free condition on Moore Road? Mansfield-yes. Mansfield: we will hire a contractor company to do the brining, probably an extra minimum of two brinings and “as needed”.

Mangus: You have no jurisdiction over the road, you cannot regulate the speed limit but a mention in the campground rules would be nice. Possibly a departure sign.

Mangus: Any concerns on the time of the year, etc.?

Dean: Will be dealing with all of the appropriate entities such as GTCRC, health department, fire code for road design, soil erosion, state board, then township and state approvals.

Dean: Phase two looks like there will be a bridge across the creek. That will be engineered and built to code.

Mangus: Lack of clarity in the fire chief's report. Fire department review needs some clarification. Please communicate with the ZA. A quick glance through and a detail fire code review are two very different things.

Mangus: Day to day running of the campground. This is a high bear population area. Will you be making special accommodations to deal with bears? Mansfield: yes, and raccoons.

Mangus: Any time frame for phase two of the operation? Evina: We are hoping to be in phase two in 18 to 24 months. Mangus: Approvals are usually given with a specific time frame. Would three years be sufficient?

Jacobson: Run off water is mentioned in the packet. Mansfield: soil erosion, storm water has to not leave the property. It will be part of the engineering that will be approved by the county and EGLE, if necessary.

Mangus: Yert deck size and material? Evina: largest yert is 24x24 and a nice deck. Will need to include a maximum size deck/platform. Yert definition = fabric over a frame. Standard size. Up to maximum number of persons per site – state maximum is eight per site and there will be no additional tents allowed on the sites.

Mangus: Residential campground onsite manager. Mansfield: One of the sites will be for the site manager.

Mangus: Will there be any layout or designation for campsites being ADA compliant? Mansfield: As state mandated, 2% have to be ADA accessible and that will be addressed.

Mangus: Guidelines: We can approve with stipulations or we can have them come back with answers.

Jacobson: Approve now with stipulations. Construction season is upon us.

Wroubel: Move forward now.

Dean: Move forward now. Excellent package of information.

Additional Conditions: approval by fire department and all other relevant agencies; inspection and approval of all existing structures and sanitary services to construction, building and health standards; sign is pending approval; lighting to comply with the ordinance; all permanent structures requiring a permit will have a permit and be inspected by GTC; phase two, up to three years to be started and are moving forward on the project; maximum occupancy will be eight; minimum additional applications of road brine; departure signage- respect the neighbors and the road; deck structure not to exceed 2500 sf total each; will develop a wildlife trash implementation process. These are all to be addressed to the satisfaction of the zoning administrator.

Findings of Fact: The proposed project is in full compliance with the intent in the district and with the standards of our zoning ordinance and fits with the Master Plan in keeping the district recreational and rural. Compatible form of economic growth.

Minor verbiage change: no ATV or four wheeler use on the property.

MOTION by Dean second by Jacobson to approve site plan review and special land use based on the standards with stipulations: approval by fire department and all other relevant agencies; inspection and approval of all existing structures and sanitary services to construction, building and health standards; sign is pending approval; lighting to comply with the ordinance; all permanent structures requiring a permit will have a permit and be inspected by GTC; phase two, up to three years to be started and are moving forward on the project; maximum occupancy will be eight; minimum additional applications of road brine; departure signage- respect the neighbors and the road; deck structure not to exceed 2500 sf total each; will develop a wildlife trash implementation process. These are all to be addressed to the satisfaction of the zoning administrator.

Minor verbiage change: no ATV or four wheeler use on the property.

Roll call vote: Wroubel yes; Dean yes; Jacobson yes; Mangus yes. Motion carried.

2. Site Plan Review and Special Land Use Review – Major Home Occupation

Discussion of Appeal: Antique, farm market, agri-tourism business

Jacobson: There will be a new building and a fire truck will be able to get around.

Dean: Estimate 25 – 35 cars in a gravel parking lot. There will be an additional cut off Gay Road. Additional drive that will connect with the main home drive.

Jacobson: Additional farm products? Merchant: Yes – local farm products.

Hours of operation maximum typical of hours of staffed operation 9 am – 9 pm excluding special events. Need

flexibility for any special events.

Days of operation: seven days a week.

Annual permit is part of the home occupation. We cannot exempt them from it but we can address it in the future before their one year renewal comes up.

Mangus: The use runs with the land. Hall: The applicant is very clear in what types of products they are going to sell.

Hubbell: Did talk to the road commission about an additional address. Not going to do an additional address.

The zoning administrator will work with the sign regulations, permanent and temporary signs. Signs on state highways have to be approved and permitted by the state.

Findings of Fact: Supported in our Master Plan of local farming and agri-tourism, compliant with zoning ordinance standards. Compatible form of economic growth.

Stipulations: Sign(s) will have to be approved and lighting regulations will need to meet zoning ordinance. It will be seasonal as determined by owner, hours of operation not in excess of 9 – 9 seven days a week, excluding special events.

MOTION by Dean second by Wroubel to approve with stipulations: Sign(s) will have to be approved and lighting regulations will need to meet zoning ordinance. It will be seasonal as determined by owner, hours of operation not in excess of 9 – 9 seven days a week, excluding special events.

Roll call vote: Dean yes; Jacobson yes; Mangus yes; Wroubel yes. Motion carried.

Unfinished Business

1. Master Plan Review: next month we will have Chris Grobbel of Grobbel Environmental & Planning Associates come and make a presentation to the commission regarding the Master Plan in person or via zoom.
2. Marihuana Zoning Ordinance: Special meeting to address the marihuana ordinance? We do have the option of splitting up the medical and the recreational ordinances. Need to address districts, standards and guidelines. Gather information from other township ordinances. Consensus for a special meeting to handle both medical and recreational ordinances at the same time.

Provided it is allowed we could allow people to view or possibly participate via zoom.

Consensus to continue with zoom access if possible. Up to a certain number of people (approx. 17) can be in person.

Next meeting: March 24, special meeting at 7 p.m. Marihuana ordinances and home occupation annual permit.

Next Regular Meeting is scheduled for April 7, 2021.

Agenda: Master Plan Review; Marijuana ordinances

Tabled items: RC District review and Event Barns review

Public Comment: Vern Gutknecht, 6801 Bunkerhill Rd., – you guys do a great job, thank you.

Commission Discussion/Comments: Carl: Will we have a chance to look at other ordinances before hand? Yes – we will try to find some. We need to address districts and standards for approval.

Thank you to Bob for the excellent packages put together.

Continuing Education: Year in Review: 2020 Zoning and Planning Court Decisions-FSBR (fsbrlaw.com)

Adjournment: 9:40 p.m.

Respectfully Submitted
Lois MacLean,
Recording Secretary

DRAFT

WHITEWATER TOWNSHIP PLANNING COMMISSION
MINUTES FOR SPECIAL MEETING via ZOOM
March 24, 2021

Call to Order at 7:00 p.m.

Roll Call: Via Zoom: Mangus in East Bay Twp, MI; Dean in Williamsburg, MI; Wroubel in Williamsburg, MI

In person: Jacobson

No Board Representative or ZBA Representative available

Also in attendance: Recording Secretary MacLean

Set / Adjust Agenda: Set

Declaration of Conflict of Interest: None.

Public Comment: Mangus: Made a statement regarding the zoning approval process.

In person:

Mike Corcoran, attorney representing Northpoint Farms: and Two Peninsulas to purchase the property, noting the process to this point. The Police power ordinance is law, the zoning ordinance is to determine where in the Ag and Industrial districts and the special use permit. The Police power ordinance is very thorough. An overlay district would be very similar to the one created for adult book stores. This is a pretty simple deal and should not take seven months as the PC Chair has noted. A decision needs to be made on whether the Board or the PC will make the decision on the permit. The township lawyers added a section on caregivers. That should not hold up the police powers. Right now there is no referendum. The township must abide by its own law. The referendum would only apply to recreational marihuana. My clients have a right to use their property at its highest and best use. Make the changes that need to be made and put it up for public hearing at the next regularly scheduled PC meeting. Concerned that township officials are dragging their feet. Concerned about the influence of the township Supervisor, who has been at every one of these meetings and that is inappropriate. It is clear how he feels about this. I am here to ask you to take action.

Mangus: The Board adopts or rejects the zoning ordinance that the PC presents to them.

Corcoran: The Board has passed two police power ordinances so they have to pass something.

Zoom:

Rodney Rebants, 648 Island View Drive. Thank you for your explanation of the process. I believe the attorney is also an investor, please be accurate your interest in this issue. While this review is being done there have been other elements of the PC activities that have been side lined. The PC is trying to do it right. The issues in front of the PC, we have 5 acres, now we have marihuana ordinances. The township attorney has pushed this hard. I think that is wrong. I would like the discussion of this be part of an open meeting, having an open house. The general voters in Whitewater Township need to have a voice. Would like to have an open meeting with the PC and the board.

Linda Slopsema, 9693 Miami Beach Rd., Want to make sure everyone is aware of things happening in the township. A group of concerned citizens put through a petition to put the recreational marihuana question to a vote. Petitions were submitted and rejected for formatting issues. People have legitimate concerns. Be aware that people have concerns about property value, environmental impact, odor, crime, costly litigation. The ordinances passed in December seem pretty thorough. Suggest you focus on specific requirements in the zoning ordinance and special use permits.

John Mater, 464 Island View Dr., the township board is represented by five members, only three are pushing it through. One member has a conflict of interest. I do not understand about what is stated about Popp attending meetings. He has not been voicing an opinion, he has strictly been in attendance. The petitions were whitewashed by those seem three votes. They seem to do anything to stall to make things go their way. That is the way the township seems to run. The PC is being thorough. People have been brought to the PC and three people do not accept them.

Brandon Hubbell, 8365 Park Rd. Someone mentioned the Corcoran has an investment interest and that is completely untrue. No interest in this other than being our attorney. Don't understand why the petitions are being talked about. This is about zoning. That has nothing to do with the zoning or this meeting.

In person:

Chris Hubbell, 8055 Angell Rd., Mr. Corcoran is not a vested party. Keep hearing people want a referendum to stop recreational marihuana. You cannot stop recreational marijuana from the township. It is legal in the state of Michigan. People can smoke it and there is nothing the township can do about it. Don't know why we are trying to fool each other, it is the law, anyone can smoke recreational marihuana. I am looking out for my property rights. I always thought the chair was for property rights too. I would like mine also.

Public Hearing: None

Special Meeting Business:

1. Article 25, 22.c. Annual review standards for major home occupations. The Zoning Administrator (ZA) noted an issue with line seven that requires an annual review of the special use. The special use runs with the property. The recommendation is that we strike that line item from the special use permit requirements. The ZA will make a draft of the change and bring it back for review at the next regular meeting and address at our next public hearing.
2. Marihuana Ordinance zoning standards. Discussion: Mangus: Provided information for review. February the PC had a consensus to not use an over-lay / spot zoning but to address special use standards. Where is this going to be located in the ordinance? Do want special use addressed in each district? In Article 6? And various locations throughout the ordinance? Or, we could use Article 26, keeping it all in one location. Consensus to keep it all in one place in the ordinance. Use the term Establishment or Facility? Be consistent. Article 3, Definitions, create a section of Marihuana related definitions. The Michigan law has all of the definitions. Do we need to add anymore? Do we need to remove any? Consensus to go with as presented.

Residential cultivation, personal use and caregiver standards. Deal with them now, later or not at all. Jacobson: We don't have a problem with it in the community. Leave it alone. That is not what we are working on. We can come back to it if necessary.

Mangus: Is a caregiver considered an establishment? Do we need to address caregiver standards? If we don't have standards does that mean primary caregivers are automatically illegal because they do not have a permit from the township? Will need input from the attorney. Mangus: Not change the practices of home grow. Residential cultivation is not regulated by the ordinance but is regulated by the MMA. Note that it is not regulated by the rest of this ordinance. Call it out by the uniqueness and let it be covered by the state. Mangus: One question is the number of plants per house. Jacobson notes that only one person in a household can be a caregiver, 72 plant max plus 12 for personal. Mangus: Is this a conflict with the Board approved opt in ordinance? We can get clarification from the attorney. Consensus to get clarification.

Come back to districts and move on to special use permit standards.

Does Ordinance 59 or 60 specifically state Ag and Industrial? There was discussion at the Board level but don't know if specific district language made it into the ordinances. Some in Ag, everywhere in industrial and possibly commercial district.

Do we treat grow and process separately? Do we want to treat medical and recreational separately? Dean: Marihuana is marihuana, keep it all together. Industrial yes to all, grow, process, medical and recreational. Hall, it was initially limited to Ag and Industrial, I think, to avoid residential districts. There have been many changes. Mangus: The attorney can do a line item to address.

Industrial: medical and recreational, grow and process. Consensus. Do we need to address any additional standards like building sizes and setbacks? Consensus, no extra rules.

Agricultural: Much of our Ag is actually residential use, waterfront, wetland, etc. Medical grow and process is allowed per state law. Do we go with the same with the recreational? Dean: Grow and process is allowed for medical. What is the difference between medical and recreational as far as

impact? Consensus to go grow and process medical and recreational in Ag as they may merge the two laws.

Special Use standards for roads? Consensus for no additional road standards.

Visibility issue? Consensus-no.

Distance requirements from other facilities/establishments? Consensus-no.

Property size minimum? Or distance from x number of homes by x number of feet. Consensus.

Maximum facility size? There are no building size limits in Ag at this time. Jacobson does not want to see limitations on farmers. Wroubel does feel building size may need to be addressed. Mangus: Could go with a percent of the size of the land. Dean: Trust the market that it will be self-regulating. Mangus will look into other area ordinances to see what they do/say about building sizes. Jacobson: if we put a building size limit what is the difference between multiple small vs one large. A farmer may want to grow and expand. Mangus: percentage of land, big land=big building, small land=small building.

Neighboring uses. Distances from schools, parks, etc., are covered in the General police ordinance. Do we want to limit near residential home(s) or a neighborhood like Wintergreen Heights for example. Some facilities are already in use, it would be a different use. Dean: We need to keep distance in context. There are a lot of road front homes. 500 ft. is going to be very restrictive. Jacobson: We already have zoning restrictions regarding building location. Dean notes that there will be a site plan review for each one and it can be addressed individually. Mangus: Cannot enforce standards that are not in the special use standards. Dean: Noise abatement and odor impact to neighboring properties. Feet are arbitrary because every situation will be different. Mangus: Call it a buffer instead of a setback with any standards. Standard lot line distance is 15'. A buffer would be between uses not necessarily property lines. Jacobson notes that the operation is in a building. Consensus to require a buffering plan between uses but not alter the setbacks for these uses. For purposes of buffering, lighting and parking would be like the commercial district or require a buffering zone plan with no specific additional distance.

Commercial would be the same standards as Ag – Consensus. Utilize the same standards of buffer zone, no additional distance, building size, etc.

The Village District is very small. It has residential and the park. Jacobson says maybe we should just stay away from the Village or if they meet the standards they meet the standards. There are some structures and land available in the area. Wroubel is not in favor of having it in the village district, we are accommodating in other districts. We will leave it out for now and look at the map and bring it back next month.

Special Use Permit standards: We cannot require anything we do not ask for. Gathered information from our zoning ordinance regarding special uses in other areas and in other township zoning ordinances. We do not know if the township will do the special use permit or the license first but they will need it. Need to address chemical and plant waste disposal, odor, security, lighting, hours of operation can be part of the plan, distance as is in the general ordinance such as distance from parks, distance from schools, etc. Drop the definition of the hours of operation to be approved by the PC. Eliminate building distances or put in the standards that are in the general ordinance. A previously used building may be considered as distances are not being addressed.

Look over the standards applicable to licensed marihuana in all districts.

Will bring back the updated information for review at the next meeting.

Next Regular Meeting is scheduled for April 7, 2021.

Public Comment:

Zoom:

Linda Slopsema: Everyone knows marihuana is legal. The issue is regarding the people being able to vote because of the items you have been talking about and how they affect property value, environment, etc.

In person:

Chris Hubbell: In reference to the comment just made, my property is not around any of these properties being talked about. This is my property and my property rights. You are taking up a petition to take away my rights and tell me what to do with my land.

Commission Discussion/Comments: Dean: Are the general ordinances available on the website? Would like to see them available on the township website.

Hall: Regarding public comment, zoning never has been or is it intended to promote or allow the highest and best use of property. Zoning is about segregated land uses into specific areas. Have an individual section regarding marihuana, and reference in the individual districts. State made it very clear that marihuana is not a farm product. Marihuana is not covered under Right to Farm or GAAMPS.

Dean: Tentative schedule, IF we can get to a final in April, what then? We can send it to the attorneys. We could possibly have it back in May and create a final draft then we could hold a public hearing in June, send to the Board and they would look at it in July. Dean: Would an additional meeting be beneficial? We can discuss at the April meeting.

Hall: We are a little behind with the PC not having had communication regarding the ordinance previously. The Board liaison would normally be sharing information back and forth to make the timeline more efficient.

An extra meeting could help. The board could schedule their meeting before the PC is completed by putting it on their agenda for June 8 after our June 2 meeting.

Adjournment: 9:01p.m.

Respectfully Submitted
Lois MacLean,
Recording Secretary

S and K <skmangus@ymail.com>

To: Michele Mueller

Thu, Mar 25 at 4:34 PM

Ms. Mueller,

Thank you for taking the time to reach out on this matter. I will share your comments and concerns with the PC in our next meeting packet as correspondence. I appreciate your willingness to participate in this process. You are correct it is not a simple matter. I cannot answer all of your questions by email but you are more than welcome to give me a call and I will do what I can. You can also call our ZA Bob Hall. He is in the office every Thursday. Please stay in touch. We need all the help we can get on this ordinance.

Kim Mangus
2312-631-2326

On Thursday, March 25, 2021, 01:50:48 PM PDT, Michele Mueller <punchneedleinfo@charter.net> wrote:

To: Kim Mangus

CC: please forward to other board members as necessary

My name is Michele Mueller. My address is 7482 Cook Rd., Williamsburg, MI

I attended the Planning Commission Board meeting, in person, on Wednesday March 24. My purpose was to observe the interaction between board members as they work their way through adopting a zoning ordinance in regard to medical and recreational marijuana in Whitewater Township.

As a taxpayer and a concerned citizen, I wanted to find some assurance that the Board members were committed to representing ALL the residents of Whitewater Township.

I left the meeting without much confidence that the "process" will be equal nor fair to the residents of the community.

Kim, I applaud the fact that you gathered as much documented information as possible to gain a balanced approach to zoning and the marijuana business. However, what I didn't hear or see were actual facts, figures, or first hand experience pertaining to the effects of introducing the marijuana business to our community. Such as:

How many grow facilities will be allowed?

Is it possible to create just one processing facility for the growers? Much like the hops farm?

How far apart will growers be allowed?

What does a "processing facility" actual do? How does it operate and how does it impact the surrounding property?

What criteria will a person need to present to the Township that they are able to comply with EPA standards?

Who will inspect these facilities in an ongoing effort for compliance?

Will there be recreational "pot shops" in the community?

Who, on the Board, is willing to do their due diligence to personally educate each other on research and first hand visits to neighboring communities to gain insight on what is working and what is not?

What are the answers to disposal of chemical and biomass waste? Will the local landfills accept their waste?

Do you want to open the door to a "pot farm" on every corner?

Is anyone aware of the proven statistics relating to rising crime, deflated property values, quality of life, our kids impression of the drug culture?

Overall, my impression from the back and forth conversation among all of you is that a "one size fits all" approach is the easiest way to get the task done. It was stated more then once to keep all regulations similar as it applies to ag, commercial, and industrial with no care how it affects residential.

Please let me clear. I don't have issues with anyone making a living. We all have bills to pay. Marijuana is just a crop to the farmer. Farmers grow crops. However, aside from my moral opinions about marijuana, I don't believe the average person gets the same reaction he gets when he looks at a cherry farm as when he looks at a pot farm.

We all understand this business is here to stay. It's on our door step. The opportunity to deal with this issue and do it well is on the table.

Mr. Hubbell expresses his right to do what he wants with his property. As he should. He wants to be treated fairly. Well so do I.

I am asking the Board, and all decision making officials, to be ABSOLUTELY SURE that the zoning laws have correct measures to assure ALL of us that our property rights, our quality of life, and our safety will be protected. Make the zoning strict, make it fair, and make it equal. Hold people who apply for permits to a high standard. Do these people want to create a good business or do they want a quick buck and move on when it gets too hard. What damage to our community will they leave behind? Think about it.

A public hearing was mentioned. I ask that the Board make a public announcement when that will occur.

Our "village" was mentioned. I assume its basically OldM72. Can we really be proud of the "village"? To me it underscores the fact that no one wants to deal with the obvious abuse that is clearly on display. Is this the same approach the township board will take toward "pot farms" when things get difficult?

My final request is...do the work! I know you are busy with day to day demands. We all are. But you chose to be in these positions and you have the RESPONSIBILITY to shape our community. Do the right thing and shape our community in a positive manner.

Thank you.
Michele Mueller

CORCORAN AUSTIN^{PC}201 State Street
Suite 10
Charlevoix, MI 49720
p 231.437.3199800 Cottageview Drive
Suite 1080
Traverse City, MI 49684
p 231.421.7367

Memorandum

March 24, 2021

Whitewater Township Police Power Ordinances Nos. 59 and 60 regarding the permitting of commercial medical marihuana facilities and adult-use marihuana establishments were passed in November 2020. Under Michigan Law, they became effective in December 2020. Thereafter, under the terms of the Ordinances, the Planning Commission has taken up the matter at several meetings. The Planning Commission had a draft Ordinance from the Township's able attorneys by its February 3, 2021 meeting. A request was made for a Special Meeting to be held. This has been scheduled for March 24, 2021. In advance of that meeting, we received a "time-line" from the Planning Commission Chairperson. This time-line is clear evidence that certain Township Officials are attempting to "slow play" the process in an attempt to run out the clock before a possible Referendum on August 1, 2021. As of this date, no Petitions have been accepted or approved by the township for the ballot. There is, in fact, nothing scheduled for Referendum.

The Ordinances passed are the law of the Township. We have been advised by the Zoning Ordinance Officer that he will not accept an Application under the new Ordinance until a Zoning Ordinance is passed to determine where, among other things, the uses will be allowed. Our client, Northpoint Farms, has a sale pending to a pre-qualified applicant. The Police Power Ordinances are detailed and provide abundant detail and procedure that would allow this sale to move forward now. However, the proposed use is being unreasonably delayed by Township Officials with their own agenda but no authority. The Zoning Ordinance will basically tell us where in the Township facilities will be allowed subject to Special Use Permit Approval. That process should move forward under the existing Ordinances and not be held up.

A review of the Draft Amendment indicates at the Planning Commission and the Township Board have only a few decisions to make in deciding the final language of the Amended Zoning Ordinance. These include:

1) Creation of an Overlay District:

Township counsel's recommendation makes good sense and should be followed. First, the Police Power Ordinances and the Application, required for permit are very detailed. They provide significant protection and enforcement power to the Township. Second, having reviewed Ordinances around the State on this subject, it is abundantly clear the overlay district is the easiest way to accomplish the goals of the Township. This is not unlike how the Township dealt with the creation of its' overlay for adult bookstores, which has worked well.

It appears that the decisions that the Planning Commission needs to make are simple and straight forward:

- Industrial and Agricultural Districts: Police Power Ordinances 59 and 60 are specific that both these uses and only these districts will be permitted.
- The Police Power Ordinances and the draft Zoning Ordinance Amendment require Site Plan Approval before a Land Use Permit is issued. We suggested this from the start. In terms of your decision, you need to decide if the Planning Commission or Township Board will make that decision. The current draft places this with the Township Planning Commission, which is common around the State.
- Caregivers: The suggested Ordinance makes good sense but if there is any delay in putting the matter for Public Hearing because of questions, we suggest this be left out and taken up as a separate Amendment at a later date.

2) The Township cannot intentionally delay passage of the Zoning Amendment based on a potential Referendum:

Police Power Ordinances 59 and 60, passed in November of 2020, are the Law of the Township. Despite this, the Township has indicated that it will not accept applications for Permits under the new Ordinances until the Township passes a companion Zoning Amendment. The Planning Commission has had a draft Ordinance ready since early February. It has met and discussed this Ordinance at several meetings with no action taken so far. In response to an inquiry to the Planning Commission Chairperson, Township Resident Chris Hubbell received the attached "time- line" from the Planning Commission Chair. The Timeline, along with other actions of Township officials, suggest an effort to stall this process before a potential Referendum on August 1, 2021. As demonstrated above, the Zoning Amendment is not complicated. A companion Ordinance should have already been passed by the Township. Such conduct violates long established principles laid out by Michigan's Supreme Court (see below). Furthermore, the right of referendum exists only as to Recreational Marijuana, so there is no legal reason at this point to not move forward as it related to Ordinance 59.

- In *Dequindre Development Co. vs Charter Township of Warren*, 395 Michigan 634 (1960), the Michigan Supreme Court, a landowner developer sued the Township of Warren. The plaintiff sought the rezoning of a 17- acre tract which was located between a factory tract and a mobile home tract. The Township had zoned the area single family, which would prevent the developer from expanding the trailer park. The Supreme Court held that the Township's belief that use of the land to increase the trailer park was undesirable provided no justification for the Township's confiscation of the property or the outright prohibition of a trailer park by selective administration of the ordinance. The Court found that it was apparent that the Township in effect had zone-designed the tract as a buffer strip dividing the industrial area and congested trailer park.

The Court also found that plaintiff's steady effort to obtain rezoning had been rendered fruitless. There was a conflict between the Township Board, which wanted to suppress the trailer park expansion and the Planning Commission, which recommended rezoning.

As the issue progressed through the Township, the plaintiff accused the Board of stalling a decision upon their application. The Trial Court agreed and the Supreme Court upheld that decision.

In that case, the plaintiff was willing to comply with all state regulations and any standards that the Township of Warren had established for trailer parks. However, the Zoning Administrator would not accept an Application for such use since the municipality had not passed an updated Zoning Ordinance that would permit trailer parks let alone rezone Plaintiff's property.

In the matter at hand, just as in the *Dequindre* case, our client, Northpoint Farms, was the landowner that first pushed for the passage of the Police Power Ordinances after efforts to lawfully utilize its' property under the prior Township Law and Zoning. There is no question that our client's property will be included in the Amended Zoning Ordinance as a location that will be allowed to grow and process medical and recreational marijuana subject to State and Township Approval. Our Client has been ready to submit an Application for a Permit to the Township since December. Its' transaction with the proposed Permittee is now in jeopardy due to Whitewater Township's delay in passing a relatively simple Zoning Amendment. The current Zoning does not allow for such use and it does not comply with the State law and the Township's Law on the subject.

3) Delay in passing a Zoning Ordinance Amendment to conform with Township Law may give rise to an Action for Mandamus:

A Mandamus action allows a citizen to file suit in Circuit Court to order a public official or officials to do a specific act. It applies to situations where there has been a refusal to do an act in disregard of that official's clear legal duty. In *Smith vs. Building Inspector for the Township of Plymouth*, 346 Mich. 57 (1956), the plaintiff filed an action for a Writ of Mandamus to compel the township building inspector to issue a permit for construction of buildings and facilities for use in operation of a trailer coach park on property where the township zoning ordinance prohibited trailer parks.

The Michigan Supreme Court upheld the trial court's finding that the Ordinance should be voided, as the area of proposed site of trailer park was largely agricultural and open country, without any residential or industrial development, and there was no justification for prohibiting a trailer park. As such, the Court held that the building permit should have been granted

In this matter, the Whitewater Township Zoning Administrator, presumably taking orders from the Township Supervisor, has indicated that he will not accept an Application for a Permit under the Ordinances passed last November from our Client or anyone else until a Zoning Ordinance Amendment is passes. At the same time, it is clear that the Planning Commission chairperson has decided to try to delay the passage of a Zoning Ordinance Amendment before the potential Referendum. It is also clear that the Township Supervisor was against Ordinances 59 and 60 and rather than follow the law and the will of the people, he is committed to making sure that a Zoning Amendment is not considered or passed before a possible referendum, which at this point, has yet to have any official basis, petition or filing. Despite having the power of

appointment of the Planning Commission, he has inappropriately attended every meeting where this subject has been addressed by the Planning Commission for the express purpose of stalling or prohibiting it.

Continued deliberate delay of this sort will certainly force us to file a Mandamus Action if the Planning Commission decides to keep postponing and delaying its' duty to send a proposed Zoning Amendment to the Board. Likewise, any undue delay by the Board in deciding on a Zoning Amendment would open the door to our Client or others in seeking relief from the Circuit Court for Grand Traverse County.

Conclusion:

On behalf of Northpoint Farms, please make a final decision tonight to place the Zoning Amendment for Public Hearing at the next regularly scheduled Planning Commission meeting.

A handwritten signature in black ink, appearing to be 'M. J. Z.', written in a cursive style.

3/24/2021

Exhibit A

Michael Corcoran

From: Chris Hubbell <chris@gtfruit.com>
S Monday, March 15, 2021 11:58 AM
To: 'Cheryl A. Goss'
Cc: mjc@michaeljcorcoranlaw.com; 'Zoning Administrator'
Subject: FW: PC process for zoning amendment

This what I got back from Kim Mangus, this is not acceptable , this has Ron Popp all over it.

Let me know your thoughts. This should not take any longer than One Month.

Chris Hubbell

Exhibit A

From: S and K <skmangus@ymail.com>
Sent: Friday, March 12, 2021 11:39 PM
To: Chris Hubbell <chris@gtfruit.com>
Subject: PC process for zoning amendment

Chris,

The special meeting is scheduled for Wednesday, March 24th at 7-9 pm. I expect to have an initial draft copy available for that meeting just as a starting point for discussion.

A time frame, I can't promise that the PC will complete a draft ordinance at this meeting. All I can promise is that we will work towards that goal. I am just one member, and each of us come to this issue with our own unique knowledge base or lack there of. This item was not set before the PC until this December and developing new ordinance is not a simple process. It is quite a bit more complicated, and there are more requirements at the Zoning level than general ordinances at the Board level.

So going forward here is an outline of our process and what to expect:

- Need or request for a new ordinance is identified - Complete 12/2020
- Draft Ordinance Amendment is developed by the PC - Currently in process
- Draft approved by PC and sent to Township attorney and ZA for review - future
- PC will review attorney and ZA recommendations and address concerns as they see fit - typically takes a month of significantly longer. The condo amendment the Board just passed took about 6 months before it was returned to the PC.
- Public Hearing scheduled and published in the paper - typically takes a month as it must be posted 14 days before our meeting and is always posted on a weekend.
- Public Hearing held, comments review, adjustment made if needed, and forwarded to the Board with a recommendation to adopt or reject proposal. If significant issues are identified, the PC will have to address the issue and hold another Public Hearing, but this is very rare.
- Board will adopt or reject the amendments at their next available meeting, if adopted, amendment will be published and take effect. It is however important to note that the public has 7 days after publishing to notify the Township if they intend to request a referendum on ANY zoning ordinance amendment, so it is possible that publishing will not be the final step.

In my opinion, if everything moves along as quickly as possible, the soonest that an ordinance could be approved is July, even with extra meetings, and no other issues on our agenda. Feel free to run this process breakdown by ZA Bob Hall or your attorney. You can also give me a call if you have any questions.

Kim Mangus
PC Chair
231-631-2326

On Wednesday, March 10, 2021, 02:21:33 PM PST, Chris Hubbell <chris@glenn.com> wrote:

Kim, What time is the special meeting going to start on the standards for special use standards or Rules pertaining to cannabis, And do you think the planning board can get this done in that meeting so that public hearing can be set and move this forward. It seems that most of the board wants to get this done.

Chris Hubbell

WHITEWATER TOWNSHIP



Master Plan 2015

**5777 Vinton Road
PO Box 159
Williamsburg, Michigan 49690
Telephone 231-267-5141
Fax 231-267-9020
www.whitewatertownship.org**

Acknowledgements

Planning Commission

Mickey Dean, Chair
Kim Mangus, Vice-Chair
Matt Lyons, Secretary
Patrick Miller
Brad Link
Doug Bowerman
Lloyd Lawson, Township Trustee,
Township Board Representative

Township Board

Ron Popp, Supervisor
Cheryl Goss, Clerk
Ardella Benak, Treasurer
Paul Hubbell, Trustee
Lloyd Lawson, Trustee

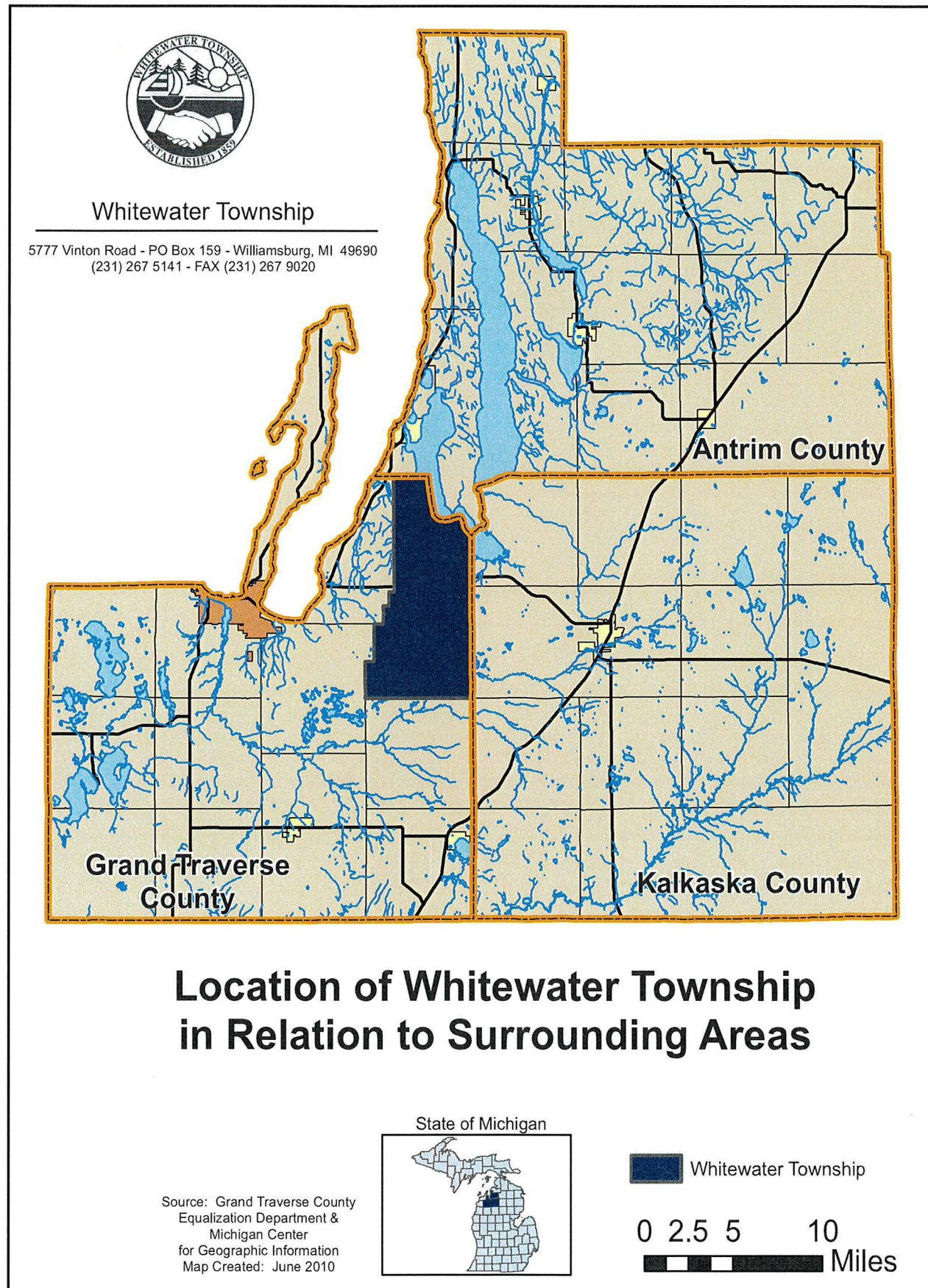
Contributors

Leslie Meyers Planning/Zoning Administrator 2008 – 2012	Arnell Boyd Township Trustee, Township Board Rep 2007 – 2012
Dylan Sullivan Planning Intern 2011 – 2012	Ron Akers Planning Intern 2009 – 2011
Lois MacLean Deputy Treasurer and Recording Secretary	Dennis Habedank Zoning Administrator 2013 – 2015
Julie Courtade, PC 2007 – 2011	Ron Popp Interim Zoning Administrator 2012 – 2013
Glenn Savage, PC 2007 – 2010	Luann Snider Chairwoman, WWT Historical Society
Steve Zakrajsek, PC 2007 – 2012	

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Figure 1. Location of Whitewater Township



PART 1

Introduction

Whitewater Township is located in the northeast corner of Grand Traverse County, Michigan. Since the adoption of the previous Master Plan in 1999, a number of changes have occurred within the Township, the surrounding area and in State Law. The Planning Commission determined that it was essential to Whitewater Township for the Master Plan to be rewritten in order to address these changes.

What is the Master Plan?

The Master Plan is a comprehensive long-range plan intended to guide growth and development of Whitewater Township. It is based on public input, the Whitewater Township Community Input Survey 2009, existing development, physical characteristics, and social and economic conditions. This plan pro-

vides an outline for: Township Officials, residents, developers, and business people interested in living, locating and/or working in the community.

The Whitewater Township Master Plan is not a zoning document; therefore the recommendations of the plan are only for guidance, not to regulate property. Whitewater Township Zoning Ordinance remains the authority in all Township zoning matters.

How does the Township derive its authority?

The Township derives its authority for the preparation of a Master Plan from the Michigan Planning Enabling Act, Public Act 33 of 2008, as amended. Section 33 of the Act requires:

Michigan Planning Enabling Act of 2008, Public Act 33

“(1) A master plan shall address land use and infrastructure issues and may project 20 years or more into the future. A master plan shall include maps, plats, charts, and descriptive, explanatory, and other related matter and shall show the planning commission’s recommendations for the physical development of the planning jurisdiction.”

“(2) A master plan shall also include those of the following subjects that reasonably can be considered as pertinent to the future development of the planning jurisdiction:

a) A land use plan that consists in part of a classification and allocation of land for agriculture,

residences, commerce, industry, recreation, ways and grounds, public buildings, schools, soil conservation, forests, woodlots, open space, wildlife refuges, and other uses and purposes.

b) The general location, character, and extent of streets, railroads, airports, bicycle paths, pedestrian ways, bridges, waterways, and waterfront developments, sanitary sewers and water supply systems, facilities for flood prevention, drainage, pollution prevention, and maintenance of water levels, and public utilities and structures.

c) Recommendations as to the general character, extent, and layout of redevelopment or rehabilitation of blighted areas; and

the removal, relocation, widening, narrowing, vacating, abandonment, change of use, or extension of streets, grounds, open spaces, buildings, utilities, or other facilities.

d) A zoning plan for various zoning districts controlling the height, area, bulk, location, and use of buildings and premises. The zoning plan shall include an explanation of how the land use categories on the future land use map relate to the districts on the zoning map.

e) Recommendations for implementing any of the master plan’s proposals.”

How will Whitewater Township use this plan?

The Plan serves many functions and is to be used in a variety of ways:

1. The Plan is a general statement of the Township's goals and policies and provides a comprehensive view of Whitewater Township's desires for the future.
2. The Plan serves as an aid in decision-making. Goals and policies outlined in the Plan guide the Planning Commission and Township Board in their deliberations on zoning, subdivisions, capital improvements, and other matters relating to land use and development.
3. The Plan provides the basis upon which the zoning ordinance is written. The Michigan Zoning Enabling Act of 2006, Public Act 110 as amended, requires that the Zoning Ordinance be based upon a plan designed to promote the public

health, safety, and general welfare.

4. The Plan attempts to coordinate public improvements and private developments. An outcome of the Plan should be that public investments such as infrastructure improvements will be located in areas identified in the Plan as having the greatest benefit to the Township and its residents.
5. The Plan is an educational tool and gives citizens, property owners, developers and adjacent communities a clear indication of the Township's direction for the future.

In summation, the Whitewater Township Master Plan is a document which sets forth a long-range statement of general goals and policies aimed at the unified and coordinated development of the Township.

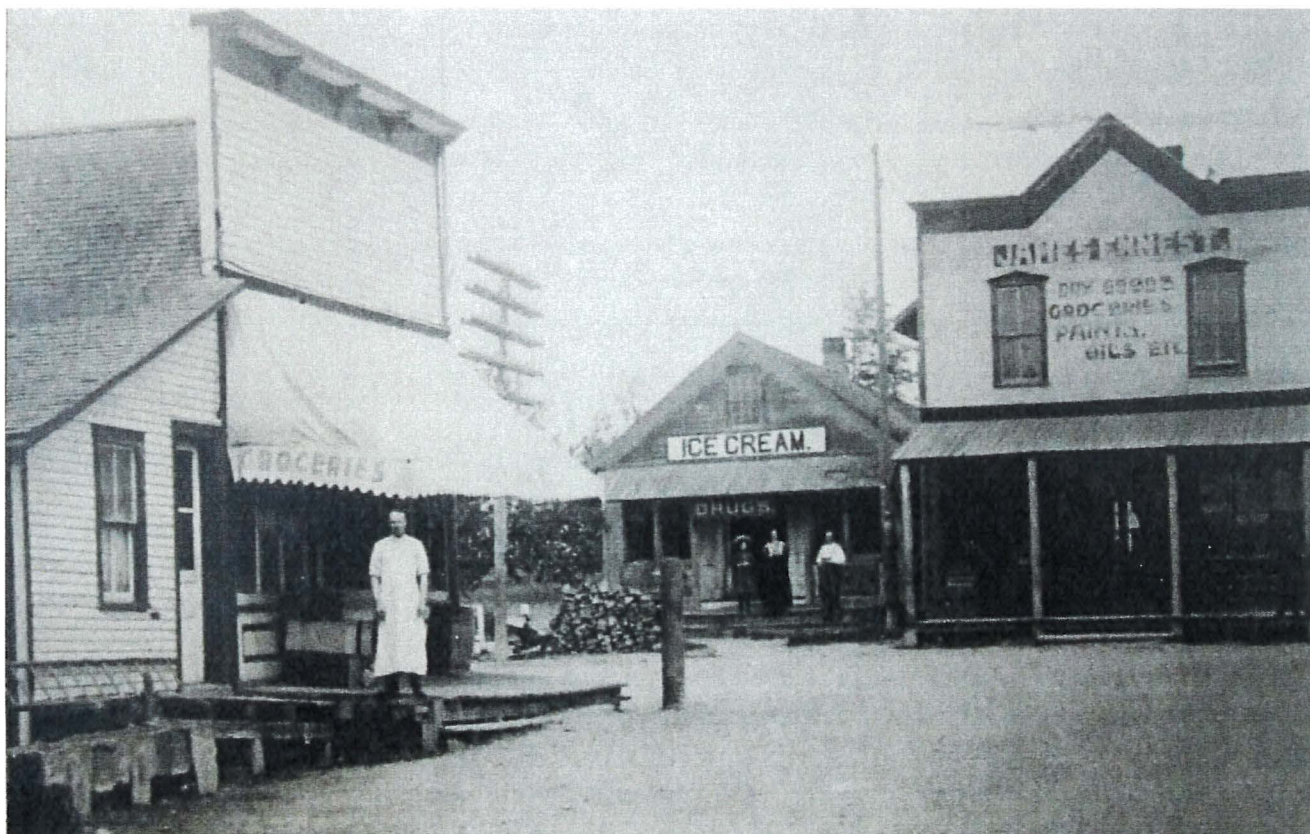


Figure 2. "The Corners" in Old Williamsburg at the corner of Church Street and Vinton Road. F.E. White's store (left) housed the Post Office. Circa 1910

PART 2

Goals and Policies

Master Plan Goals

1. Respect the Rights of the Township Residents and Property Owners
 - Respect private property rights as guaranteed by the State of Michigan and United States Constitutions.
 - Encourage new development in areas with infrastructure that is available or attainable.
 - Encourage land uses that are compatible with adjacent land uses.
 - Encourage the clean-up or containment of blighted and/or contaminated sites.
 - Increase awareness of land use issues and the techniques available to address land use issues.
2. Preserve Whitewater Township's Rural Character
 - Encourage development that retains or mimics natural features.
 - Encourage guidelines that preserve the environmental integrity of the Township floodplains, wetlands, watersheds and water bodies.
 - Encourage community sewer and water systems in areas of the greatest environmental need.
 - Encourage the continuation of hunting, fishing, trapping, and other outdoor recreational opportunities.
3. Build a Sense of Community
 - Encourage social and cultural activities for year-round and seasonal residents.
 - Recognize and preserve the scale and compact nature of the commercial district.

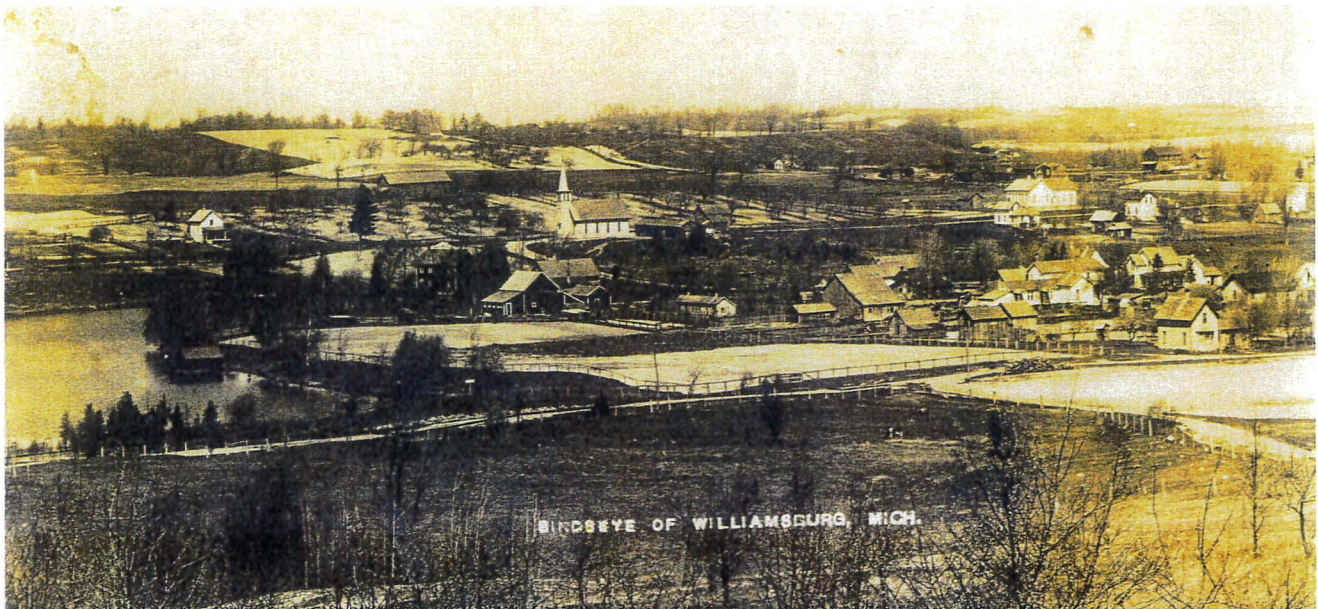


Figure 3. Birdseye of Williamsburg
Whitewater Township Master Plan

- Support and encourage the development and implementation of a recreation plan.
 - Encourage preservation of historically significant features within the Township.
4. Encourage Economic Opportunities
- Support property owners who engage in home occupation activities which are in character with the area/neighborhood.
 - Support business, agricultural production and agri-tourism.
 - Streamline the application process for development.
 - Encourage municipal infrastructure for the benefit of the Township and areas of the greatest need.



Figure 4. Williamsburg Depot with Western Union Telegraph and American Express Agency. Beehive Hotel is on the extreme left. Circa 1895



Figure 6. Power, Whitmore and Power Bank, Hobb's Store and White's Store in Upper Williamsburg. Water tower on Gardner-Wilkinson house (far right) supplied water to four daily trains. Circa 1923



Figure 5. Rob Clow's store in Williamsburg.

PART 3

Information and Background Studies Summary

This portion of the Master Plan inventories Whitewater Township's geography, history, past trends, current conditions and future projections, thereby illustrating the point from which planning begins. The following summarizes significant findings. A bibliography of Background Studies is included in the Appendix.

Boards, Commissions, and Administration

The Township has a number of official bodies associated with the planning and development of the Township. A description of each body and its function in relation to planning follows:

Township Board

The Township Board is the chief governing body of the Township and consists of the Supervisor, Clerk, Treasurer, and two Trustees. All Board members are elected for concurrent four year terms.

State statute, Public Act 33 of 2008, as amended, requires that the Board hears and decides rezoning

requests, zoning maps, text amendments, and subdivision plats.

Planning Commission

In accordance with planning and zoning enabling statutes, the Township has established a seven member Planning Commission. The Planning Commission's main responsibility is to develop the Master Plan and to draft zoning ordinance for adoption by the Township Board. The Township Board grants additional authority to the Planning Commission to approve special land uses, most site plans and general development based on the current Zoning Ordinance while protecting public health, safety, and welfare. The Master Plan may be considered when making such decisions.

Zoning Board of Appeals

The Zoning Board of Appeals (ZBA) is the quasi-judicial branch of zoning administration. The ZBA hears and decides on appeals involving zoning variances or conditional uses.

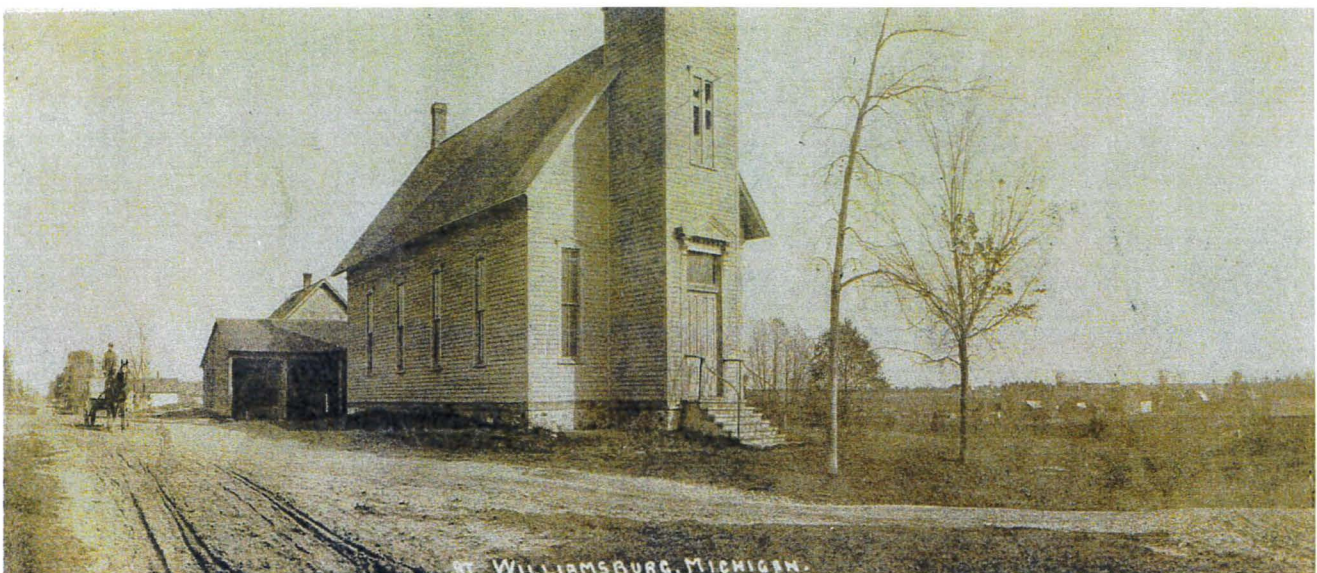


Figure 7. Williamsburg United Methodist Church 1881, Corner of Church Street and Williamsburg Road
Whitewater Township Master Plan

The ZBA consists of five members appointed to three year staggered terms.

Zoning Administrator

The Zoning Administrator processes and reviews site plans, rezoning requests and special land uses, performs zoning inspections, issues land use permits, addresses code enforcement; and provides support to the Planning Commission and Zoning Board of Appeals as requested by the Township Board.

Location

Whitewater Township is located in Northwest Michigan in Grand Traverse County. The unincorporated village of Williamsburg is considered the Township's center and is bisected by M-72. The

Township Hall is located within this area, as are the commercial and industrial districts. The central area is situated 12 miles east of Traverse City, 13 miles west of the Village of Kalkaska and 10 miles south of the Village of Elk Rapids.

History

Archaeologists theorize that five or six different cultures of people have occupied the area of the Township around Skegemog Point beginning approximately 10,500 BC. Prior to the white settlers of the area, the Mascoutin (or "People of the Open Prairie"), a branch of the Algonquin Tribe, lived in the area until the 1630s, followed by the Chippewa and Ottawa Indian Tribes. The majority of Native

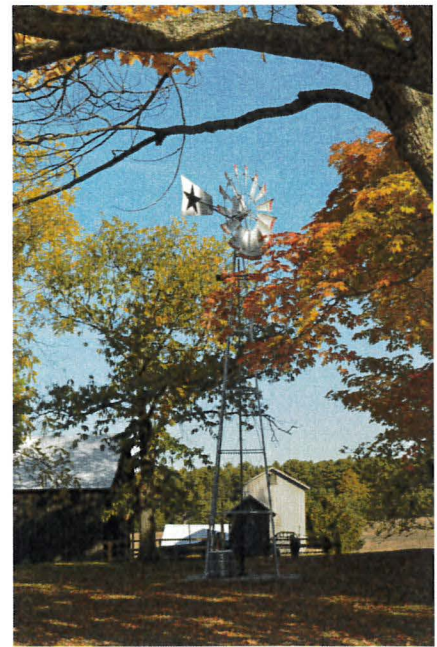


Figure 9. Samels Farm. The site is listed in the National Register of Historic Places.

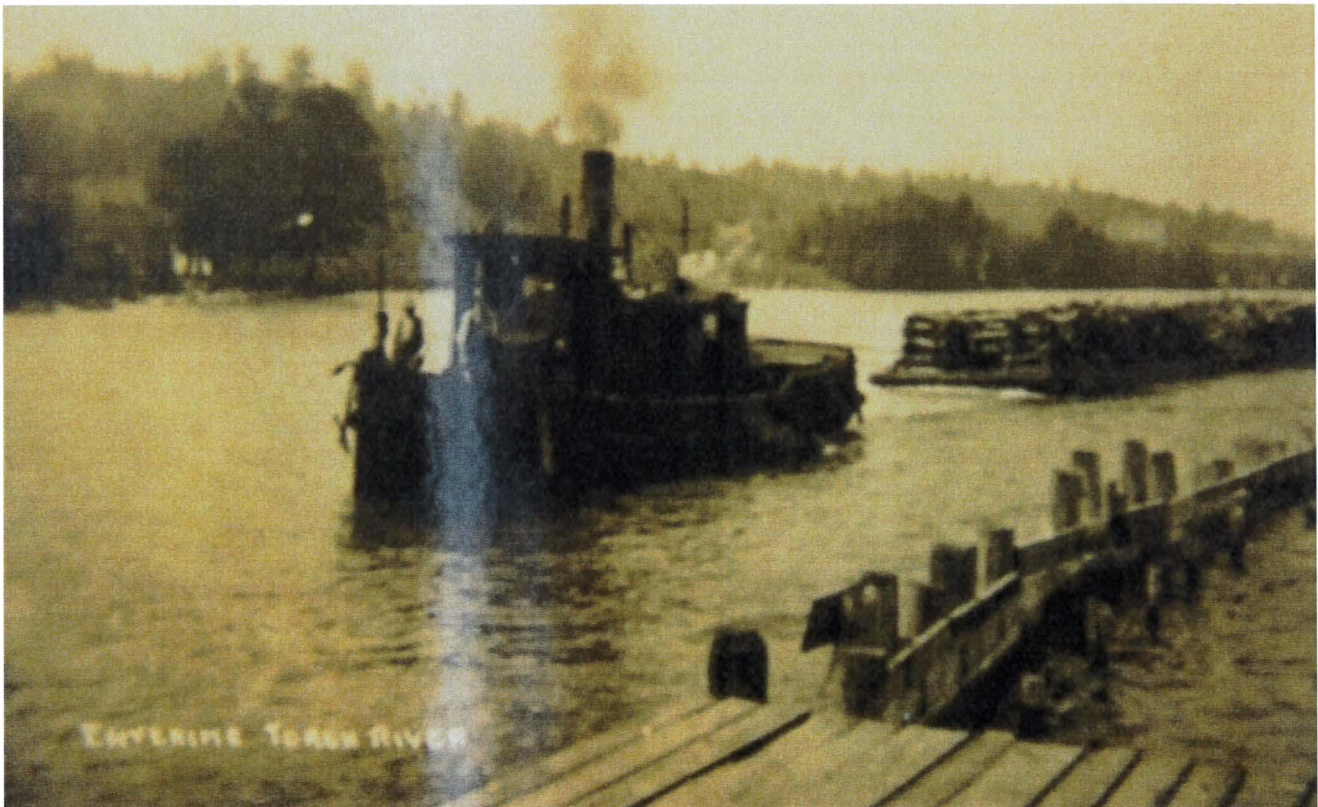


Figure 8. Entering Torch River

Americans were moved north to a reservation after 1857.

Following Father Baraga's mapping of the area between 1830 - 1840, the Government Survey of 1850 was completed and the area received its first permanent white settlers. Amon Langworthy, George Brown and William H. Fife (who later became the Township's first supervisor) came in 1854, Joseph Sours in 1855, H. S. Beach in 1856, and J. M. Merrill in 1858. At "Hi" Pray Park, a stone memorializes the Williamsburg pioneers of 1856.

Prior to the construction of roads and railroads in the area, supplies came by boat from Elk Rapids on Elk and Round (today known as Skegemog Lake) Lakes and were transported cross-country to the Williamsburg area. Construction of the Grand Rapids and Indiana Railroad began in the area in 1867 and reached Lake Michigan in 1872.

The area of Williamsburg was originally part of a large county called Michilimackinac and was the largest settlement in the area. In 1859, Whitewater Township became the third township in the county, after Peninsula and Traverse. It covered the area from Elk Lake to Grand Traverse Bay. The current Township Hall was built in 1889 on land donated by David Vinton, Jr. and is still in use today.

In 1903, the population of Williamsburg was about 150. With agriculture on the rise, the town contained

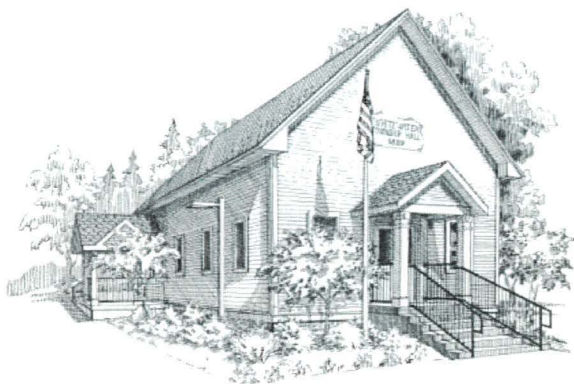


Figure 11. Whitewater Township Hall, by Jennifer Oakley



Figure 10. Evening on the Torch River

a store, hotel, blacksmith shop, sawmills, gristmill, grange hall, Township Hall, a Methodist-Episcopal Church, and was home to seven schools.

By the 1930s the population was 460. Charles M. Greenway's estate "Weesh-Ko-Wong", now "Millbrook" was a notable fish hatchery. Famous for his brook and rainbow trout fingerlings, he also tried to repopulate the grayling, a native fish decimated by logging and non-native trout species. Williamsburg was expanding northward; growth included a bank, potato warehouse, barber shop, a new post office, and a new high school, complete with a gymnasium.

Like everywhere in America, the 1960s brought change to Williamsburg and her 630 residents. The State of Michigan relocated M-72, bisecting the town, and the last railroad steam engine had traveled the tracks. The Williamsburg Consolidated School became a part of the Elk Rapids School District. The gymnasium remained, hosting community events and well known dances attended by people from miles around well into the decade.

The new millennium brought new interests into Williamsburg. The Grand Traverse Band of Ottawa and Chippewa Indians constructed Turtle Creek Casino. Elk Rapids School District built Mill Creek

Elementary School. Grand Traverse Plastics, Inc. anchors the industrial section of town, shipping products worldwide, and small businesses populate the M-72 corridor. With more than 2,500 people calling Whitewater Township home in 2010, balancing growth with the desire to maintain a rural character is the community's main focus.

Demographics

Population

Master plans attempt to accommodate population growth, the need for future land uses, and community services. Economic fluctuations influence regional growth as illustrated in the chart below. Chart 1 summarizes past population projections compared to actual population per the US Census as compiled by The Northwest Michigan Council of Governments (NWMCOG), now known as Networks Northwest.

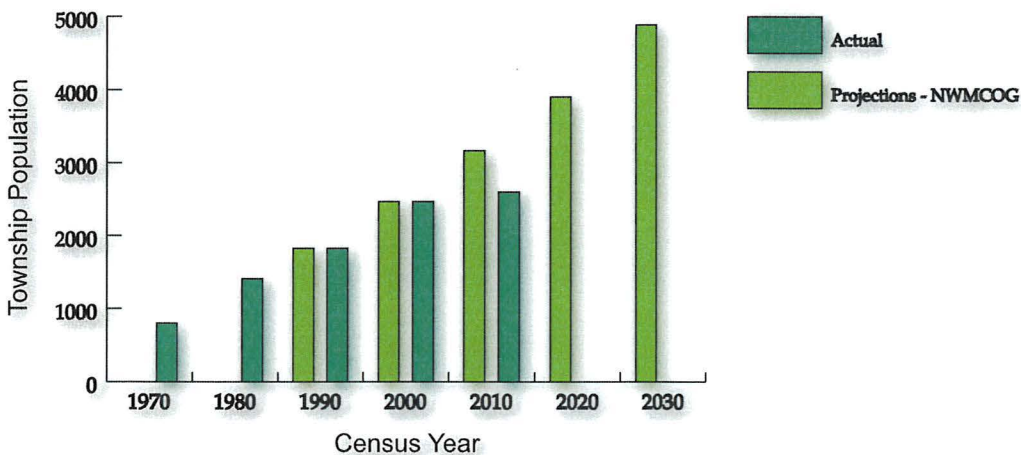


Chart 1. NWMCOG Population Projections and US Census Population Record

According to the 2010 Census the median age of a Whitewater Township resident was 46.1 years. The median age in 2000 was 39.5. years. Chart 2 shows the change in age distribution over the past 20 years.

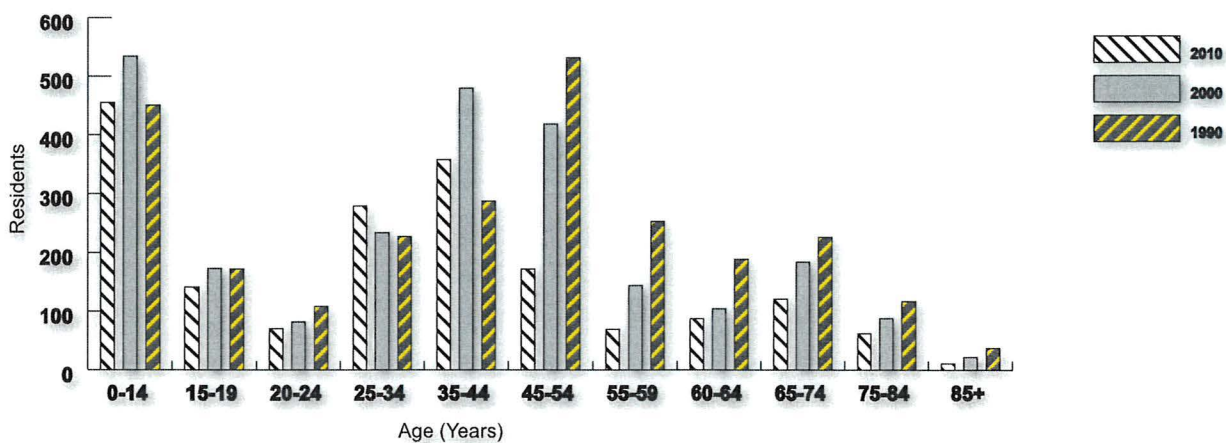
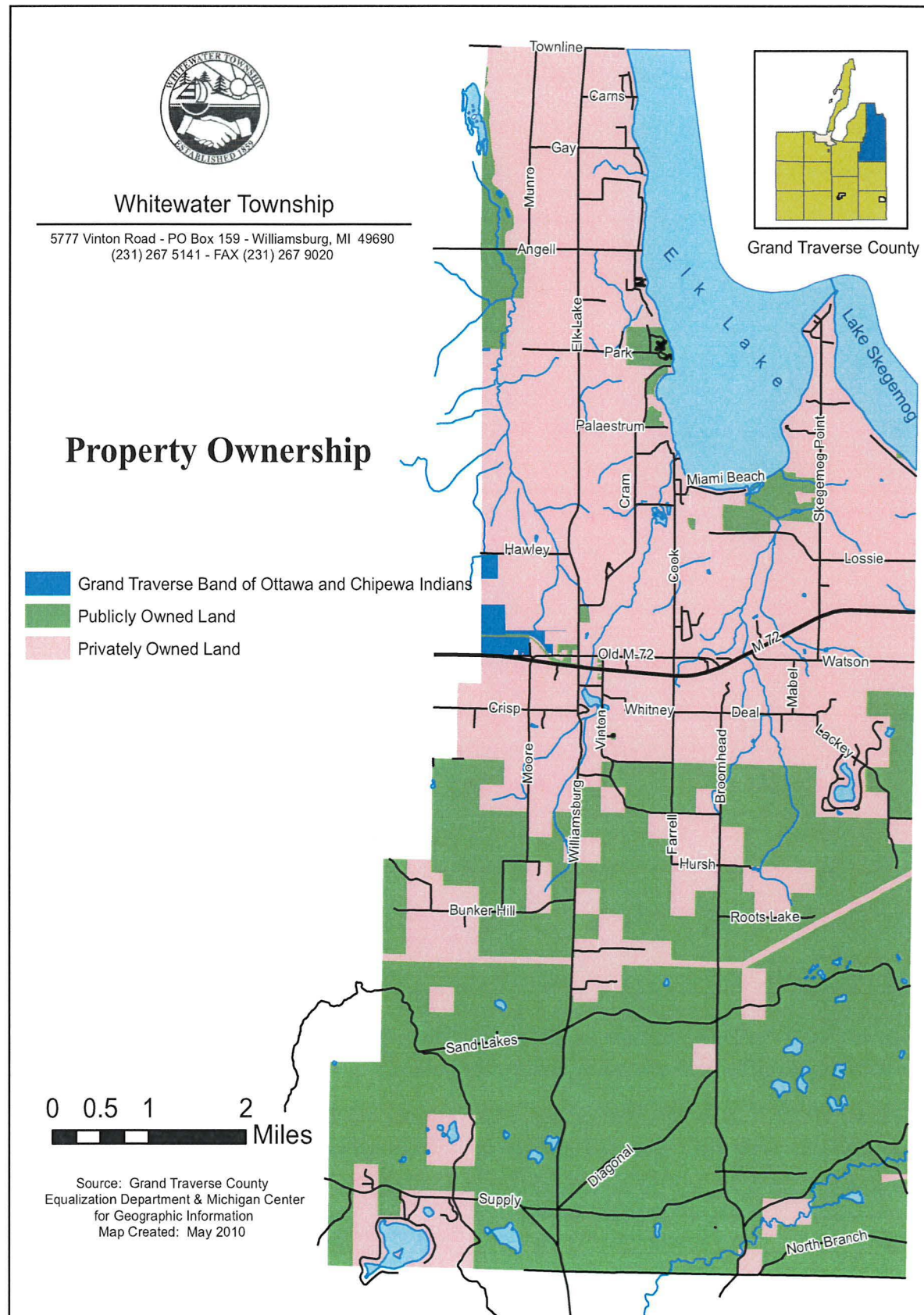


Chart 2. Age Distribution based on Data Driven Detroit report 8-11-2011

Figure 12. Whitewater Township Property Ownership



Housing and Households

According to the 2010 Census, permanent households total 1,012. Approximately 93% are single family homes, 278 of these are seasonal. Table 1 provides data on household trends.

	1990	2000	2010
Permanent Households	634	896	1012
Seasonal Housing Units	243	240	278
Households w/individuals 65 years or over	132	196	264
Households w/children under 18 years	270	362	306
Average Household Size	2.88	2.72	2.57

Table 1. Household Trends

Economic Base

Major employment industries in the area include tourism, agriculture, healthcare, and manufacturing. Most of our residents are employed outside the Township.

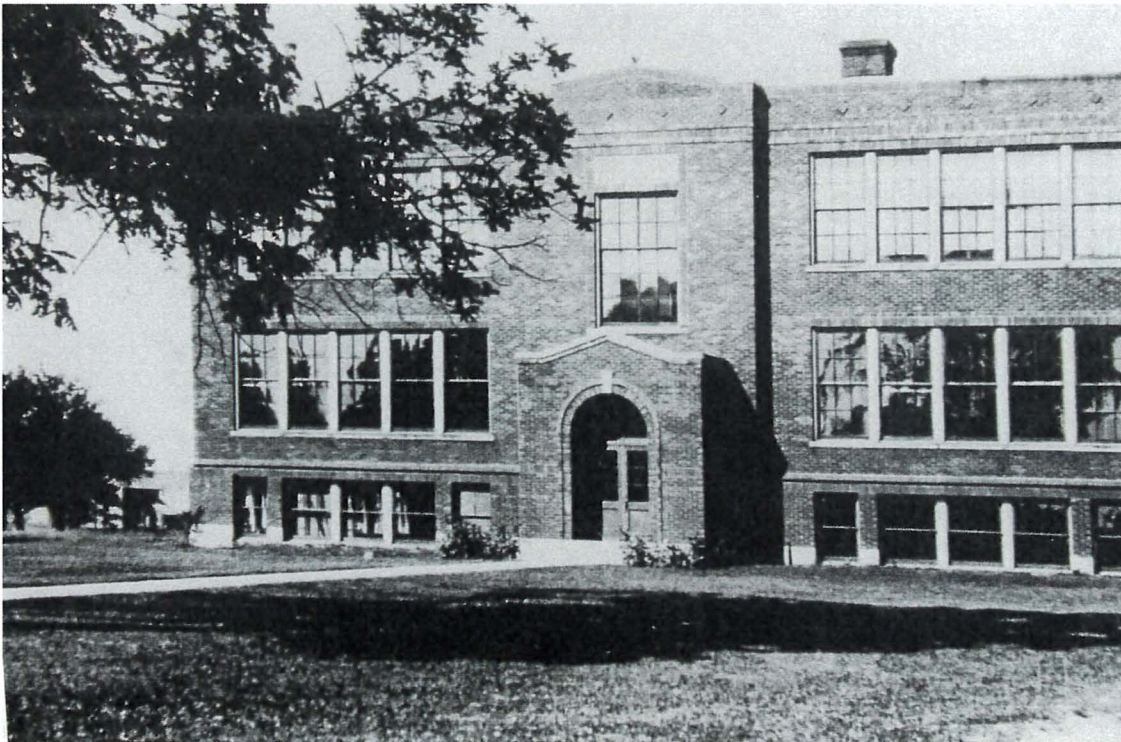


Figure 13. Williamsburg High School, Mid 1920s to mid 1960s, Elk Lake Road

The state equalized value (SEV) for real property by percentage in Whitewater Township is presented in Chart 3.

Existing Land Use

Existing land use patterns are illustrated in Chart 4. Whitewater Township remains a relatively low density residential community.

Township expenditures, by percentage, are categorized by Chart 5.

Community Facilities and Services

The Township Hall has been located at 5777 Vinton Road since 1889. The building was enlarged in the late 1960s with a major renovation taking place in 1999. The hall serves as offices for the Supervisor, Clerk, Treasurer, Zoning Administrator, Assessor, Historical Society, and neighborhood association meetings.

Emergency Services

Whitewater Township is a member of the Grand Traverse Rural Fire Department.

Emergency Medical Services (EMS) are provided by township staff, many of whom are cross-trained in fire and rescue.

Police protection is provided via the Michigan State Police and the Grand Traverse County Sheriff's Department.

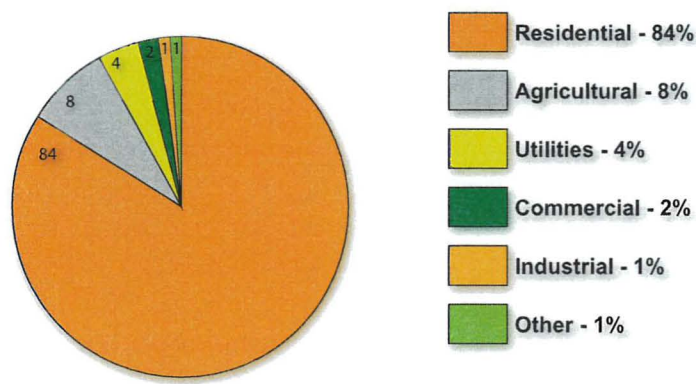


Chart 3. State Equalized Value for real property by percentage

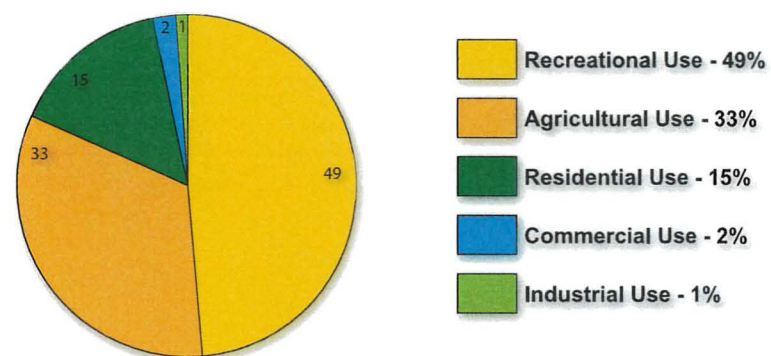


Chart 4. Existing land use

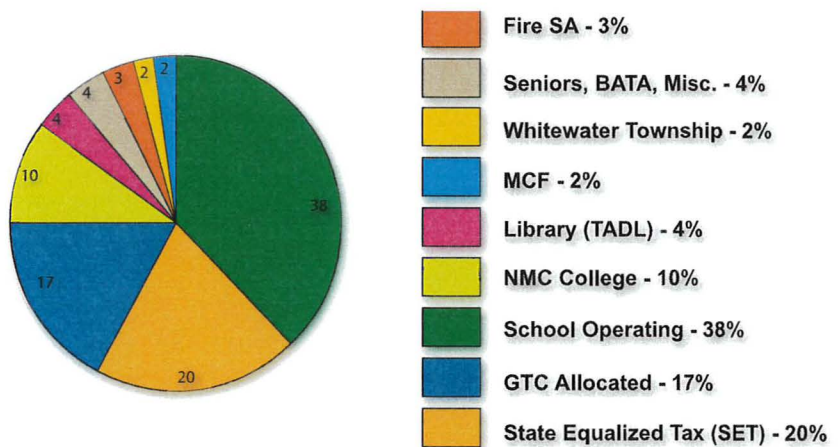


Chart 5. Categorization of Whitewater Township tax revenue



Water

The Grand Traverse Band of Ottawa and Chippewa Indians provide municipal water along the west end of Old M-72, through the village, out to Mill Creek School.

Sewer

There are currently no public wastewater treatment facilities serving Whitewater Township. In the event municipal sewer can be made available to Township Residents, the Village District Area is our highest priority.

Utilities

Electricity, traditional and cellular telephone, internet services are available within the township.

Community growth, changes in technology, and obsolescence affect all utilities. Great care should be exercised to protect the township's rural character when designing and implementing these changes.

Education

Two school districts serve the residents of Whitewater Township: Elk Rapids (which serves the

majority of residents) and Traverse City Area Public Schools. Elk Rapids Schools' Mill Creek Elementary is centrally located within the Township. The southwest corner of the Township contains a Charter School, the Woodland School.



Figure 16. The Fish Pond, Williamsburg, Michigan

Parks and Recreation

The Township enjoys two public park systems offering recreational facilities. The Whitewater Township park system includes Petobego Natural Area, Battle Creek Natural Area, Hi Pray Park, Lossie Road Nature Trail and Whitewater Township Park. The State of Michigan maintains the Sand Lakes Quiet Area and public access to numerous lakes and forest trails including the VASA trail system.

Cemeteries

Whitewater Township owns and maintains Circle Hill Cemetery and Williamsburg Cedar Rapids Cemetery.

Transportation/Traffic

Both private and public roads exist within the Township. Private landowners are responsible for maintenance of over 25 miles of private roads in the community.



Figure 15. Main Street in Old Williamsburg, a view to the east down Church Street. Circa 1912

The Michigan Department of Transportation and the Grand Traverse County Road Commission share the responsibility for operating and maintaining all public roads in Whitewater Township. The Township may request additional road maintenance at Township expense.

Natural Features

Geology

The surface geology, like much of Northern Michigan, is characterized by upland areas, moraines, coastal areas, lake beds, outwash and glacial channels.

Topography

The surface topography in Whitewater Township ranges from flat marshy areas to very steep and rolling hills. The highest point in the Township is approximately 1,007 feet above sea level, which is located near Broomhead and Roots Lake Roads. The lowest surface elevation is the surface of Elk and Skegemog (Round) Lakes averaging 590 feet above sea level.

Soils

Soils in the south portion of the Township are characterized as Kalkaska-Montcalm soils, which are well-drained. The northern areas are a mixture of well-drained soils that provide for prime fruit farming (Emmet-Leelanau) and very poorly drained soils along streams and lakes (Lupton-Roscommon).

Wetlands, Lakes and Streams

Whitewater has more than 3700 acres of inland water area (lakes and streams) and more than 1200 acres of wetlands. It is estimated that lakes and wetlands make up 15% of the Township.

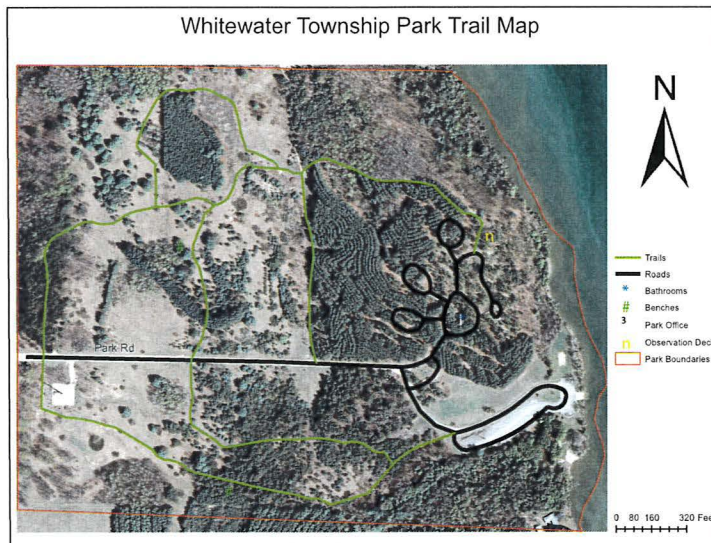


Figure 17. Trail map overlaid on satellite image of Whitewater Township Park.

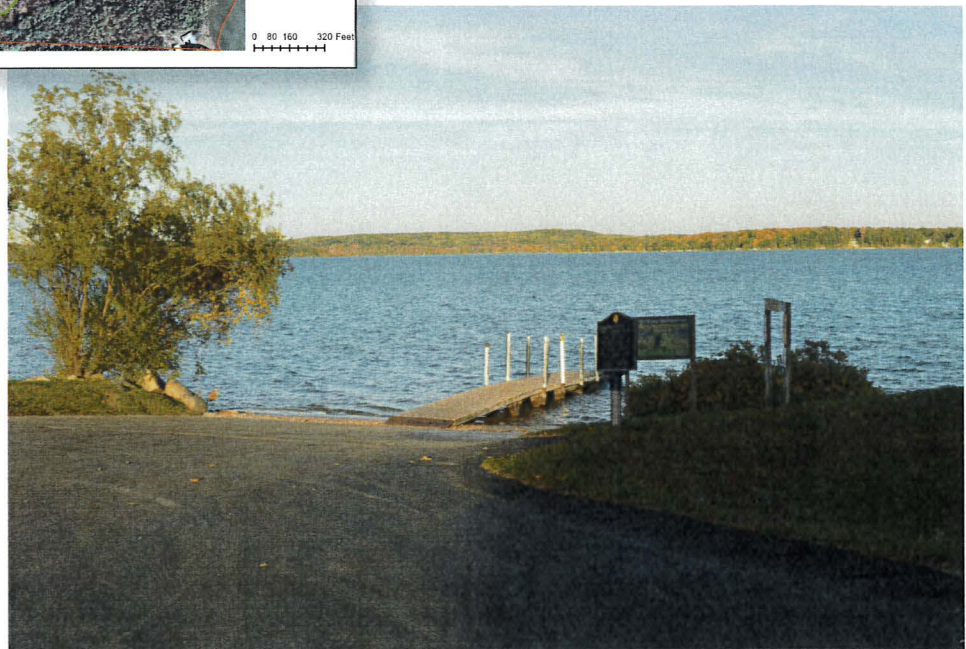
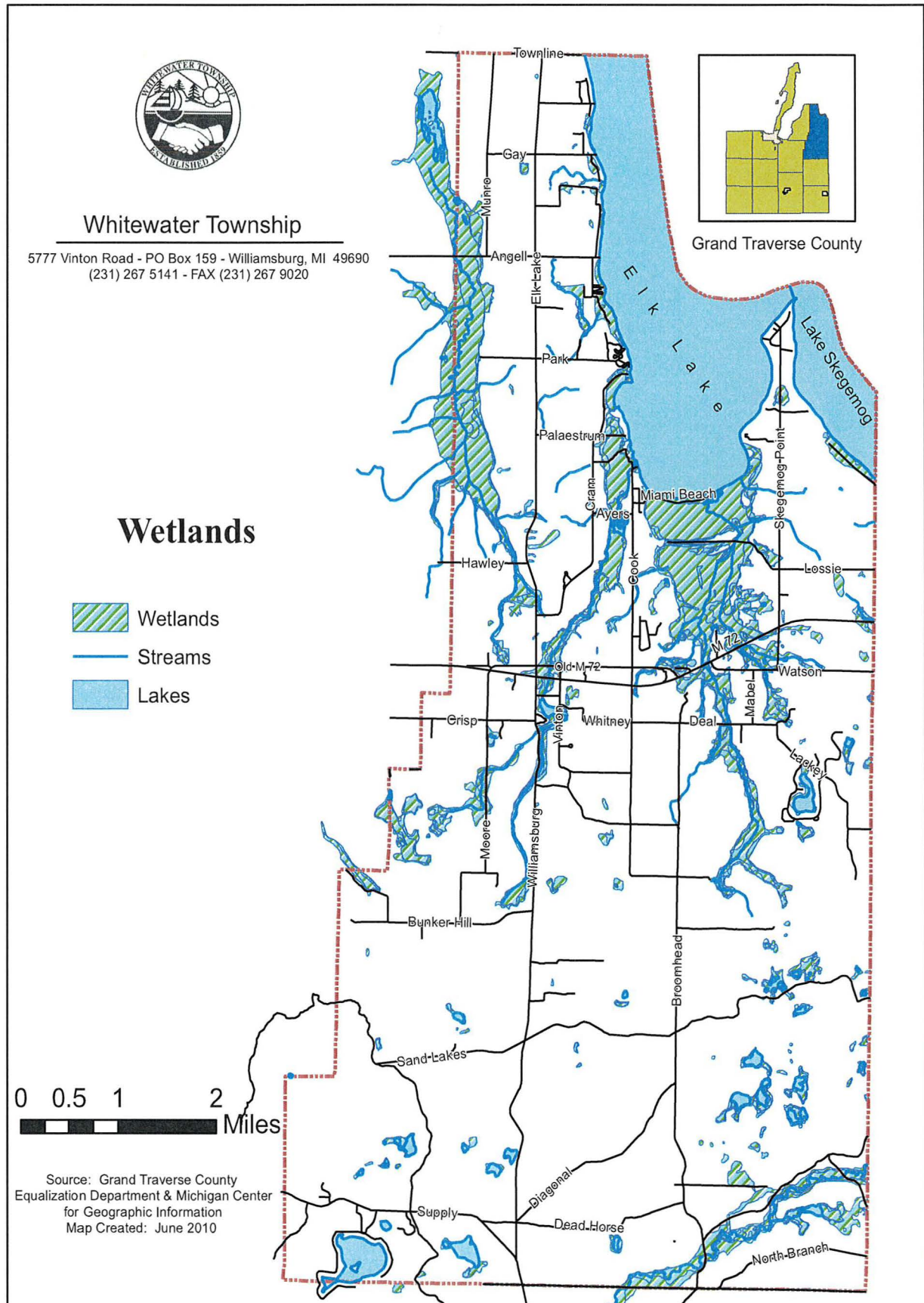


Figure 18. Boat launch at Whitewater Township Park.

Figure 19. Whitewater Township Wetlands Map



Wetlands are a part of floodwater control, ground-water recharge and discharge, water quality, sediment entrapment, shoreline stabilization, fish and wildlife habitat, and recreation. These environments can be impacted by draining and filling practices. Since wetlands are often associated with lake and stream shorelines, they receive considerable attention due to the pressure to develop these highly desirable areas.

Flood Plains

The Township joined the National Flood Insurance Program (NFIP) in 1988. The program is underwritten by the Federal Government.

Watersheds

Whitewater Township contains five different watersheds. The majority of Whitewater is within the lowest part of the Elk River, Chain of Lakes, followed by the Boardman River, Petobego, Acme Creek and Yuba Creek systems.



Figure 20. Boat launch off Baggs Road



Figure 21. Looking north from Skegemog Point: Elk Lake to the left, Lake Skegemog on the right

Figure 22. Map of Whitewater Township Major Watersheds

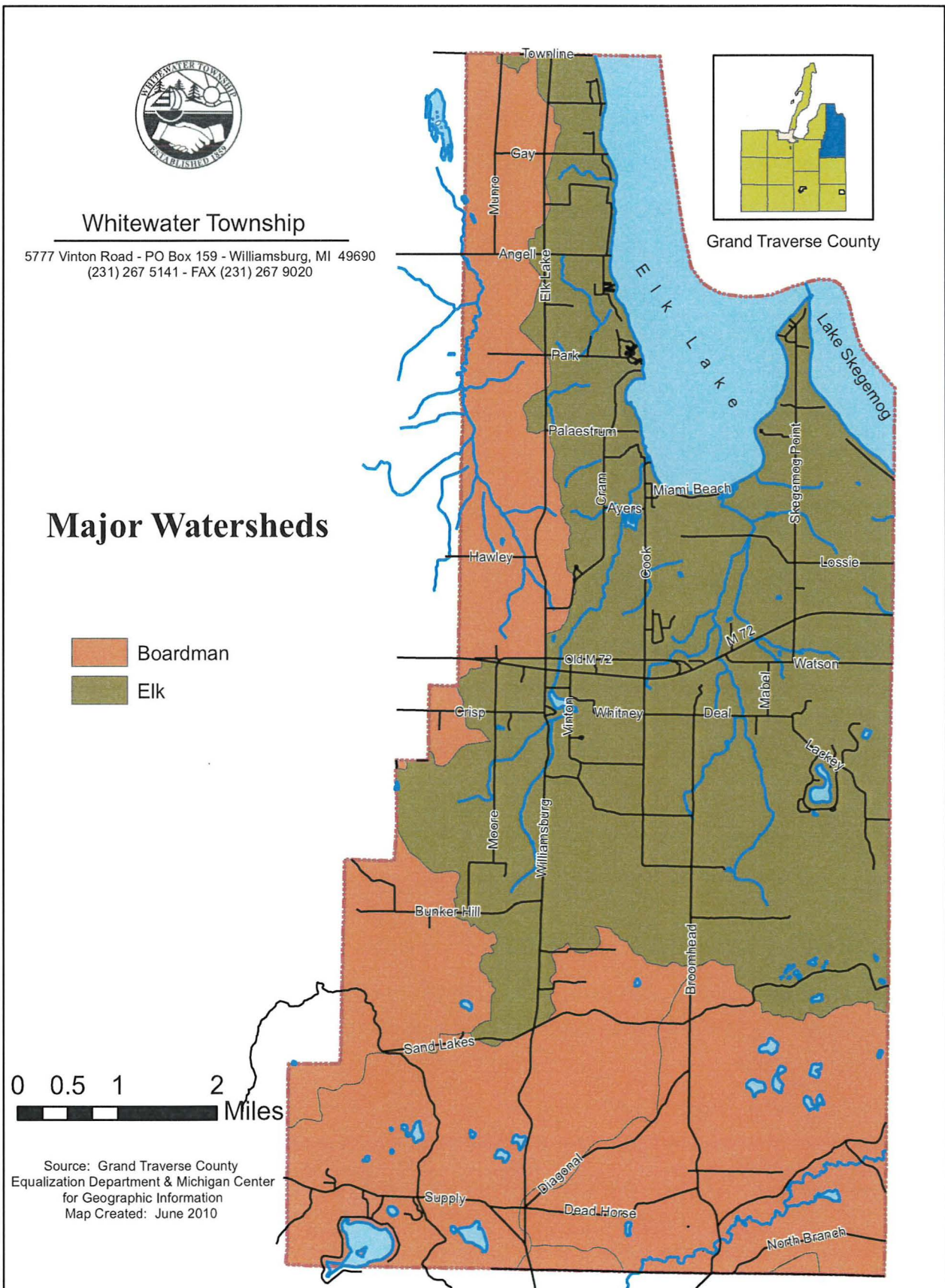




Figure 23. Elk Lake Road near the corner of Angell Road

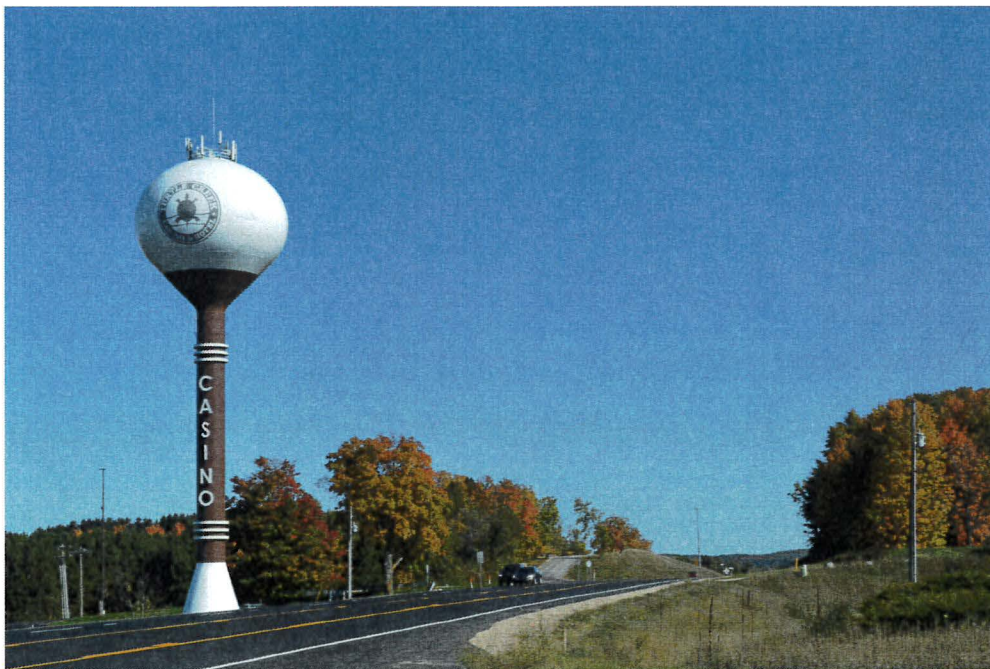


Figure 24. M-72 at Turtle Creek Casino

PART 4

Public Participation in the Development of the Master Plan

Realizing that community input is an essential element in the creation of a Master Plan, it is the goal of the Planning Commission to involve and inform all residents in the planning and development of Whitewater Township. This can be accomplished by attending meetings, registering for monthly e-newsletters, or direct contact with Township Representatives.

The Planning Commission began a complete rewrite of the Master Plan with two Open Houses, one

in March and again in May of 2009. The structure of the Open Houses consisted of 7 stations, each manned by a Planning Commissioner. The purpose of the Open Houses was to provide a casual venue in which Planning Commissioners could learn the attitudes and opinions of township residents and landowners regarding the direction of Whitewater Township.

Following the Open Houses, the Planning Commission established a Survey Design



Figure 25. Aerial view of Williamsburg, looking south along Elk Lake Road (bottom). 1955.



Figure 26. Looking east along Old M-72 with the Williamsburg depot near the center of the photograph

Team. The Team consisted of two Township trustees, two Planning Commissioners and a Citizen at Large. The Team hired a Consultant, McKenna Associates Inc. to assist with the survey's preparation, dissemination and result compilation. The Whitewater Township Community Input Survey of 2009 was sent to all property owners resulting in the mailing of 1425 surveys, with an excellent return of 560 (39%). (See appendix)

Subsequent to the presentation of the Survey results in November of 2009, the Planning Commission created six committees corresponding with the Open House topic stations. Many additional meetings were held with interested citizens, property owners and proprietors to discuss issues relevant to their specific interests.

Over recent years, Whitewater Township has compiled an e-mail list of over 400 Township residents. Residents on the e-mail list receive a newsletter each month from township officials regarding

current issues and events going on throughout the Township. This has proven to be a great asset to the community, keeping residents informed and up to date on the current status of the Township.



Figure 27. Scofield School, later called the Williamsburg School. SW corner of M-72 and Williamsburg Roads. 1888

PART 5

Future Land Use Plan

The Future Land Use Plan serves as a general guide to the Township's future development. The Future Land Use Plan is based on and is in strong alignment with our existing land use, development patterns, and the goals and policies defined in this Master Plan. The Future Land Use Plan is expected to be made up of the following Districts and Overlay Zones. Periodic review and revision is necessary and should be expected.

A-1 – Agriculture: Districts are intended to encompass those areas of the Township where the principal activity is farming. While residential uses are allowed, deference is given to Agricultural uses.

RC:

- **Public Recreation/Conservation Districts** are intended to protect and preserve publicly held land that provides parks, recreation and helps maintain the rural character of our Township.
- **Low Density Residential Districts** are intended for private developments within areas where public recreation/conservation is the predominate use.

R-1 - High Density Residential: Districts are intended for areas compatible with high density development. This land use is planned for areas with adequate roads and where environmental conditions are capable of supporting development.

R-2 - Medium Density Residential: Districts are intended for areas compatible with medium density development. This land use is planned for areas with adequate roads and where environmental conditions are capable of supporting development.

R-3 – Multiple Family Residential: Districts are intended for areas compatible with multiple family dwelling units. This land use is planned for areas with adequate roads and where environmental conditions are capable of supporting development.



Figure 28. The New Stores, Williamsburg

MHP - Manufactured Home Park: Districts are intended to provide for manufactured home parks. This land use is planned for areas with adequate roads and where environmental conditions are capable of supporting development.

V – Village District Mixed-Use/Village: Districts are intended to include a mixture of

Figure 29. Whitewater Township Current Zoning Map

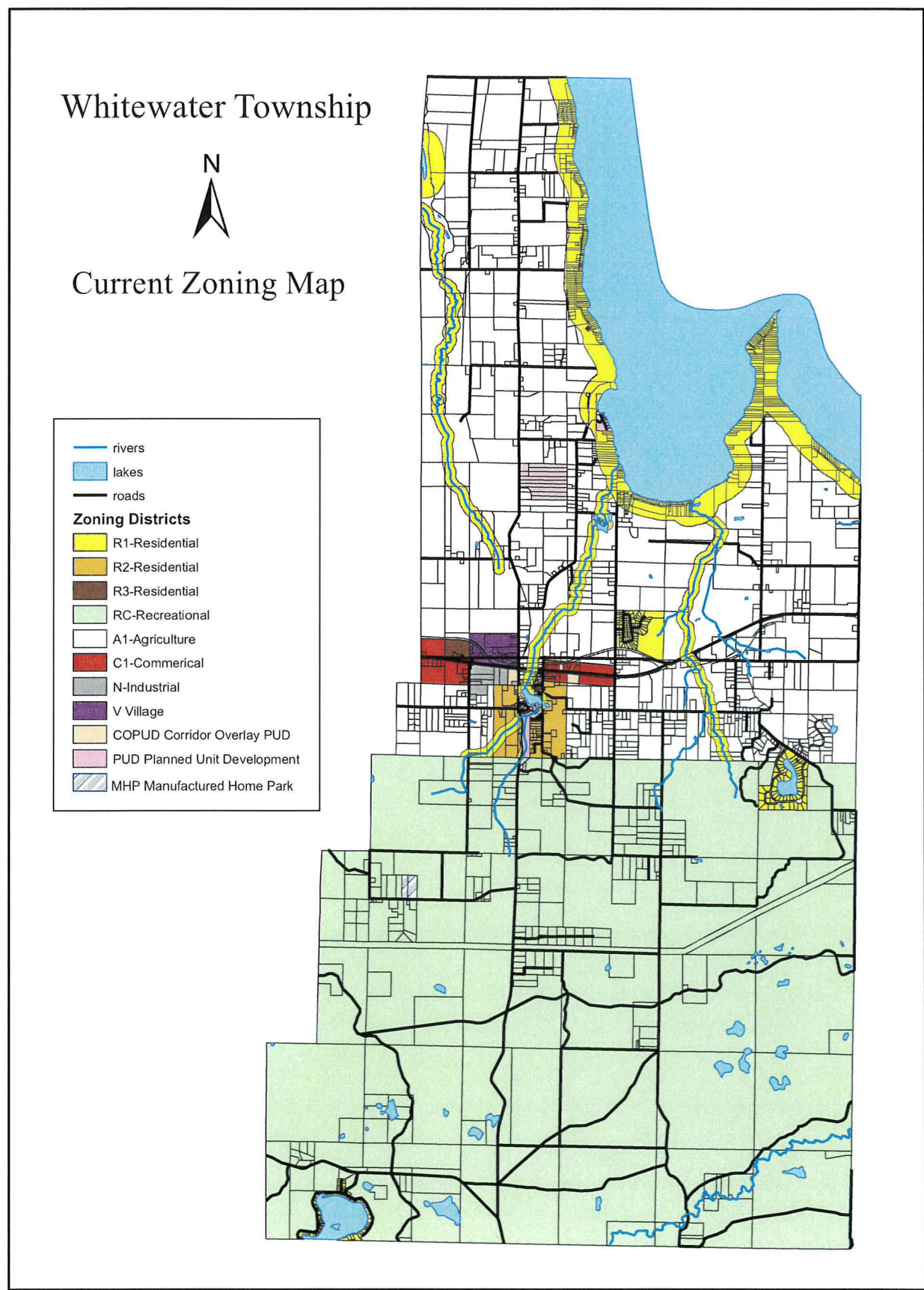
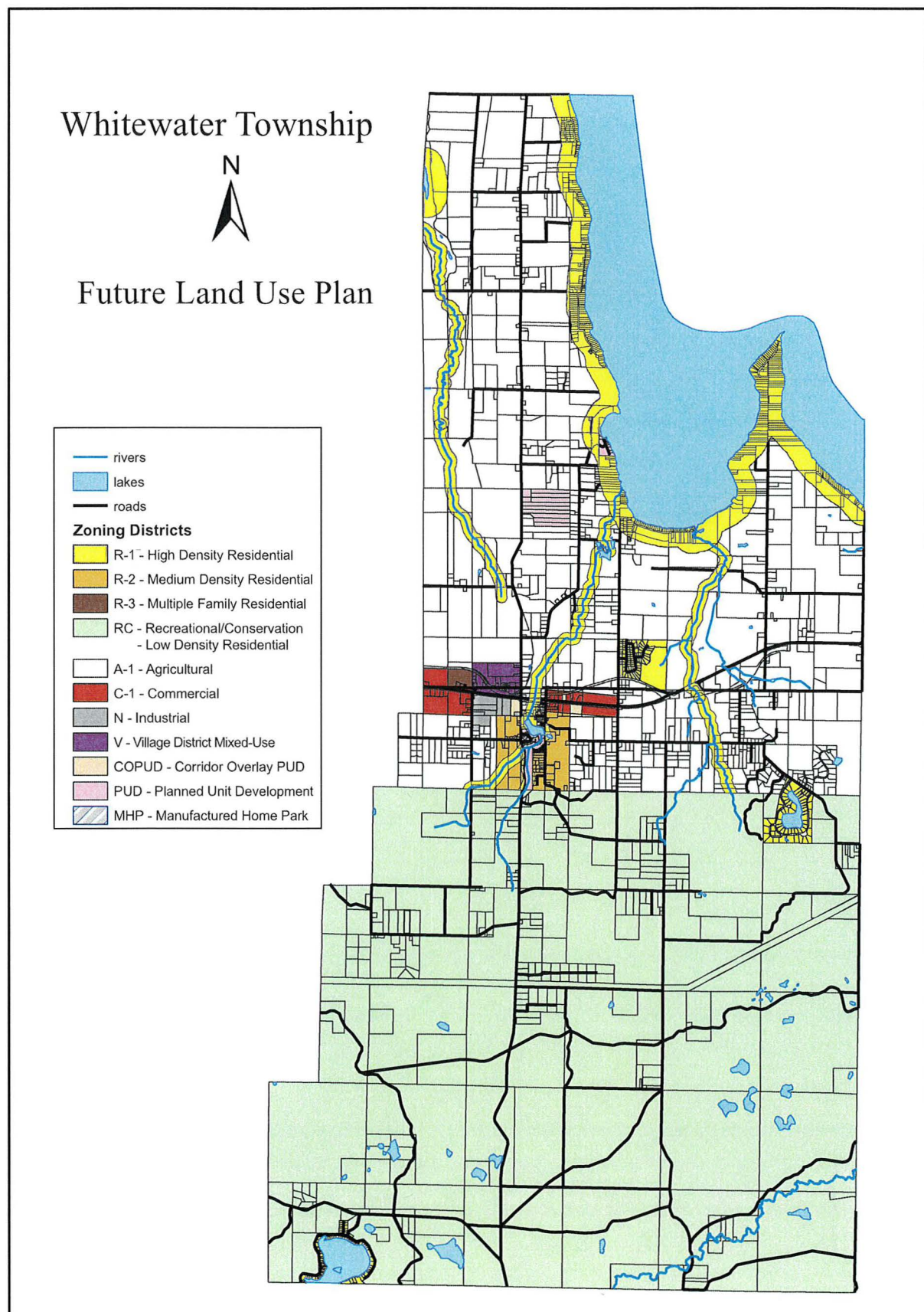


Figure 30. Whitewater Township Land Use Plan



commercial, office, service, apartment, townhouse and single family residential and may contain small lots, and shallow building setbacks.

C-1 – Commercial: Districts are intended to accommodate the sale of goods and services that may generate higher traffic volumes.

N – Industrial: Districts are intended to accommodate warehouse, research, laboratory, and light industrial uses. This land use is planned for areas with adequate roads and where environmental conditions are capable of supporting development.



Figure 31. Elk Lake Inn, “The Charm of The Wilds with the Comforts of The City.”

Overlay Zones (General)

Overlay zones superimpose additional regulatory standards on existing zoning districts. An overlay zone can establish additional regulation, or reduce or extend existing uses to address issues that are unique to a particular area.

PUD – Planned Unit Development: Residential setbacks and lot size restrictions are relaxed when offset by a required area of land set aside in a restricted manner. Commercial use is intended to allow higher density mixed use that is compatible with the existing features and development. Both forms are subject to state and township regulations. This land use is planned for areas with adequate roads and where environmental conditions are capable of supporting development.

COPUD – Corridor Overlay Planned Unit Development: These are intended to provide additional zoning tools and guidelines to create consistency and shared access along the major transportation corridors that run through our Township.

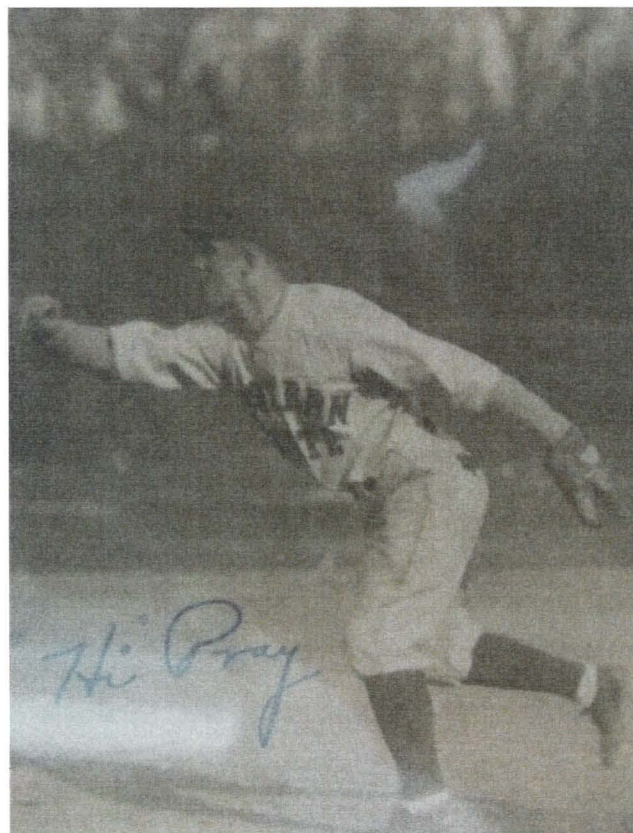


Figure 32. Hi Pray pitching for Western State, (Western Michigan University)

PART 6

Transportation Plan

The purpose of the Township road system is to provide safe and efficient movement of people and goods within and through the Township. The Michigan Department of Transportation (MDOT) and the Grand Traverse County Road Commission share the responsibility for upgrades and maintenance of all the public roads within Whitewater Township.

Transportation Plan Designations

Regional Arterials

Regional arterials are designed to carry heavy volumes of traffic. Some examples are freeways, multi-lane highways and other heavily traveled roadways that supplement the interstate system. M-72 is the main roadway that connects Traverse City to I-75 and is the only Regional Arterial Road in the township.

Major Arterials

Major arterials include roads that accommodate moderate to heavy traffic volumes. Whitewater Township's major arterials are Elk Lake Road, Williamsburg Road, and Supply Road.

Principal Collectors

Principal collectors provide access to residential, commercial, industrial and/or farm uses; these connect local roads to arterials. These carry lower volumes of traffic than major arterials. Only Angell Road is classified as a principal collector.

Secondary Collectors

Secondary collectors deliver access to land uses, but traffic volumes are significantly lower than Regional/Major Arterial and Principal Collectors. Deal, Skegemog Point, Cook, Broomhead, Ayers, Cram, Palaestrum and Hawley Roads are classified as secondary collector roads.

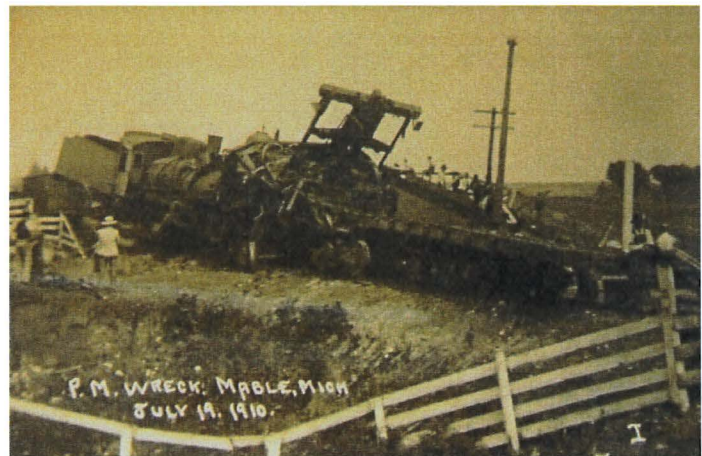


Figure 33. P.M. Wreck, Mable [sic], Mich., July 19, 1910



Figure 34. P.M. Wreck, Mable [sic], Mich., July 19, 1910

Local Roads

Local roads support access to individual properties and typically have moderate to low speeds and traffic. Gay Road, Hursh Road, and Vinton are considered local roads.

Tourist Roads

Tourist roads are the backbone of our area's tourism industry. Providing access to all that Whitewater Township has to offer, these roads need to be in the best possible condition to provide safe and efficient flow of traffic. These roads include:

- Baggs Road, an access to Skegemog (Round) Lake. It also provides access to the south side of the lake and a public access.
- Park Road, providing access to Whitewater Township Park (it is the only boat launch ramp on the west side of the lake).
- Broomhead Road, allowing access to the Sand Lakes Quiet Area and parts of the Boardman River.

Seasonal Roads

Seasonal roads receive no winter maintenance and limited maintenance throughout the year. All seasonal roads are posted as such. These include: Roots Lake, Samels, Guernsey Lake, Sand Lakes, and numerous others.

Private Roads

Private roads are privately owned and maintained for access to private property.

Pedestrian and Bike Path

Non-motorized transportation and recreation is gaining popularity. With support from landowners and residents, the Whitewater Township Planning Commission will monitor and assist the various collaborative groups of the area in developing a non-roadway focused network of trails throughout Northwest Michigan.

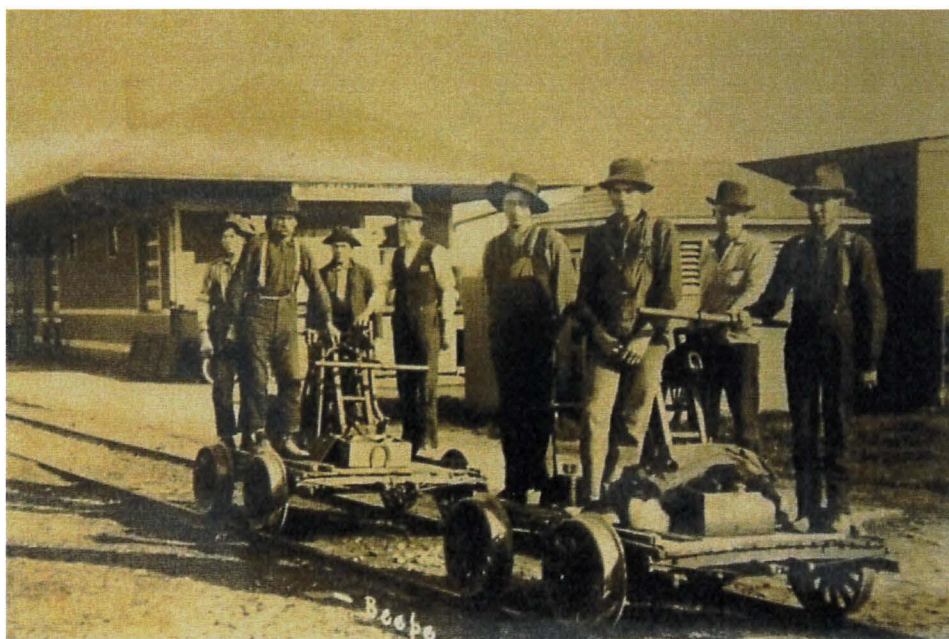
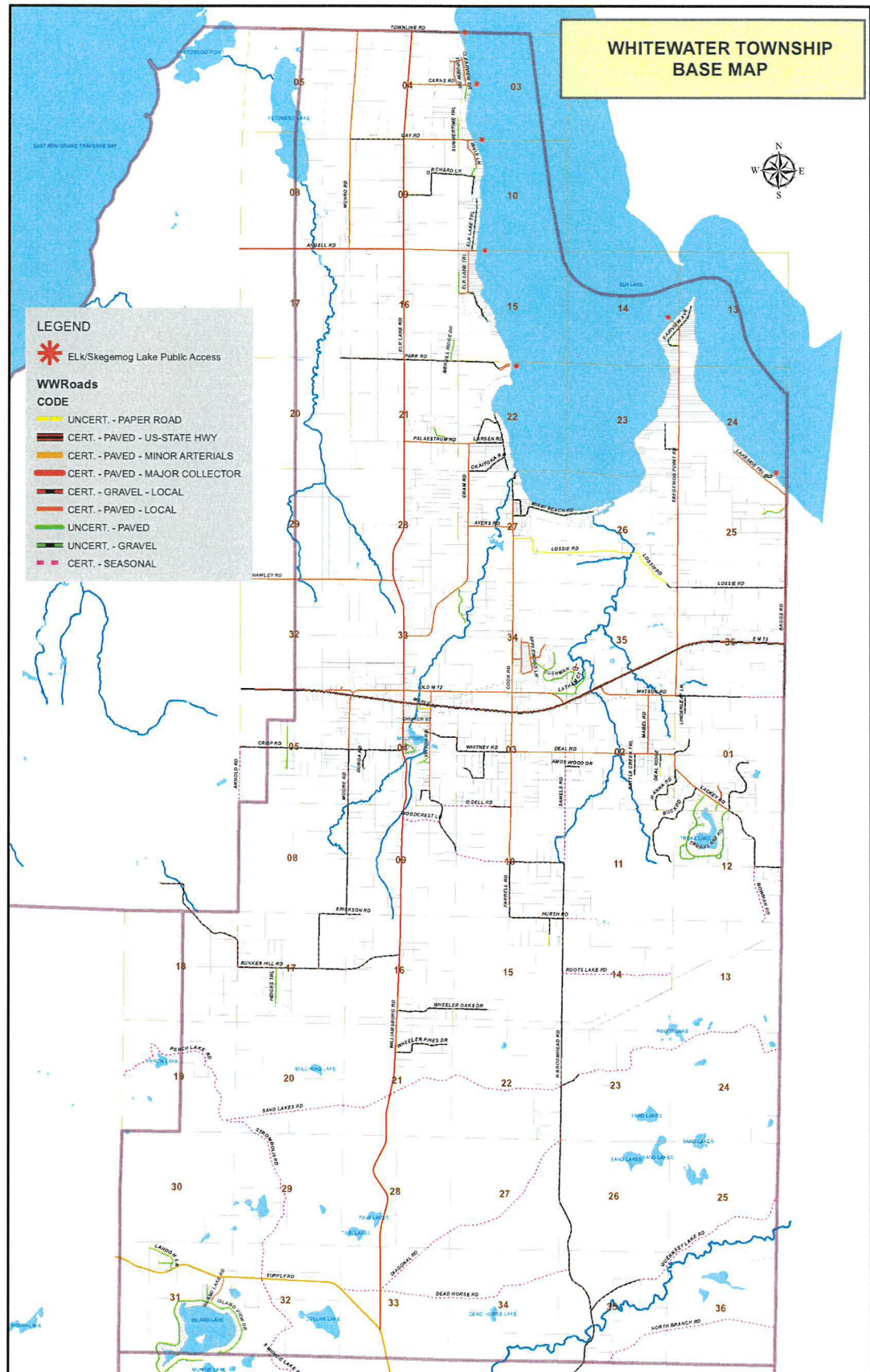


Figure 35. Railroad hand cars at the Williamsburg depot

Figure 36. Whitewater Township Base Map



PART 7

Natural Areas Plan

The citizens of Whitewater Township have always held a special appreciation for the tremendous wealth of our wild natural areas. This township contains numerous lakes and streams, as well as substantial state forest and local township park lands. It is our intent to work towards protecting these valuable public resources by encouraging preservation of the publicly held land, improving perimeter and parking signage where needed, to reduce or prevent conflict with neighboring properties, and to improve and maintain public access ensuring that these areas will be enjoyed for generations.



Figure 37. Twin Lake shoreline (along Williamsburg Road)

APPENDIX

IMAGE CREDITS

All historical photographs courtesy of Whitewater Township Historical Society.

Ink Rendering: Figure 11, page 7 drawn by Jennifer Oakley, and used with permission.

Cover photo and figures 9, 18, 20, 21, 24 and 37 courtesy of Tom Johnson.

CHART DATA CREDITS

NWMCOG Population Projections and U.S. Census Population Record

Chart 1: Data compiled by Northwest Michigan Council of Governments using Bureau of the Census, Decennial Census.

Chart 2: Age Distribution Data Driven Detroit analysis of Census 2000 and Census 2010, data from the U.S. Census Bureau, further compiled by Northwest Michigan Council of Governments.

Table 1: Household Trends Source Data Driven Detroit analysis of Census 2000 and Census 2010 data from the U.S. Census Bureau and further compiled by Northwest Michigan Council of Governments.

Chart 3: State Equalized Value for Real Property by percentage. Data provided by Whitewater Township Assessor, Dawn Plude-Kuhns.

Chart 4: Existing Land Use: data provided by Grand Traverse County GIS Department.

Chart 5: Data from Whitewater Township Treasurer for the 2013/2014 Fiscal year ending 3-31-2014.

MAP CREDITS

Location map of Whitewater Township: Generated using Grand Traverse County GIS information.

WWT Property Ownership: Generated using Grand Traverse County GIS information.

Existing Land Use in Whitewater Township: Generated using Grand Traverse County GIS information.

WWT Wetlands Map: Generated using Grand Traverse County GIS information.

WWT Major Watersheds Map: Generated using Grand Traverse County GIS information.

WWT Current Zoning Map: Generated using Grand Traverse County GIS information.

WWT Future Land Use Plan: Generated using Grand Traverse County GIS information.

WWT Base Map: Supplied by Grand Traverse County GIS Department.

OTHER SOURCES OF INFORMATION

Historical Information: Provided by Luann Snider, and compiled by the Whitewater Township Planning Commission.

Michigan Planning Act: [http://www.legislature.mi.gov/\(S\(xj3g1jaller4tq45ve4x5vuz\)\)/documents/mcl/pdf/mcl-act-33-of-2008.pdf](http://www.legislature.mi.gov/(S(xj3g1jaller4tq45ve4x5vuz))/documents/mcl/pdf/mcl-act-33-of-2008.pdf)

Michigan Zoning Act: [http://www.legislature.mi.gov/\(x3eqqx2ix0ez34nslk1zysl45\)/documents/mcl/pdf/mcl-Act-110-of-2006.pdf](http://www.legislature.mi.gov/(x3eqqx2ix0ez34nslk1zysl45)/documents/mcl/pdf/mcl-Act-110-of-2006.pdf)

WWT 2009 Community Input Survey: Conducted by McKenna Associates, Inc.

Color Code

Notes, needs review

Previously Reviewed Material

Pending Att. Consultation

Article 3: Definitions

Marihuana Related Definitions:

Shall include all of the definitions contained in the Medical Marihuana Facilities Licensing Act (MMFLA), Public Act 281 of 2016, and Michigan Regulation & Taxation of Marihuana Act (MRTMA) and Michigan Department of Licensing and Regulatory Affairs (LARA) Rules and Regulations.

Licensed Marihuana Facility: A facility authorized and defined pursuant to the Medical Marihuana Facilities Licensing Act, Public Act 281 of 2016, Michigan Regulation and Taxation of Marihuana Act which shall include the following:

- a. Residential Cultivation
- b. Grower
- c. Processor
- d. Secure Transporter
- e. Provisioning Center
- f. Safety Compliance Facility
- g. Excess Marihuana Grower

Residential Cultivation is the cultivation of medical marihuana by a patient or caregiver as defined by the Michigan Medical Marihuana Act, Initiated Law 1 of 2008.

Primary Caregiver means a person who has agreed to assist a patient with the medical use of marihuana and has a valid state license to do so.

Qualifying Patient is a person who had been diagnosed by a physician as having a debilitating medical condition being treated by marihuana.

Medical Secure Transport is a commercial entity licensed to store and/or transport marihuana between facilities.

Processor is a commercial entity licensed to purchase marihuana from a grower and extract resin, package, create marijuana-infused products, or similarly prepare marihuana substances for sale.

Grower is a commercial entity licensed to cultivate, dry, trim, or cure and package marihuana for sale to a processor or provisioning center.

Note: Any other definitions needed?

District Amendments

Residential District R1

6.10 Permitted Uses

O. **Residential Cultivation** establishments subject to the standard of Article 37.60.
(Renumber balance of section)

(Note: Hold pending attorney's opinion. This would specifically allow Residential cultivation in all districts. If we treating as a Home Occupation it would restrict to in home only not outbuildings)

Commercial District

8.11 Uses Permitted by Special Use Permit

8.11.Q Medical Marihuana Grower and Processor Facilities subject to the standards of Articles 26 and 25.25

8.11.P. Recreational Processor and Grower Facilities subject to the standards of Articles 26 and 25.25

(Renumber balance of section)

Village ? – Report – The 500 foot buffer from a park would leave the following properties available for this use: land between old and new M-72, about 100 feet across the northern edge of the district, and Eastern third of district depending on setbacks.

8.61 Uses Permitted by Special Use Permit

8.61.D Medical Marihuana Grower and Processor Facilities subject to the standards of Articles 26 and 25.25

8.16.E Recreational Processor and Grower Facilities subject to the standards of Articles 26 and 25.25

Industrial

9.11 Uses Permitted by Special Use Permit

9.11.E Medical Marihuana Grower and Processor Facilities subject to the standards of Articles 26 and 25.25

9.11.F Recreational Processor and Grower Facilities subject to the standards of Articles 26 and 25.25

(Renumber balance of section)

Agricultural

10.11 Uses Permitted by Special Use Permit

10.11.C Medical Marihuana Grower and Processor Facilities subject to the standards of Articles 26 and 25.25

10.11.D Recreational Processor and Grower Facilities subject to the standards of Articles 26 and 25.25

(Renumber balance of section)

25.22 E S.U.P. Standards governing location and operation.

25.22.E Marihuana Grow and Process Establishments - Any SUP application in the Commercial (C), Industrial (N), Agricultural (Ag), or Village (V) districts and shall comply with the following standards and shall include the following information in addition to the existing requirement for site plan and SUP.

1. A **waste disposal plan** shall be included with all applications detailing plans for solid and liquid, chemical, plant, and byproduct disposal or processing which does not include on site incineration.
2. A **security plan** including the following:
 - a. A plan detailing the establishments plans for **24-hour security monitoring**.
 - b. A plan which ensures that all marijuana plants or products are contained in an **enclosed, locked facility** that restricts and prevents access by any unauthorized person and meets all state requirements.
3. Proposed **hours of operation** shall be specified in the application are subject to Planning Commission approvals. (Note: Rules in TB wording only apply to retail.)
4. Facility Plans shall adhere to the standards in Article 34, **Off Street Parking and Loading**.
5. Plans shall provide a **landscape buffer** as defined in Article 33, Landscape Standards.
6. **Lighting Plans** detailing compliance with the following standards and those detailed in specified in Article 29, External Lighting Regulations:
 - a. A **Security Lighting Plan** which takes into consideration neighboring properties.

- b. Any artificial lighting must be **shielded to prevent glare** and light trespass and must not be visible from neighboring properties, adjacent streets or public right of ways.
 - c. All lighting, and associated equipment, such as but not limited to lamps, lights, ballasts, switches, controllers, computers, and any and all other electrical, electromechanical, or electronic devices employed on the premises must meet and fully comply with all applicable rules as required by the **Federal Communications Commission** ("FCC"), including but not limited to 47 CFR 15 (FCC Part 15) and 47 CFR 18 (FCC Part 18). Further, there must be **no** harmful and/or interfering electromagnetic emissions to any one-way or two-way radio communications, on or off the premises. Compliance with FCC Rules and Regulations is a condition of licensure by the Township.
7. Location of Marihuana Establishments shall be guided by the following standard:
- a. No Marihuana Establishment shall be located **within five-hundred (500) feet** of any licensed educational institution or school, college or university, church or house of worship or other religious facility, or public or private park, if such uses are in existence at the time the Establishment is issued an initial permit, with the minimum distance between uses measured horizontally between the closest edge of any such building or use on the property. (Note: Township Board wording)
 - b. All Marihuana facilities structures shall maintain a **one-hundred and fifty (150) foot set back** from the boundary of any residential district, subdivision, or district in which the use is not permitted. (Note: this would be approximately the same as horses)
 - c. **Exceptions** to the setback requirements may be considered by the planning commission for proposed marihuana facilities operating from an existing structure previously used for a commercial application.
8. Any structure housing a Marihuana Establishments shall comply with the **underlying zoning** in that district.
9. Any structure housing a Marihuana Establishments in any district shall maintain a total footprint of all buildings equal to or less than a **40% maximum coverage** of the property.
(Note: This is the existing standard in the C and N districts but would extend the standard to the AG for this use)
10. **Signage** shall not indicate the nature of the establishment as a marihuana facility and shall require a use permit unless approved through special use permit process.
11. No equipment or process shall be used which **creates noise, dust, vibration, glare, fumes, odor** or electrical interference detectable to the normal senses beyond the parcel boundary.
12. The Facility shall be the **only principal use** located on the Permitted Property, except that the co-location of facilities and establishments is permitted, and the stacking of applicable licenses is permitted.
-

Article 37.60 Residential Cultivation

37.60 Residential Cultivation

A. Residential Cultivation by a Qualifying Patient or Primary Caregiver shall be permitted in any district and shall be governed by the following standards:

1. All marihuana plants or product must be contained within the dwelling, or enclosed structure which prevents access by unauthorized persons.
2. Only one individual may operate within a Residential Cultivation establishment.
3. The qualifying patient or Primary Caregiver must possess and maintain a valid registry identification card by the Bureau of Health Professions, Michigan Department of Licensing and Regulatory Affairs or their successors.
4. Primary Caregivers shall comply with the standards set forth in accordance with MMA, MCL 33.26421, et seq as to the number of plants, ounces of usable Marihuana, record keeping, and security to prevent theft of stored product.
5. Residential Cultivation establishments shall obtain all necessary building, electrical, plumbing and mechanical permits for work required to house or maintain equipment used to support the cultivation, growing, or harvesting of Marihuana.
6. There shall be no external evidence, signage, odor, or lighting related to the Residential Cultivation operation detectable from the exterior of the property.
7. All lighting, and associated equipment, such as but not limited to lamps, lights, ballasts, switches, controllers, computers, and any and all other electrical, electromechanical, or electronic devices employed on the premises must meet and fully comply with all applicable rules as required by the Federal Communications Commission ("FCC"), including but not limited to 47 CFR 15 (FCC Part 15) and 47 CFR 18 (FCC Part 18). Further, there must be no harmful and/or interfering electromagnetic emissions to any one-way or two-way radio communications, on or off the premises. Compliance with FCC Rules and Regulations is a condition of licensure by the Township.
8. No equipment or process shall be used which creates noise, dust, vibration, glare, fumes, odor or electrical interference detectable to the normal senses beyond the parcel boundary.

Partial List of Resources Consulted:

Kalkaska Medical Marihuana Ordinance" only the first 7 pages are relevant to us.

Acme Township excerpt provided in the March PC packet

Township Attorney version provided in the Feb. PC packet

Whitewater Township GO 59 and 60 in the March 24 PC packet



SOLID WASTE AND HAZARDOUS WASTE REGULATIONS FOR GROWING AND PROCESSING MARIJUANA

Guidance

In order to protect Michigan's environment and comply with state and federal regulations, marijuana growing and processing operations may be subject to Michigan Department of Environment, Great Lakes, and Energy (EGLE) solid waste, hazardous waste, or liquid industrial by-product regulations. The following provides guidance on those requirements as may be applicable to marijuana cultivation and processing operations. Please note, while this list covers most state programs related to waste regulations, other federal, state, and local regulations or programs may apply.

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Regulation of Unwanted Residuals from Marijuana Growing or Processing.....	3
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What materials do I have to mix with my marijuana product and how much must I use?	4
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DEFINITIONS

HAZARDOUS WASTE – means waste or a combination of waste and other discarded material including solid, liquid, semisolid, or contained gaseous material that because of its quantity, quality, concentration, or physical, chemical, or infectious characteristics may cause or significantly contribute to an increase in mortality or an increase in serious irreversible illness or serious incapacitating but reversible illness, or may pose a substantial present or potential hazard to human health or the environment if improperly treated, stored, transported, disposed of, or otherwise managed.

LISTED HAZARDOUS WASTE – certain wastes are automatically a hazardous waste if:

- They are produced from non-specific sources (F listed wastes) – see R299.9920
- They are produced from specific sources (K listed wastes) – see R299.9222
- They are discarded commercial chemical products, off-specification species, container residues, and spill residues (P listed wastes) – see R299.9224
- They are discarded commercial chemical products, container residues, and spill residues (U listed wastes) – see R299.9225

CHARACTERISTIC HAZARDOUS WASTE – is a waste which has any of the four hazardous waste characteristics identified in the state and federal regulations, which include:

- Ignitable wastes: Starts burning easily; liquid with a flash point below 140 degrees F.
- Corrosive wastes: Dissolves metals or burns skin; pH less than 2.0 or greater than 12.5
- Reactive wastes: Undergoes rapid or violent chemical reaction
- Toxic wastes: Poisonous to humans or organisms – see R299.9217

UNIVERSAL WASTE – means any of the hazardous wastes (see R 299.9228(1)) that can be managed differently than most hazardous wastes (see R 299.9228)

SOLID WASTE – means garbage, rubbish, ashes, incinerator ash, incinerator residue, street cleanings, municipal and industrial sludges, solid commercial waste, solid industrial waste, and animal waste that are not a regulated hazardous waste.

LIQUID INDUSTRIAL BY-PRODUCT – means any material, that is not a regulated hazardous, waste that is produced by, is incident to, or results from industrial, commercial, or governmental activity or any other activity or enterprise, that is determined to be liquid by method 9095 (paint filter liquids test) as described in "Test methods for evaluating solid wastes, physical/chemical methods," United States Environmental Protection Agency publication no. SW-846, and that is discarded.

Diverted wastes – means a specific list of materials that when managed in compliance with 324.11521b are not a regulated solid waste.

WASTE REGULATIONS ASSOCIATED WITH MARIJUANA PRODUCTION AND PROCESSING

Large-scale marijuana cultivation operations may generate solid waste, hazardous waste, universal wastes, diverted waste, or a liquid industrial by-product. You may be subject to several regulations based on the Natural Resources and Environmental Act, 1994 PA 451, as amended, specifically:

- Part 111, Hazardous Waste Management
 - [Part 111 Statute](#)
 - [Part 111 Rules](#)
- Part 115, Solid Waste Management
 - [Part 115 Statute](#)
 - [Part 115 Rules](#)
- [Part 121, Liquid Industrial By-Products](#)
- [Act 138, Hazardous Materials Transportation Act](#)

In addition to the listed parts of the NREPA the Medical Marijuana Facilities Licensing Act, 2016 PA 281, and its rules contain requirements for managing wastes from growing and processing of marijuana.

WASTES GENERATED FROM GROWING AND PROCESSING MARIJUANA

The growing and processing of marijuana in Michigan brings challenges regarding the disposal of generated wastes. Marijuana can be processed in a variety of ways. While it is anticipated that most of the waste streams will be eligible for disposal in a municipal solid waste landfill, others may require management in a hazardous waste landfill. Therefore, each waste stream will need to be evaluated by the generator of the waste for the presence of both listed and characteristically hazardous wastes. For example, the use of various flammable chemicals during the processing of marijuana could generate wastes that are characteristically hazardous for ignitability and/or toxicity. It's important to remember that each waste stream from each generating location will need to be fully evaluated to determine the proper disposal options.

Wastewater from the operation should be managed in compliance with the EGLE guidance document, "Protecting Water Resources when Growing and Processing Marijuana"

Unprocessed marijuana is currently not listed as a hazardous waste under Part 111, of the NREPA. Characterization determinations could change if the unprocessed marijuana were to come into contact with certain listed hazardous wastes, which could have the potential to impact the way marijuana is characterized for disposal. Waste byproducts resulting from chemical treatment have the potential to become a listed waste or a characteristically hazardous waste (see definitions above). EGLE recommends that any treated marijuana or waste byproduct be fully characterized on a case-by-case basis before disposal.

In addition, non-hazardous waste liquids may be regulated under Part 121, Liquid Industrial By-Products. Part 121 includes recordkeeping, generation, storage and transportation requirements.

Act 138 addresses licensing for companies transporting either hazardous waste, or liquid industrial by product, or both.

REGULATION OF UNWANTED RESIDUALS FROM MARIJUANA GROWING OR PROCESSING

The regulation of unwanted residuals from the growing or processing of marijuana depends on the character and quantity of the wastes generated. If you determine that you generate a regulated hazardous waste, it is in your interest to generate as little as possible and to not store the waste for long periods of time. Refer to [Chapter 1, Tables 2.4 – 2.6](#) of [The Michigan Guide to Environmental, Health, and Safety Regulations](#) found at Michigan.gov/ehsguide for a summary of the requirements related to:

- Generator status (based on amounts generated monthly and storage amounts)
- Transportation and disposal
- Waste analysis plans

- Inspection requirements
- Labeling
- Secondary containment
- Air emissions controls
- Contingency plans and emergency procedures
- Training
- Reporting
- Closure of accumulation areas

REGULATION OF LIQUID INDUSTRIAL BY-PRODUCTS

There are two options for managing liquid industrial by-products. The first is to discharge the waste to the municipal sewer. This should be done only after discussing the character and volume of the waste with the owner/operator of the waste water treatment plant. The second option is to hire a licensed liquid industrial waste hauler to transport your material to an approved designated facility for treatment and/or disposal. See the part 121 statute for regulation and exemptions.

REGULATION OF SOLID WASTE

If you have determined that your waste is not a regulated hazardous waste or a liquid industrial by-product, then it is likely to be regulated as a solid waste. The following are commonly asked questions regarding the management of solid waste from marijuana processing and growing:

What can I do with leaves, stalks, flowers, stems, seeds, roods, and soils generated from my operation? According to R 333.237 a marijuana product that is to be destroyed or is considered a waste must be rendered into an unusable and unrecognizable form through grinding and incorporating with an unusable solid waste.

What materials do I have to mix with my marijuana product and how much must I use?

The ground marijuana product must be mixed with an equal volume of one of the following materials:

- Paper waste
- Plastic waste
- Cardboard waste
- Food waste
- Fermented organic matter or other compost activators
- Other wastes approved by the Department of Licensing and Regulatory Affairs
- Soil

What are the proper management standards for the mixture of marijuana product and non-consumable solid waste?

The mixture must be managed in compliance with one of the following:

- Disposed into a licensed municipal solid waste landfill.
- Composted at registered yard waste composting facility provided EGLE has approved the facility's operations plan.
- Sent to an anaerobic digester provided EGLE has approved the facility's operations plan.
- Sent to a licensed municipal solid waste incinerator or a licensed hazardous waste incinerator.

Where are licensed municipal solid waste incinerators located?

Kent County Waste to Energy
950 Market Avenue SW
Grand Rapids, Michigan
616-336-2502

PERMITS, LICENSES OR AUTHORIZATIONS

Depending on the character and volume of waste generated, you may require a permit, license or other authorization to manage wastes from your facility

- Hazardous waste requirements – a generator of a regulated hazardous waste must obtain a Site ID for their facility. The application can be found at [Michigan.gov/documents/deq/deq-whm-hwp-EQP5150_214510_7.pdf](https://www.michigan.gov/documents/deq/deq-whm-hwp-EQP5150_214510_7.pdf).
- Liquid Industrial by-product requirements
- Solid waste requirements – You do not require a permit or license to manage or store non-hazardous solid waste. In addition, any person hauling non-hazardous solid waste does not require a permit or license from the state of Michigan. Of course, you must comply with all local zoning ordinances and special use permits to operate your facility.

ADDITIONAL INFORMATION

- **Compliance Assistance Resources** - Viewing our waste characterization and generator status recorded [webinar](#) after printing our webinar [notes](#) and viewing any other webinars you expect relevant to your operations based on your expected/known waste streams and how you concluded they are characterized. All of the webinars are available at [Michigan.gov/EGLEwaste](https://www.michigan.gov/EGLEwaste), under announcements (second to last bullet in the list). You may also find our [Waste Characterization Steps and questions](#) and optional [characterization form](#) helpful in documenting your determinations.
- **Permitting/Licensing/Authorization Resources** - If you are looking to determine what authorizations may be needed from EGLE as a whole (all divisions), I'd recommend seeing our [Permit Information Checklist](#) and other resources available at [Michigan.gov/EGLEpermits](https://www.michigan.gov/EGLEpermits). Note too that the guidebook can be accessed on this page too. If you're interested in a hardcopy, you can purchase it online too. However, keep in mind the electronic version (which has direct link at [Michigan.gov/EHSguide](https://www.michigan.gov/EHSguide), has lots of valuable links that provide access to more detailed information that what is available in the print version.
- [Registered Composting Sites](#)
- [Hazardous Waste Site ID Form](#)
- [Part 121 Frequently Asked Questions](#)

This publication is intended for guidance only and may be impacted by changes in legislation, rules, policies, and procedures adopted after the date of publication. Although this publication makes every effort to teach users how to meet applicable compliance obligations, use of this publication does not constitute the rendering of legal advice.

WHITE PAPER: THE ENVIRONMENTAL IMPACTS OF THE MARIHUANA INDUSTRY



September 17,
2018

Michigan Department of Environmental Quality
Marihuana Workgroup



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EXECUTIVE SUMMARY

Marihuana cultivation and processing are expanding, as both recreational and medical marihuana products are being legalized across the United States of America (U.S.). In Michigan, medical marihuana is currently legal, and an initiative to legalize recreational marihuana will appear on the ballot in November 2018. Due to the potential full legalization of marihuana in Michigan, a Michigan Department of Environmental Quality (MDEQ) workgroup was formed to assess the environmental risks posed by the marihuana industry.

Air

- Odor from marihuana cultivation and processing is a major concern. Many people are familiar with the pungent odor from burning marihuana. Foul odors are also generated from the cultivation and processing of marihuana.
- Processors often use solvents to extract essential oils that contain medicinal and psychoactive compounds. These solvents pose potential public health impacts and may be subject to existing air pollution control rules.
- Marihuana plants have the potential to emit significant quantities of volatile organic compounds (VOC), which may pose a threat to attainment of the National Ambient Air Quality Standard (NAAQS) for ozone.
- Depending on the nature, size, and scale of the operation, cultivation and processing facilities may be required to obtain a *Permit to Install* (PTI), per Rule 201 of Part 2, Air Use Approval (Part 2 Rules), promulgated pursuant to Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA).
- Open burning is another potential concern. The growth and processing of marihuana results in plant wastes, which could pose air quality threats if they were burned as a means of disposal.

Waste

- Any marihuana plant waste should be made unusable and unrecognizable prior to disposal. This can be accomplished by grinding the marihuana waste and incorporating ground, non-consumable materials, such as inedible food waste, kitty litter, municipal solid waste, or other inedible wastes. The mixture should be at least 50 percent non-marihuana waste and should be secured in a locked container until transported off-site.
- Unprocessed marihuana is currently not listed as a hazardous waste. Characterization determinations could change if the unprocessed marihuana comes into contact with certain listed hazardous wastes during the essential-oil extraction processes.
- Marihuana byproducts resulting from chemical treatment have the potential to become characteristically hazardous waste. The MDEQ recommends that any treated marihuana or waste byproduct be fully characterized, on a case-by-case basis, before disposal.
- Inorganic solid wastes can be disposed at a licensed municipal solid waste incinerator or a licensed municipal solid waste landfill.
- Under current regulations, marihuana plant wastes may be disposed at the following: a licensed municipal solid waste incinerator, municipal solid waste landfill, anaerobic digester, or registered composting facility; or the wastes may be composed on-site.

Water

- The cultivation of marihuana plants requires significant quantities of water. The use of the *State of Michigan Water Withdrawal Assessment Tool* (WWAT) will be required prior to beginning any new or increased large quantity withdrawal from groundwater or surface water.
- A Soil Erosion and Sedimentation Control (SESC) permit will be required for any earth change activity that disturbs one or more acres of land or is within 500 feet of a lake or stream.
- Construction activities that disturb one or more acres of land and have a point source discharge of storm water to waters of Michigan (streams, rivers, lakes, and wetlands) are required to obtain a National Pollutant Discharge Elimination System (NPDES) Permit.
- The State of Michigan (State) has assumed authority to administer Section 404 of the federal Clean Water Act (CWA) permitting program, which is the program that regulates the discharge of dredged or fill material into wetlands. The Michigan Department of Attorney General (MDAG) is reviewing if the MDEQ can issue wetland permits for marihuana activities.
- The State has been delegated authority to administer Section 402 of the CWA, which is the NPDES Program. If facilities have a direct discharge of pollutants to surface waters, they must apply to obtain an NPDES permit. Further research and/or discussion with the MDAG is needed to determine if the Water Resources Division (WRD), of the MDEQ, needs to add special language in NPDES permits for marihuana operations.
- The MDEQ does not recommend groundwater (land application) discharges of wastewater from growing or processing facilities.
- Discharge of wastewater from growing or processing to a septic system is not allowed, as only sanitary wastewater can be discharged to a septic system.
- The MDEQ has some concerns with contaminated runoff from these sites. Current storm water regulations would not directly apply to marihuana operations.

Key Recommendations

- Create fact sheets and educational documents for distribution to owners and operators of marihuana cultivation and processing facilities.
- Develop sample city ordinances or guidance for local governments on how to manage odors, as well as other environmental impacts from the marihuana industry.
- Review topics where administrative rulemaking may be necessary to properly manage environmental impacts from the marihuana industry and determine if rulemaking is the appropriate avenue for managing these impacts.
- Continue inter-departmental coordination with the Department of Licensing and Regulatory Affairs (DLARA) and Michigan Department of Agriculture and Rural Development (MDARD); consider developing a task force or formal workgroup to encourage greater coordination across the different agencies impacted by the marihuana industry.
- Develop internal guidance and policies for how MDEQ staff should handle marihuana facilities moving forward. There is a need for consistency across divisions in how communication, complaints, enforcement, and inspections will be handled.
- Assist the Bureau of Medical Marihuana Regulation (BMMR) staff in development of a permanent rule set to replace the emergency rules that regulate the marihuana industry.

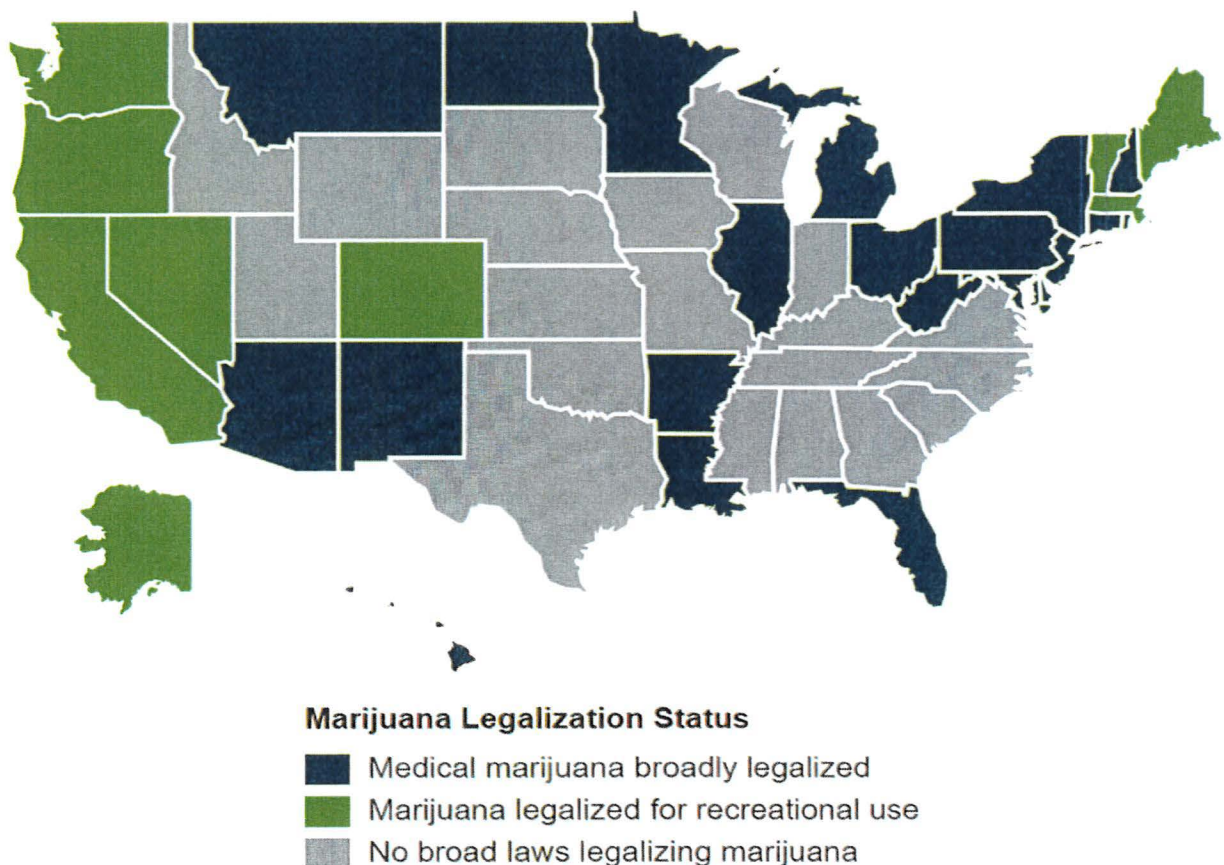
INTRODUCTION

States that have legalized recreational marihuana are beginning to realize the full extent of environmental impacts associated with the marihuana industry. As marihuana operations continue to expand (*Figure 1*),^{1,2} state environmental agencies have been working to determine the appropriate method of regulating this industry.

In Michigan, medical marihuana is currently legal and a proposal³ to legalize recreational marihuana will appear on the November 2018 ballot. Legalization of recreational marihuana could result in a significant increase in production and processing of cannabis. The State must be prepared to address the adverse environmental impacts posed by the marihuana industry. To achieve this goal, the MDEQ formed a marihuana workgroup tasked with assessing the negative environmental impacts that the marihuana industry will have within Michigan.

This white paper examines the environmental impacts posed by the marihuana industry, identifies gaps in the existing regulatory framework, and recommends potential actions the MDEQ may need to take to address the environmental impacts of the marihuana industry.

Figure 1: Legal Status of Marihuana by State



¹ https://en.wikipedia.org/wiki/Timeline_of_cannabis_laws_in_the_United_States#States

² <http://www.governing.com/gov-data/state-marijuana-laws-map-medical-recreational.html>

³ <https://www.regulatemi.org/initiative/>

Definition of marihuana

Cannabis is a tall plant that is cultivated to produce drugs and fiber. Marihuana is the dried leaves and flowers of the cannabis plant that has THC (Tetrahydrocannabinol) in a concentration sufficient to produce a psychoactive effect after ingestion. Marihuana is also a natural source of CBD (Cannabidiol), which is not psychoactive and has medical applications. Hemp is a variety of cannabis that has very little THC and is cultivated for its tough fiber, which is used to make rope, cloth, and other products. Throughout this paper, cannabis will be used when referring to the plant and cultivation, while marihuana refers to the drug and its industry.

MICHIGAN'S EXISTING REGULATORY FRAMEWORK

Medical Marihuana

Medical marihuana was legalized with the passing of the Medical Marihuana Act of 2008 (MCL 333.26530). The Medical Marihuana Act created a system of registering patients and caregivers, imposed registration, application, and renewal fees, and provided for the promulgation of administrative rules. To supplement the Medical Marihuana Act, the Michigan Legislature adopted the Medical Marihuana Facilities Licensing Act (MMFLA) in 2016, which spells out the licensing requirements for marihuana cultivation, processing, and provisioning operations.

Through the MMFLA, BMMR, which is housed within the DLARA, was given the responsibility of licensing facilities that grow, process, transport, and sell medical marihuana in Michigan. In December of 2017, the DLARA issued emergency administrative rules to implement the MMFLA. These emergency administrative rules specify how facilities can obtain a medical marihuana license, the criteria by which license approval will be assessed, requirements for tracking and monitoring systems, along with several other requirements surrounding the licensing and operation of medical marihuana facilities in Michigan. The emergency administrative rules remain in effect until November 2018. BMMR staff are currently working to develop a permanent rule set that will replace the emergency rules.

Ballot Petition

A proposal to legalize recreational marihuana will appear on the ballot November 2018. This was a result of successful campaign efforts by the advocacy group, Coalition to Regulate Marijuana Like Alcohol. If passed, the ballot initiative would modify State law to allow legal marihuana possession, use, cultivation, and sale of marihuana for persons 21 years or older. This petition would also allow for taxation of revenue earned from marihuana facilities and would allow for the promulgation of additional administrative rules regarding marihuana possession, use, cultivation, and sale. However, the ballot proposal does not contain language regarding environmental impacts resulting from the legalization of recreational marihuana.

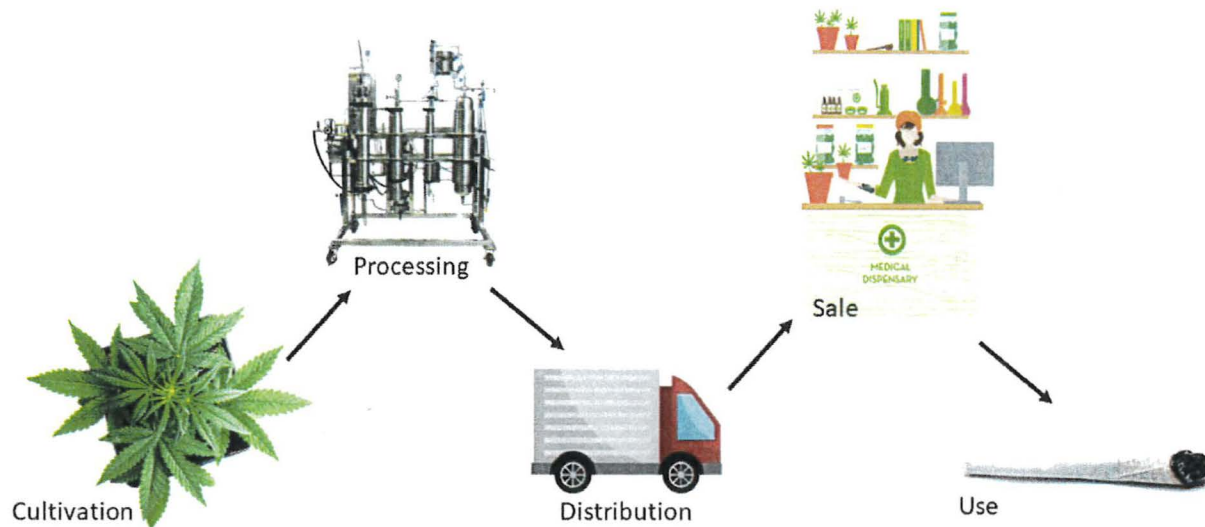
ENVIRONMENTAL IMPACTS OF THE MARIHUANA INDUSTRY

The marihuana industry consists of five stages: cultivation, processing, distribution, sale, and use. An overview of the process is provided in

Figure 2. Cultivation is the stage at which the cannabis plant is grown, either indoors or outdoors. Processing is when the cannabis plant is converted into the final marihuana product that typically involves the use of solvents to extract active ingredients. Distribution involves the transportation of

marihuana products to the dispensaries. Marihuana products are sold through dispensaries and used by the consumer.

Figure 2: Marihuana Industry Overview



Environmental impacts from the marihuana industry are most common during the cultivation and processing stages. These stages are the primary focus of the remainder of this whitepaper. Cultivation and processing operations pose several threats to air, water, and land resources in Michigan. Cultivation and processing may be performed at a single facility or at separate operations. The remainder of this section discusses the environmental risks posed by marihuana cultivation and processing operations.

Cultivation

Cannabis cultivation may occur at indoor or outdoor facilities. Both indoor and outdoor cultivation require similar inputs to the system, such as water, nutrients, soil, and light to successfully grow cannabis. However, differences in conditions between indoor and outdoor cultivation result in unique environmental risks.

For both indoor and outdoor grow operations, the location of these facilities is important in preventing future environmental impacts. Clear-cutting, soil erosion, river diversions, and wetland impacts are among the impacts that marihuana cultivation operations can have on the land and water resources. For example, the state of California has faced issues with grow operations illegally located on federal and state protected lands. There are cases where individuals have clear-cut state protected forestland to establish cannabis cultivation operations. As a result of these illicit marihuana grow operations, Northern California has seen significant land use changes (Figure 3).⁴ To prevent these impacts, outdoor grow operations should not be located on or near ecologically sensitive areas, and all land changes and water withdrawals should be carefully controlled. In addition, indoor cultivation operations should not be located close to residential areas or in proximity to ecologically sensitive land.

⁴ Carah, Jennifer K. et al. High Time for Conservation: Adding the Environment to the Debate on Marijuana Legalization. *Bioscience* 65.8 (2015): 822-829. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4776720/>

Cannabis plants require large amounts of water throughout the growth process. Researchers have estimated that growing marijuana requires up to six gallons per plant, per day, resulting in an estimated 412,500 gallons of water used per acre over the growing season.⁵ Best management practices such as closed loop and water reuse systems can help reduce the quantity of water required by these facilities.

Due to the high water demand of cannabis cultivation, facilities may utilize illegal surface water withdrawals to irrigate cultivation operations. The state of California has had difficulty dealing with the large scale impacts resulting from illegal operations that intentionally divert streams or drain wetlands to irrigate cannabis plants.

In Michigan, impacts from outdoor marihuana grow operations have already been documented in Arenac County, where outdoor medical marihuana cultivation is allowed. The WRD has been dealing with issues of improper management of wetlands at medical marihuana facilities. A site of approximately 9.5 acres of a high quality, regulated, forested wetland was impacted by illegal tree and stump removal, excavation of a ditch/stream to drain the property, and placement of fill. Another site of approximately one to two acres, high quality, regulated floodplain was damaged by mechanical land clearing, the excavation of ditches to drain the property, placement of fill, and the construction of a grow building. Additionally, the colonization of invasive species occurred at both sites (Figure 4).

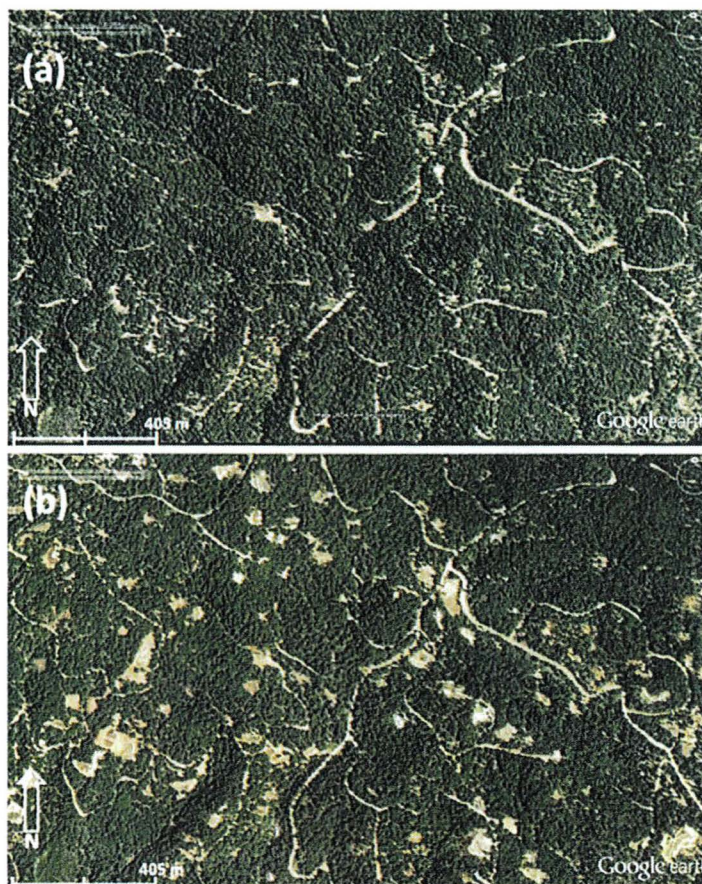


Figure 3: Land clearing and habitat conversion associated with marihuana cultivation in the Trinity River watershed (a) before conversion, 2004, and (b) after conversion, 2012. Source: Carah et al, 2015.

⁵ Bauer, Scott et al. Impacts of Surface Water Diversions for Marijuana Cultivation on Aquatic Habitat in Four Northwestern California Watersheds. *PLoS ONE* 10(3).



(a) 9.5 acre site of what was previously high quality forested wetland.



(b) 1-2 acre site of previous high quality flood plain wetland.

Figure 4: Damage due to unlawful activities at outdoor marihuana grow operations in Arenac County.

Nutrient and chemical inputs to the system present another set of environmental challenges. Fertilizers, pesticides, fungicides, and rodenticides are commonly used in marihuana cultivation operations. These nutrient and chemical inputs can be toxic to wildlife, adversely impact drinking water aquifers, result in eutrophication of water resources, and damage septic systems. Nutrient and chemical inputs have a higher likelihood of resulting in adverse environmental impacts in outdoor operations, which are less likely to control and prevent the direct runoff of toxic compounds. WRD staff recommend following best management practices,⁶ such as pesticide management, to reduce the impacts of storm water runoff. In addition, the WRD does not recommend discharges to groundwater via a septic system, or discharges of untreated wastewater to the ground or groundwater.

Cannabis plants emit VOCs throughout their growth cycle. These VOC emissions are similar to the biogenic emissions that originate from pine trees. Outdoor grow operations typically have higher emissions to the ambient air than indoor grow operations, due to the lack of physical barriers or control technologies between the plants and the ambient air. Work is ongoing to determine more accurate emissions estimates for both indoor and outdoor grow operations. Preliminary estimates indicate that an average outdoor grow operation emits around 43 tons of VOC per year.⁷ There is a potential for hundreds of these operations to emerge across Michigan in a relatively short period of time, resulting in significant increases in VOC emissions in Michigan. These increases in VOC emissions would impact the ability of Michigan to meet the health-based national air quality standards for ozone.

VOCs emitted by cannabis plants are known to have a strong, pungent odor. The odors from growing cannabis plants can pose a nuisance to the surrounding communities in which these cultivation

⁶ http://www.michigan.gov/deq/0,4561,7-135-3313_71618_3682_3714-118554--,00.html

⁷ Ashworth, Kristi and Wiedinmyer, Christine. Impacts of the Legalization of Marijuana on Emissions and Air Quality in US. http://www.research.lancs.ac.uk/portal/files/145113071/GRC_Poster.pdf

operations are located. Odors from the plants can be mitigated through the use of control technologies, such as activated carbon filtration, negative ion generation, ozone generators, and misting systems. Activated carbon filtration is the most common and widely accepted method of controlling foul odors. Some odor control technologies may also reduce VOC emissions. Odor control plans are an effective way of reducing nuisance odors, beyond just installing control technologies. These plans typically document the nature of odors at the facility, as well as the control technologies and work practices the facility will utilize to minimize the impact of the odors on the surrounding communities.

Indoor cannabis cultivation operations may also use carbon dioxide (CO₂) generators to accelerate plant growth. Two common methods used to generate CO₂ are fermentation and combustion. Fermentation creates CO₂, hydrogen, methane, and other air contaminants. Combustion generates carbon monoxide (CO), nitrogen oxides, particulate matter (PM), sulfur dioxide, and VOCs. In significant quantities, the emissions of these air contaminants may pose public health risks and require a PTI.

The cultivation of marihuana produces solid wastes including stems, seeds, roots, stalks, soils, and other materials. Any marihuana plant waste should be made unusable and unrecognizable prior to leaving the licensed premises. This can be accomplished by grinding the marihuana waste and incorporating with ground, non-consumable, materials that result in a mixture of at least 50 percent non-marihuana waste. Example materials include, but are not limited to, inedible food waste or other organic material, kitty litter, municipal solid waste, or other inedible wastes. Mixture should be secured in a locked container until it is transported off site (*Figure 5*).

Once the marihuana plant waste is made unusable and unrecognizable, the waste may be disposed of at a licensed municipal solid waste landfill, deposited at a registered compost facility, taken to an anaerobic digester or a licensed municipal solid waste incinerator, or composted in a secure on-site location, to create soil that will be used on-site for further marihuana cultivation.



Figure 5: Grinding of marihuana plant waste. Photo courtesy of www.marijuanaventure.com

Composting⁸ may be a desired practice at grow facilities, but it does present some additional concerns. Composting plant material and other organic wastes from growing and processing operations may include fertilizers and toxic pollutants. These pollutants have the capacity to leach into groundwater impacting drinking water sources. Storm water runoff from compost piles can include fertilizers and toxic pollutants, oxygen depleting constituents, extreme pHs, and solids.

Incineration of marihuana wastes may be a safe disposal method in some cases, but it is important to ensure that ambient air quality is not adversely impacted. Open burning of plant wastes results in uncontrolled emissions of pollutants into the air, which can lead to nuisances and odors in surrounding communities. Open burning of cannabis plants specifically poses additional public health concerns, due to the potential psychoactive effects when the smoke is inhaled. If cannabis wastes are to be burned as a means of disposal, it must be at licensed municipal solid waste or hazardous waste incinerator where emissions from the incineration can be controlled.

In addition to plant wastes, waste streams from indoor cannabis cultivation operations may include light bulbs, fertilizers, carbon dioxide canisters, solvents, and pesticides, which all pose potential disposal hazards. These materials should be disposed of according to existing guidance and recommendations.

Processing

Marihuana processing operations convert the cannabis plant into usable marihuana products. These are indoor operations that typically use solvents to extract essential oils from the plant. The extracted essential oils contain THC and CBD and are used to make a variety of marihuana products, such as food items, skin care products, and vapor pen cartridges. Chemicals such as CO, propane, butane, and supercritical CO₂ can be used to enhance oil recovery from marihuana. The use of these solvents and their fate in the environment is the primary environmental concern during the processing stage.



If not properly managed, the solvents and chemicals used in essential oil extraction will end up in wastewater streams or storm water runoff. The pollutants in the wastewater have the potential to impact drinking water sources and damage septic systems. Processing facilities should follow best management practices⁹ to reduce the impacts of storm water runoff, and untreated wastewater from processing facilities should not be discharged directly to groundwater or surface water.

Solvents may evaporate during the extraction processes, resulting in potential emissions of hazardous air pollutants and VOCs. Air emissions due to solvent evaporation can be controlled through the use of low-VOC solvents, proper workplace

practices, or control technologies. Emissions from processing cannabis may pose additional threats to attaining the NAAQS.

⁸ http://www.michigan.gov/deq/0,4561,7-135-3312_4123-185537--,00.html

⁹ http://www.michigan.gov/deq/0,4561,7-135-3313_71618_3682_3714-118554--,00.html

While most odor issues associated with marihuana facilities occur during the growth of the marihuana plant, odors are emitted from processing facilities as well. The handling of marihuana plants, along with the chemicals used throughout the processing stage may result in strong or pungent odors. Foul odors from processing facilities can become nuisances and may pose public health and safety threats to neighboring communities. Odors can be mitigated with proper odor controls or an odor control plan.

Solid and hazardous wastes generated at processing facilities must be properly managed to prevent adverse environmental impacts. Processing facilities handle marihuana plant wastes, which should be handled following the same guidelines provided for cultivation facilities. However, processing facilities have additional waste streams generated from the use of solvents during the extraction processes. Waste byproducts resulting from chemical treatment have the potential to become characteristically hazardous in accordance with 40 CFR, Part 261, and R 299.9212, of Part 111, of the NREPA. The MDEQ recommends that any treated marihuana or waste byproduct be fully characterized on a case-by-case basis before disposal.

APPLICABILITY OF EXISTING REGULATIONS

The MDEQ currently administers several programs that will help prevent adverse environmental impacts from the marihuana industry. The following section discusses, by media, the existing regulatory programs that may apply to the marihuana industry.

Air

Prior to operation of a cannabis cultivation or processing facility, the facility may be required to obtain an air quality permit. A PTI is required for any source of air contaminants unless the source is exempt from the permitting requirements. Furthermore, a source of air contaminants may be subject to the requirement to obtain a Renewable Operating Permit (ROP) if the potential to emit one or more criteria air pollutants¹⁰ exceeds applicability thresholds. It remains to be determined whether the character and quantity of air emissions from cannabis cultivation or processing operations are exempt, or if the emissions are great enough to require the owner to obtain a PTI or ROP.

The acceleration of plant growth via CO₂ generation may not be exempt from air pollution control rules if the CO₂ generating equipment produces other air contaminants such as CO, VOCs, and hazardous air pollutants. The Air Quality Division (AQD) may require marihuana growers to calculate the potential to emit from CO₂ generators. Marihuana growers may demonstrate that their CO₂ generators are exempt from the requirement to obtain a PTI, per the exemptions described in Rule 278 - 291 of the Part 2 Rules.

Rule 901 of Part 9, Emission Limitations and Prohibitions—Miscellaneous, promulgated under Part 55, Air Pollution Control, of the NREPA, prohibits the emissions of air contaminants or water vapors that cause or contribute to: "injurious effects to human health or safety, animal life, plant life of significant value, or property" or that result in "unreasonable interference with the comfortable enjoyment of life and property."¹¹ Rule 901 could apply to odors generated from marihuana cultivation and processing

¹⁰ Criteria pollutants are those for which a national air quality standard has been set. There are six criteria pollutants: carbon monoxide, sulfur dioxide, nitrogen dioxide, particulate matter, ozone, and lead.

¹¹ http://dmbinternet.state.mi.us/DMB/ORRDocs/AdminCode/1760_2017-006EQ_AdminCode.pdf

facilities. At this time, the AQD is not inspecting odor complaints from medical marihuana facilities, due to the uncertain legal status and potential dangers posed to field staff. Currently, the AQD refers cannabis related odor complaints to local government agencies. However, if recreational marihuana were to be legalized and a more robust regulatory framework were to be developed, the AQD may use its authority under Rule 901 to enforce against odors from marihuana cultivation and processing facilities.

Michigan has laws restricting the open burning of waste and plant debris. Open burning is regulated by the NREPA and fines may be imposed if the law is violated. According to the open burning regulations, businesses are prohibited from burning trash, which would prohibit marihuana cultivation or processing facilities from the open burning of their wastes. Michigan laws also restrict open burning of household wastes, including brush, logs, stems, trees, brush, and clippings. These restrictions would likely apply to marihuana wastes that are disposed of at private households. In addition, local governments often have city or county ordinances regarding open burning. Local ordinances take precedence when they are more restrictive than the State regulations.

Waste

Existing waste regulations are currently used to regulate medical marihuana wastes. These regulations would also apply to recreational marihuana wastes in the event that marihuana is fully legalized. Unprocessed marihuana is currently not listed as a hazardous waste or as a prohibited material consistent with the regulations of either the Resource Conservation and Recovery Act of 1976, as amended (RCRA), or Part 111 of the NREPA. Characterization determinations could change if the unprocessed marihuana were to come into contact with certain listed hazardous wastes, which could have the potential to impact the way marihuana is characterized for disposal. Waste byproducts resulting from chemical treatment have the potential to become characteristically hazardous waste in accordance with Title 40 Code of Federal Regulation, Part 261, Identification and Listing of Hazardous Waste, and R 299.9212 of Part 111, of the NREPA. The MDEQ recommends that any treated marihuana or waste byproduct be fully characterized on a case-by-case basis before disposal.

Solid wastes generated in the cultivation and processing of cannabis can be a concern to public health and the environment if improperly handled. Marihuana waste does not meet the definition of "Yard Clippings" as defined in Part 115, Solid Waste, of the NREPA. Therefore, organic and inorganic solid wastes produced in the growth, production, and processing of medical marihuana may be disposed of in a municipal solid waste landfill or taken to a licensed municipal solid waste or hazardous waste incinerator.



Organic marihuana wastes may be deposited at a registered composting facility that has notified the MDEQ that it will accept medical marihuana waste as a feedstock. The generating facility must maintain records of the amount of medical marihuana waste (by weight or volume) that is sent to compost facilities, and to which compost facilities the material is sent. Composting Best Management

Practices are available to help reduce the impacts of composting on groundwater and surface water.^{12,13} The MDEQ plans to use enforcement discretion to allow the transportation of medical marihuana waste to any municipal solid waste landfill or registered composting facility.

In addition to existing MDEQ regulations, the DLARA proposed administrative rule set contains rules related to waste management. The rules require marihuana wastes to be made unusable and unrecognizable through the grinding and mixing of marihuana waste with specific non-consumable solid waste products, such as paper, plastic, cardboard, food, grease, fermented organic matter, soil, or other wastes, as approved by the DLARA. Also, the rules say that marihuana facilities must adhere to applicable State and local laws and regulations related to waste disposal.

Water

Michigan currently has laws that help protect against the significant water usage or withdrawals that large-scale cannabis cultivation operations may require. In 2008 the Michigan Legislature enacted new laws to manage large quantity water withdrawals (more than 100,000 gallons of water per day [gpd]). Prior to beginning any new or increased large quantity withdrawal from groundwater or



surface water, Michigan requires the use of the WWAT.¹⁴ The WWAT is used to determine if the withdrawal is likely to cause an adverse resource impact on any aquatic system. If the WWAT determines the withdrawal is not likely to cause an adverse resource impact, the user may register the withdrawal through the WWAT and execute the withdrawal if it is under 2,000,000 gpd. If the proposed withdrawal is in a sensitive area, or the WWAT evaluation indicates there is a potential adverse resource impact, the user is referred to the MDEQ for further review. MDEQ staff complete a site-specific review utilizing additional information and determine the likelihood of an adverse resource impact occurring due to the withdrawal.

All withdrawals above 100,000 gpd are required to report their annual water use to either the MDARD (for farms) or the MDEQ (other withdrawals including municipal water supplies). Fees apply to these annual reports; however, for farms and withdrawals less than 1,500,000 gpd, the annual reporting fee is waived. Withdrawals greater than 2,000,000 gpd require a permit under Part 327, Great Lakes Preservation, of the NREPA. Application fees apply to Part 327 permits, which are subject to public notice and have administrative appeal rights that are not required or available for withdrawals between 100,000 and 2,000,000 gpd. If a grower wishes to use municipal water rather than undergoing a water withdrawal, they should consider contacting the municipality to determine if the local system can supply the quantity of water required.

¹² http://www.michigan.gov/documents/deq/deq-wb-nps-odd_250887_7.pdf

¹³ http://www.michigan.gov/documents/deq/wrd-storm-industrial-Composting-CompAssistance_483542_7.pdf

¹⁴ http://www.michigan.gov/deq/0,4561,7-135-3313_3684_45331---,00.html

White paper:

THE ENVIRONMENTAL IMPACTS OF THE MARIHUANA INDUSTRY

Part 91, SESC, of the NREPA, provides for the control of soil erosion and protects adjacent properties and the waters of Michigan from sedimentation. A permit is generally required for any earth change activity that disturbs one or more acres of land or is within 500 feet of a lake or stream. Part 91, of the NREPA, is administered and enforced by various State, county, and local governmental agencies with oversight from the WRD. Fees are determined locally.

Construction activities that disturb one or more acres of land and have a point source discharge of storm water to waters of Michigan (streams, rivers, lakes, and wetlands) are required to obtain an NPDES permit from the WRD. For sites disturbing one to five acres, the applicant/permittee receives automatic storm water coverage upon the applicant obtaining a Part 91 permit or undertaking the project as an Authorized Public Agency (APA). Although the coverage is automatic, the permittee must comply with the requirements of Permit by Rule (Rule 2190, promulgated under Part 31, Water Resources Protection, of the NREPA). For sites disturbing five or more acres, the applicant/permittee must obtain a permit under Part 91, of the NREPA, (or undertake the project as an APA) and apply for a Notice of Coverage (NOC) with the WRD. Along with the NOC application, the applicant/permittee must submit a copy of the SESC permit, approved SESC plan, site location map, and the permit fee.

Any occupation, filling, or grading below the 100-year floodplain elevation requires a permit from the MDEQ under Michigan's Floodplain Regulatory Authority found in Part 31, of the NREPA.¹⁵ A river, stream, lake, or drain may, on occasion, overflow their banks and inundate adjacent land areas. The land that is inundated by water is defined as a floodplain. In Michigan and nationally, the term floodplain has come to mean the land area that will be inundated by the overflow of water resulting from a 100-year flood (a flood that has a 1 percent chance of occurring any given year).

In 1984 Michigan received authorization from the federal government to administer Section 404, of the CWA, in most areas of Michigan.¹⁶ A State-administered program of Section 404 must be consistent with the requirements of the CWA and associated regulations set forth in the Section 404(b)(1) guidelines.

Part 303, Wetlands Protection, of the NREPA, requires a wetland permit to deposit or allow the placing of fill material; dredge, remove, or permit the removal of soil or minerals; construct, operate, or maintain any use or development; or drain surface water in wetlands that are:

- Connected to one of the Great Lakes or Lake St. Clair.
- Located within 1,000 feet of one of the Great Lakes or Lake St. Clair.
- Connected to an inland lake, pond, river, or stream.
- Located within 500 feet of an inland lake, pond, river, or stream.
- Not connected to one of the Great Lakes or Lake St. Clair, or an inland lake, pond, stream, or river, but are more than five acres in size.
- Not connected to one of the Great Lakes or Lake St. Clair, or an inland lake, pond, stream, or river, and less than five acres in size, but the MDEQ has determined that these wetlands are essential to the preservation of Michigan's natural resources and has notified the property owner.

Prior to issuing a permit, the MDEQ determines that: the permit would be in the public interest; the permit would be otherwise lawful; the permit is necessary to realize the benefits from the activity; no unacceptable disruption to aquatic resources would occur; the proposed activity is wetland dependent; and no feasible and prudent alternatives exist.

¹⁵ https://www.michigan.gov/deq/0,4561,7-135-3313_3684_3725---,00.html

¹⁶ https://www.michigan.gov/deq/0,4561,7-135-3313_3687---,00.html

The U.S. Army Corps of Engineers (U.S. ACE) retains federal jurisdiction over traditionally navigable waters including the Great Lakes, connecting channels, other waters connected to the Great Lakes where navigational conditions are maintained, and wetlands directly adjacent to these waters. A joint State and federal permit application is available under these situations.

Federal oversight of State-administered Section 404 of the CWA programs is primarily the responsibility of the U.S. Environmental Protection Agency (USEPA). The MDEQ's 1983 Memorandum of Agreement with the USEPA, Region 5, outlines the procedures to be followed in program administration. Federal agencies must review projects that impact critical environmental areas or involve large quantities of fill. The USEPA reviews about one percent of all applications received. If the MDEQ determines that an application to Michigan's program pursuant to Section 404 of the CWA is subject to federal review, copies of the public notice are sent to the USEPA, Region 5; U.S. ACE Detroit District; and the U.S. Fish and Wildlife Service. The USEPA is responsible for compiling all federal comments and submitting comments on the federal position to the MDEQ.

The MDEQ may not issue a permit that carries Section 404 of the CWA authority if the USEPA objects to the project. This is true even if the applicant successfully appeals the MDEQ's denial of a permit at the administrative level or through a court. People are encouraged to set up a voluntary pre-application meeting with MDEQ staff to minimize project planning costs and delays. Fees apply for the pre-application meeting. The MDEQ offers a Wetland Identification Program (WIP) to assist landowners in identifying wetland and upland areas. Fees apply to the WIP.

In addition to State and federal wetland regulations, local units of government can regulate wetlands by ordinance. In areas where a local wetland permit is required, a permit must also be received from the State before beginning the activity.

Wastewater discharges are carefully regulated and monitored by the WRD. The existing regulations apply to marihuana facilities. A discharge of point source pollutants to surface waters of Michigan is subject to the NPDES program.¹⁷ Discharges to the ground or into groundwater are also regulated by the State.¹⁸

The NPDES permit process was initiated by the Federal Water Pollution Control Act amendments of 1972. The purpose of the program is to control the discharge of pollutants into surface waters by imposing effluent limitations to protect the environment. Authority to administer this program was delegated to Michigan by the USEPA in October 1973. Under this program, producers and processors could discharge waste to a municipal wastewater treatment plant (WWTP) with an NPDES or groundwater discharge permit or obtain an NPDES permit for a direct discharge to surface water.

If facilities choose to utilize a municipal WWTP to treat and discharge the waste from their operations, they may be subject to the Industrial Pretreatment Program (IPP).¹⁹ The IPP regulates the disposal of industrial wastewater into the sanitary wastewater collection system and is designed to: protect the physical structures and the safety of operation and maintenance personnel of the wastewater system (collection and treatment); protect the health and safety of the public and the environment; and comply with pretreatment regulations as required under 40 CFR, Part 403, General Pretreatment Regulations and Categorical Standards, and local source control ordinances. Fees for this program are determined by the municipality.

¹⁷ http://www.michigan.gov/deq/0,4561,7-135-3313_71618_3682_3713---,00.html

¹⁸ https://www.michigan.gov/deq/0,4561,7-135-3313_4117---,00.html

¹⁹ http://www.michigan.gov/deq/0,4561,7-135-3313_71618_3682_3683_3721---,00.html

If facilities choose to have a direct discharge to surface waters, they must apply to obtain an NPDES permit. If issued, a permittee is responsible for meeting site specific permit limitations. The NPDES Program has application and annual fees.²⁰ A facility proposing to discharge wastewater into the ground or into the groundwater must apply for a State groundwater discharge permit. Depending on the volume and environmental risk of the discharge, a hydrogeologic investigation of the proposed discharge site may be required. A State groundwater discharge permit may include permit limitations and requirements for a detailed discharge management plan and groundwater monitoring.²¹

DISCUSSION

Regulatory Gaps

The MDEQ's existing regulatory framework is relatively robust and should prevent many of the potential adverse environmental impacts from the marihuana industry. However, the MDEQ may still need to develop additional educational tools, guidance, sample local ordinances, or administrative rules in order to more fully regulate the marihuana industry.

Education is one key aspect of preventing adverse environmental impacts. Marihuana cultivation and processing facilities are subject to a variety of existing rules and regulations of that they may be unaware. Providing guidance documents or educational materials that identify these regulations and inform owners and operators of their required actions helps in preventing environmental impacts prior to operation.

Administrative rulemaking may be needed to add new rules or revise existing ones to apply specifically to environmental impacts of marihuana industries. This may be done through internal MDEQ rulemaking or through coordination with the DLARA.

As was previously mentioned, the DLARA is currently undergoing administrative rulemaking to replace their emergency rules and to ensure more robust regulation of the medical marihuana industry. The rules primarily apply to medical marihuana facilities licensing and tracking, but some do have applicability to environmental regulation, such as the waste regulations contained in their current proposed rules. The MDEQ Marihuana Workgroup has met with BMMR staff involved in rule development and they expressed interest in coordinating with MDEQ in this or future rulemakings, especially as they relate to environmental topics. This rulemaking is too far along to make major changes or additions to at this point. However, there should be opportunities in the future to coordinate with BMMR in administrative rulemaking.

The MDEQ may want to develop guidance or sample ordinances that can be used by local governments to help fill any additional regulatory gaps. One area where sample city ordinances may be needed is odor prevention and control. While the State has rules to enforce against nuisance odors, city ordinances and the requiring odor control plans is likely to be more effective at limiting nuisance odors from cannabis facilities. Cities can adopt ordinances that require marihuana facilities to develop and submit odor control plans prior to operation. These odor control plans would then identify the control techniques or work practices that facilities will use to minimize odors from their facilities.

²⁰ http://www.michigan.gov/deq/0,4561,7-135-3313_71618_3682_3713-90130--,00.html

²¹ https://www.michigan.gov/deq/0,4561,7-135-3313_4117-9782--,00.html

Complicating Factors

The ability of the MDEQ to regulate marihuana may depend on the regulatory approach taken by other State agencies. MDARD has the authority to choose whether or not to classify cannabis as an agricultural product. If it were classified as an agricultural product, marihuana cultivation operations would be required to follow Generally Accepted Agricultural and Management Practices (GAAMPS), established as part of the Right to Farm Act, 1981 PA 93, and these operations may then not be subject to MDEQ rules and regulations. The workgroup has had discussions with MDARD staff, who have said that marihuana is not classified as an agricultural product. However, MDARD staff have also indicated that the classification of marihuana as an agricultural product will be reconsidered if the ballot measure passes. Additional coordination with MDARD staff will be needed regarding the regulation of marihuana cultivation operations.

The illegal status of marihuana at the federal level may complicate the ability of the MDEQ to implement and enforce federally delegated programs. For instance, water permits are handled through federally delegated programs. The WRD is currently working with the MDAG to determine if the statement of the rule that the permit must otherwise be lawful will hinder the DLARA from issuing permits to marihuana facilities. The AQD and the Waste Management and Radiological Protection Division also have federally delegated programs that may face complications in implementation. It remains to be determined whether permitting and enforcement actions would be legitimate under USEPA-approved and federally delegated programs.

CONCLUSION

With the possible legalization of recreational marihuana in Michigan, the State could see a large increase in marihuana operations across Michigan. The MDEQ is already seeing adverse impacts from the cultivation and processing of medical marihuana. Therefore, it is important that the MDEQ be prepared to address these impacts, particularly in the event that recreational marihuana is also legalized in Michigan. The MDEQ must work to ensure that this emerging industry does not threaten the quality of Michigan's air, water, or land resources.

APPENDICES

Appendix A: About this Workgroup and Contact Information

Appendix B: Summary of Regulations in Other States Related to Environmental Impacts from the Marihuana Industry

Appendix C: Additional Resources

**APPENDIX A:
THE MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
MARIHUANA WORKGROUP**

The Michigan Department of Environmental Quality (MDEQ) Marihuana Workgroup was formed in fall of 2017 and had their first meeting on November 15, 2017. The group is primarily concerned with the environmental impacts faced by the marihuana industry and how the MDEQ can best work to address and prevent these impacts. The whitepaper was created and compiled by members of this workgroup and represents a summary of the information collected thus far on this industry.

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APPENDIX B: MARIHUANA ENVIRONMENTAL LAWS BY STATE

ALASKA

The state requires owners of cultivating and processing facilities to have proper licensing to operate.¹ Facilities may also be subject to specific taxes and fees associated with marihuana production.

To obtain and keep licenses, owners must adhere to regulations that outline proper solid and liquid waste disposal,² approved pesticides and sanitizers, water irrigation methods, odor control measures, and facility ventilation. Facilities must also be mindful of approved solvents/gases for extraction processes and diligent in maintaining records and including labels which cite pesticides and chemicals used in cultivation. Inspections may be unannounced, and the state reserves the right to retract licenses should facilities pose public health risks.³ At this time, there are no wastewater permits required for cultivators. However, cultivators who wish to discharge wastewater directly into surface waters can only do so after receiving an Alaska Pollutant Discharge Elimination System permit. This permit also requires routine monitoring which is to be paid for by the permittee.

Additionally, local governments may soon be allowed to address odor control if they go through a local approval process; a processing fee would be added.⁴ Home growers may possess up to six plants, with three or fewer being mature. Personal use in public is not allowed and must be done on privately owned property. In addition to the Clean Air Act's implementation, Alaska has recently made it illegal⁵ to smoke any substance in most public spaces across the state; marihuana cafes and lounges are still legal, so long as the establishment has the correct authorizations.

CALIFORNIA

Proper licensing is required by the state to process and produce marihuana.⁶ Random inspections and compliance checks will be conducted to ensure that facilities are up to code.

Standards to be upheld are inclusive of proper water catchment systems, solid and liquid waste disposal, pesticide and herbicide usage, and irrigation methods. Plants must also be tracked and traced throughout the entire process of cultivation. Cultivation sites and/or licensees may lose their right to marihuana processing and license renewals should there be repeat compliance offenses or adverse watershed and wildlife impacts. Certain cultivation sites may face higher fees if their

¹ *Alaska Administrative Code, Chapter 306 Regulation of Marijuana Industry, Article 1 Licensing; Fees, Section 420 Marijuana cultivation facility license required*

² *Alaska Administrative Code, Chapter 306 Regulation of Marijuana Industry, Article 7 Operating Requirements for All Marijuana Establishments, Section 740 Waste disposal*

³ *Alaska Administrative Code, Chapter 306 Regulation of Marijuana Industry, Article 4 Marijuana Cultivation Facilities, Section 465 Random sampling*

⁴ *Alaska Administrative Code, Chapter 306 Regulation of Marijuana Industry, Article 2 Local Options, Sections 200 - 260*

⁵ *Alaska Administrative Code, Chapter 306 Regulation of Marijuana Industry, Article 8 Enforcement, Civil Penalties, Sections 800 - 850*

⁶ *California Code of Regulations, Title 3 Food and Agriculture, Division 8 Cannabis Cultivation, Chapter 1 Cannabis Cultivation Program, Article 3. Cultivation License Fees and Requirements, Section 8200 Annual License Fees*

Appendix B - Marihuana Environmental Laws by State

operation poses potential increased threats to environment and health, and sites that require remediation may also incur additional fees.

During the establishment of a marihuana business or grow operation, most jurisdictions in California require an odor control plan, approved by a licensed engineer, when owners apply for Use Permits or Building Permits. For any cannabis cultivation licensing, documentation of water source is required during the application process. Cannabis cultivators who intend to divert surface water require a water right to irrigate their plants.⁷ Water rights have also recently been made available for small domestic use; however, owners are prohibited from doing so during the dry season. Those with contained springs may be exempt from flow requirements under specific conditions.

By July 1, 2019, all cannabis cultivators will be required to transition to the Cannabis General Order (in adherence with NPDES) which requires compliance in areas related to waste water discharge, storm water, water quality, irrigation, pesticide regulation, environment and wildlife, industrial water usage, and pollution.⁸

Home growers can have up to six plants and personal usage is prohibited in public. Some counties have begun issuing permits for marihuana smoking lounges after health officials were able to update regulations earlier in 2018.

COLORADO

Facilities and cultivation sites are required to abide by strict compliance regulations.⁹ Depending on the medium, waste must be properly disposed of and made unrecognizable. During cultivation and during waste disposal, the plants themselves must be tracked in inventory and records. Pesticides and agricultural chemicals must be approved, and water must also be responsibly sourced from regulated water systems, as defined by the state.¹⁰ Marihuana cultivators are required to apply for well permitting and water rights, should they intend to utilize such water sources. Additionally, some local jurisdictions (e.g., Denver) have implemented procedures to mitigate and control odor at marihuana facilities. In such instances, cultivators are required to have approved odor control plans, keep records, specify odor emitting activities, have authorized engineering controls, and undergo inspections.

Retailers may also be subject to an additional marihuana tax for wet whole plants, which reflects an allowance for water and waste. Marihuana plants are classified as noxious weeds. Also, bills are awaiting signature concerning allowable uses of reclaimed wastewater, allowable recyclable uses of marihuana waste, and research funding towards industrial hemp development and utilization.

⁷ California Code of Regulations, Title 14 Natural Resources, Division 1 Fish and Game Commission-Department of Fish and Game, Subdivision 3 General Regulations, Chapter 3. Miscellaneous (Refs & Annos), Section 699.56 Fees for Lake and Streambed Alteration Agreements:

⁸ California Code of Regulations, Title 23, Waters, Division 3 Safe Water Resources Control Board and Regional Water Quality Control Boards, Chapter 9 Waste Discharge Reports and Requirements, Article 1 Fees, Section 2200.7 Annual Fee Schedule for Marihuana Cultivation

⁹ Code of Colorado Regulations, Industrial Hemp Regulatory Program Act, Title 35, Article 61, Section 1203 Administration and Enforcement of the Industrial Hemp Regulatory Program Act

¹⁰ Code of Colorado Regulations, Industrial Hemp Regulatory Program Act, Title 35, Article 61, Section 1203-2 Pesticide Applicators' Act

Appendix B - Marihuana Environmental Laws by State

Home growers are allowed up to six plants, with as many as three plants flowering at once. Public consumption of marihuana that endangers others is prohibited. Marihuana smoke is subject to the Colorado Clean Indoor Air Act, the same as tobacco smoke; however, cannabis lounges and cafes are on the rise, as the state recently issued its first licenses which allow the use of marihuana on a business premise.

MAINE

Maine Department of Health and Welfare is entitled to take action to ensure compliance. This can mean collecting samples and/or performing lab testing on soil and marihuana plant specimens from facilities and dispensaries. Mandatory testing,¹¹ notification requirements, sampling test results, and contamination testing for residual solvents, poisons, pesticides, insecticides, and bacteria are required. Contaminated marihuana must also be destroyed and disposed of responsibly. Proper regulation and control of cultivation, manufacturing, and retail may be adopted and amended by the Commissioner of Agriculture to ensure public safety.¹²

Licenses to grow marihuana for commercial purposes will be doled out in lottery fashion with state caps on the number of licenses given out to prospective marihuana cultivators.¹³

Home growers may cultivate up to six flowering plants at their primary residence, on property owned by them, and plants must be tagged and tracked.¹⁴ Public usage is prohibited.

MASSACHUSETTS

Cultivation processes are to follow regulations which limit contamination, such as mold, fungus, bacterial disease, rot, and pests, and should also use approved pesticides.

During all processing: solid waste containing cannabis must be ground up and made unusable for its original purposes; liquid waste containing by-products are to be disposed of in a manner that does not pollute surface or ground water; storing waste must be done so in accordance with local statutes; waste and litter are to be disposed of in a manner that minimizes odor and pest attraction.

Marihuana may only be labeled "organic" if cultivation abides by U.S. Department of Agriculture's organic requirements. Home growers may not have more than six flowering plants growing in their primary, private residence and marihuana usage is prohibited in public spaces, such as parks, public transportation, schools, sidewalks, etc.

¹¹ *Maine Revised Statutes, Title 7 Agriculture and Animals, Part 5 Plant Industry, Chapter 417 Marijuana Legalization Act, Section 2445 Independent testing and certification program*

¹² *Main Revised Statutes, Title 17-A Main Criminal Code, Part 2 Substantive Offenses, Chapter 45 Drugs, Section 1117 Cultivating Marihuana*

¹³ *Maine Revised Statutes, Title 7 Agriculture and Animals, Part 5 Plant Industry, Chapter 417 Marijuana Legalization Act, Section 2447 License application and issuance*

¹⁴ *Maine Revised Statutes, Title 7 Agriculture and Animals, Part 5 Plant Industry, Chapter 417 Marijuana Legalization Act, Section 2452 Personal use of marihuana*

Appendix B - Marihuana Environmental Laws by State

NEVADA

Growers and handlers must keep inventory of the cultivating property. Facilities are to abide by compliance regulations, inclusive of safe ventilation systems,¹⁵ which control the enclosed space, proper disposal of all solid or liquid waste and wastewater, and responsible use of any agricultural chemicals.¹⁶

Marihuana facilities may also be subject to unannounced compliance checks and must complete random sampling tests for contamination and safety risks. Any costs of remediation or mitigation of environmental damages due to marihuana cultivation, manufacturing, distribution, or disposal fall upon the facility to cover.¹⁷

Some local departments have implemented odor control and nuisance measures (e.g., Clark county) which oversee facilities' odor emissions, odor mitigation practices, engineering controls, complaints, and records.

Additionally, the cultivation of industrial hemp is permitted only if hemp research is being conducted under designated pilot programs or other academic research. Public consumption of marihuana is prohibited, no exceptions. A public place is defined as anywhere the public is invited, and violators will be charged with a misdemeanor.

Home growers are limited to possession of six plants per person, or 12 plants per private household, but only if there is no licensed marihuana retail store within 25 miles of residence. Up to six plants may be "growing" or "flowering" at any one given time.

OREGON

The Oregon Department of Environmental Quality (ODEQ) does not regulate growing/processing of marihuana, but businesses are required to abide by pre-existing regulations intended to safeguard air, water, and land. If a cultivator is in risk of violating the ODEQ's regulations, permits for air contaminant discharge, volatile organic compounds, odor nuisances, and/or burning are required.

To renew licenses, cultivators and processors are required to use only approved pesticides, submit a report of water and electrical usage, use approved extraction methods and chemicals, and abide by all waste disposal requirements. Cannabis waste must be disposed of responsibly in a manner that makes the original plant unrecognizable and unfit for human/animal consumption.

Additionally, all solid and liquid waste must be disposed of in accordance with regulations set by the ODEQ's air emissions, waste water, and hazardous waste. Regulated water irrigation methods must also be applied, and facilities are to have proper ventilation. Only licensed and accredited laboratories may test industrial hemp; the selling of industrial hemp products is prohibited unless the product has been laboratory tested and approved for safe consumption.

¹⁵ Nevada Administrative Code, Chapter 453A – Medical Use of Marijuana, Production and Distribution of Medical Marijuana, Requirements for the Extraction of Concentrated Cannabis and the Production of Edible Marijuana Products and Marijuana-Infused Products, Section 574 Ventilation and Hood Systems

¹⁶ Nevada Administrative Code, Chapter 586 Nevada Pesticides Act, Section 550 Pesticides used on Marijuana and Medical Marihuana

¹⁷ Nevada Administrative Code, Chapter 557, Industrial Hemp Growers, Handlers and Producers of Industrial Hemp not for Agricultural or Academic Research, Grower to Provide Description of Cultivation Property:

Appendix B - Marihuana Environmental Laws by State

Home growers are allowed to possess up to four plants on their private property and public usage of marihuana is prohibited. Any utilization of marihuana inhalant delivery systems in all public spaces and businesses are prohibited, as per Oregon's Clean Air Act.¹⁸ Oregon has specific permits for air quality contaminants in compliance with Title V of the Clean Air Act, but there is no specific mention of marihuana.

The state also requires reports of greenhouse gas emission levels. Businesses which emit more than 25,000 metric tons are required to report to the U.S. EPA, which may be the case with larger commercial indoor grow operations associated with greater energy usage.

VERMONT

The use of marihuana in public is not permitted; public spaces may be defined as streets, alleys, parks, or public buildings other than individual dwellings.¹⁹

Home cultivators are limited to 2 mature plants or 4 immature plants per household.

The manufacturing of concentrated marihuana by chemical extraction is not allowed unless authorized by a dispensary.

WASHINGTON

When applying for marihuana licensing, applicants are required to submit a plan which outlines security, safe transport, and responsible waste testing and disposal methods.^{20, 21} Outdoor growing operations may be denied development permits if water is not physically or legally available at the site.

If the cultivating land does not have water rights already attached to it, owners may have to obtain water through a water right from a public utility district or irrigation district, go through the process of obtaining a water right permit, or apply for a water right permit exemption intended for industrial uses of water.

Water right exemptions may also be available for small uses of water. Commercial growers are prohibited from using irrigation from their respective irrigation districts if the water is sourced from a U.S. Bureau of Reclamation water facility (i.e., reservoirs, canals, pumps, etc.), as stated under the Controlled Substance of 1970. However, rain water may be collected and/or stored, and does not require a water right. Also, groundwater from exempt wells can be pumped to storage tanks as

¹⁸ *Oregon Revised Statutes, Volume 11, Chapter 468A Air Quality, Section 020 Application of Air Pollution Laws*

¹⁹ *Vermont Statutes Online, Title 18 Health, Chapter 084 Possession and Control of Regulated Drugs, Subchapter 001 Regulated Drugs, Section 4230 Marihuana Usage in Public Spaces, (a) Possession and Cultivation*

²⁰ *Washington Administrative Code, Title 314 Liquor and Cannabis Board, Chapter 55 What is a marijuana producer license and what are the requirements and fees related to a marijuana producer license, Section 075 (1.ii.b.) Requirements and Fees for Marihuana Producer License:*

²¹ *Washington Administrative Code, Title 314 Liquor and Cannabis Board, Chapter 55 What is a marijuana producer license and what are the requirements and fees related to a marijuana producer license, Section 097 Marihuana Waste Disposal – Liquids and Solids*

Appendix B - Marihuana Environmental Laws by State

part of rainwater collection systems, that is, if the 5,000 gallons per day limit is not exceeded. Marihuana licensees are not eligible for license renewals if their property is within 1,000 feet of public property grounds, or if licensees are in serious breach of regulations.

Processors and facilities are subject to regular compliance checks, which will check for proper ventilation, safe use of solvents in extraction,²² proper disposal of solid and liquid waste, and approved application of crop aids. Any revenue collected from fees are to be deposited into an account that resides within the agricultural local fund. In terms of air quality, marihuana facilities are subject to odor and air pollutant regulations.

Additionally, because marihuana processors are volatile organic compounds and sources of odor, air permits, fees, and certain registrations are required by the state. Some counties in the state are even required to obtain an Order of Approval from the Puget Sound Clean Air Agency. The processing of industrial hemp (except seed) as food, extract, oil, cake, concentrate, resin, or other preparations for topical use, oral consumption, or inhalation is prohibited.

Washington may adopt rules as needed to monitor licensing and permitting of hemp research, as well as adopt any standards for marihuana production which are consistent with the Director of Agriculture and Marketing's program. Home growers are limited to four plants per household and it is illegal to use marihuana in view of the public.

WASHINGTON D.C.

Home cultivators may grow up to six marihuana plants, of which no more than three can be mature, on private residence. Marihuana smoking, eating, or drinking in public spaces, such as streets, parks, alleys, vehicles on streets, etc., is prohibited.²³

Prepared by: DEQ Interns led by Aashika Sulabelle

²² *Washington Administrative Code, Title 314 Liquor and Cannabis Board, Chapter 55 What is a marijuana producer license and what are the requirements and fees related to a marijuana producer license, Section 104 Marihuana Processor License Extraction Requirements*

²³ *Washington D.C. Law 20-153 Legalization of Possession of Minimal Amounts of Marijuana for Personal Use Initiative of 2014*

APPENDIX C: USEFUL RESOURCES

For more information regarding other states' cannabis and marijuana programs, see the links below.

ALASKA

[Marijuana Industry Info Webpage](#)

[Marijuana Growing and Processing Wastewater FAQ](#)

CALIFORNIA

[State Board – Cannabis Cultivation Water Quality](#)

OREGON

[Business Readiness Guidebook](#)

[Recreational Marijuana FAQ Webpage](#)

WASHINGTON STATE

[Regulatory Guidance for Indoor Marijuana Producers](#)

[Regulatory Guidance for Cannabis Operations](#)

[Puget Sound Clean Air Agency: Marijuana Producer/Grower/Processor Permit Application](#)

CITY OF DENVER

[Cannabis Sustainability Webpage](#)

[Best Management Practices: Commercial Medical Marijuana Cultivation](#)

[Cannabis Environmental Best Management Practices Guide](#)

[Executive Summary: Cannabis Environmental Best Management Practices Guide](#)

[Odor Control Plan Review Checklists: Marijuana Cultivation, Marijuana Infused Products](#)

NATIONAL

[Domestic Cannabis Cultivation Assessment \(2009\)](#)



Grobbel Environmental & Planning Associates

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Lake Leelanau

Michigan

49653

April 5, 2021

Whitewater Township Planning Commission
5777 Vinton Rd.
P.O. Box 159
Williamsburg, MI 49690

RE: Evaluation and Recommendations for Whitewater Township Master Plan 2021 Update, Whitewater Township, Grand Traverse County, Michigan.

Dear Whitewater Township Planning Commission,

Per your request, please find this evaluation and summary of recommendations for the Whitewater Township Master Plan update.

A. REQUIRED UPDATES

1) Zoning Plan. It is required that a zoning plan be included within the Master Plan that identifies zoning districts and their purposes, as well as the basic standards or “schedule of regulations” proposed to control the height, area, bulk, location, and use of buildings and parcels. The zoning plan must also consider the likely zoning designation of transition zones between zoning districts. This section of the updated Master Plan must relate these and other Master Plan recommendations to specific regulations within the Whitewater Township Zoning Ordinance.¹ The zoning plan must be based on an inventory of current conditions relevant to established Whitewater Township zoning districts, and the purposes for which zoning was adopted.²

¹ Whitewater Township Zoning Ordinance, Township Ordinance #6, Adopted and Effective December 23, 1972, as amended.

² The existing 2015 Whitewater Township Master Plan does not possess a zoning plan and includes an undated zoning map. The Michigan Planning Enabling Act, P.A. 33 of 2008, as amended, Section 33(2)(d), M.C.L. 125.3833(2) (d), requires that a Master Plan serve as the basis for the zoning plan, and the Michigan Zoning Enabling Act, P.A. 33 of 2008, as amended, Section 305, M.C.L. 125.3305, requires a zoning plan be prepared as the basis for the zoning ordinance. This requirement must be in any plan adopted or amended after September 1, 2008.

2) **Economic Development Plan³/Placemaking.** Pursuant to the Michigan Planning Enabling Act, the Master Plan must address economic development, the “new/global economy,” and emerging economies and technologies. “Placemaking” should also be highlighted as an important tool for planning for future community economic development. Placemaking is a planning approach to economic development that typically results in the revision of zoning techniques to consider and plan for the “old” and “new” economies within a community and its region. The overarching goal is to retain businesses that a community now possesses, i.e., the “old economy,” and to plan for and remove barriers to emerging businesses, communication technologies, and industries, i.e., the “new” economy.” Past economic development strategy was often focused on attracting new industry, businesses and manufacturing.

3) **Transportation/Complete Streets.** The Michigan Planning Enabling Act⁴ requires Master Plans to include a transportation plan (and/or “street plan”) inventorying the extent of all transportation system components, and coordinating and planning regionally for “roadways....to provide appropriate access to all legal users...whether by car, truck, transit, assistive device, foot or bicycle.” In other words, it is required that master plans consider and plan for pedestrian-based and well as vehicular travel (i.e., “complete streets”). Master Plan update should re-inventory and plan for transportation networks, facilities, and public transportation, and must consider and plan for “multi-modal” transportation including non-motorized and pedestrian travel within each.

4) **Blighted Areas.** As required by Michigan law, Whitewater Township’s updated Master Plan must evaluate blighted areas, and make recommendations for their redevelopment and/or rehabilitation.⁵

5) **Rezoning Criteria.** Updating the rezoning criteria utilized in Whitewater Township is also required by Michigan law.⁶

6) **Update Demographics/Housing Data** - Using available 2015-2019 Census projections, it is also required that the Mater Plan update population/population projections (see Population, p. 8), housing (see Housing and Households, p. 10), human/social services (missing), education (missing, see Education p.

³ Michigan Planning Enabling Act, P.A. 33 of 2008, as amended, Section 33(2)(d), M.C.L. 125.3833(2) (d), requires that a Master Plan serve as the basis for the zoning plan, and the Michigan Zoning Enabling Act, P.A. 33 of 2008, as amended, Section 305, M.C.L. 125.3305, requires a zoning plan be prepared as the basis for the zoning ordinance. This requirement must be in any plan adopted or amended after September 1, 2008.

⁴ Michigan Planning Enabling Act, P.A. 33 of 2008, as amended by Public Acts 134 and 135 of 2010, Section 33(3), M.C.L. 125.3833(3). This requirement must be in any plan adopted or amended 90 days after December 17, 2010.

⁵ Michigan Planning Enabling Act, P.A. 33 of 2008, as amended, Section 33(2)(c), M.C.L. 125.3833(2)(c).

⁶ Michigan Zoning Enabling Act, P.A. 110 of 2006, as amended, Section 202(1), M.C.L. 125.3202(1).

13), employment (missing), economic measures (see Economic Base, p. 10), etc. to inform an updated vision, goals and actions. Infrastructure measures, i.e., roads, bridges, trails, rail, public transit, transportation/traffic, drains, sewer and water, community facilities and services, parks and recreation, cemeteries, utilities, communications/mail, emergency services, etc. (within pp. 11- 13) should also be updated.

7) **Update Vision, Goals and Actions, and Future Land Use Map** - Update the 2015 Master Plan's Part 2: Master Plan Goals and Policies based on Whitewater Township Planning Commission input, public input sessions and 2021 survey results. Public notice, public hearing, and publication pursuant to the Michigan Planning Enabling Act, P.A. 33 of 2008, as amended. The Future Land Use Map (page 32) must be evaluated and updated if needed based on the above.

8) **Land Use/Land Cover.** Existing land use in 2015 as described and depicted in the pie chart on p. 11 must be updated, and should be contrasted with land cover, i.e., forest, herbaceous/grassland, shrubland, developed, agriculture, wetlands, and other categories (which includes ice/snow, barren areas, and open water).

B. RECOMMENDED

1) **Public Participation/Opinion Survey and Analysis.** The current Master Plan relies upon the results of a 2009 public opinion survey and two (2) open houses to inform the 2015 Master Plan's goals and policies.⁷ It is highly recommended that the updated Master Plan include a 2021 web-based opinion survey including press releases/public notices and a detailed report of findings, and four (4) professionally facilitated public input/visioning sessions. The results should be used to update the 2015 Master Plan goals and policies within a 2021 community vision, goals and actions

If you have any questions regarding this summary, please do not hesitate contact me at 231-499-7165 or grobbelenvironmental@gmail.com. Thank you.

Sincerely,
Grobbel Environmental & Planning Associates



Christopher P. Grobbel, Ph.D.
Sr. Community Planner/Project Manager

⁷ See 2015 Whitewater Township Master Plan, Part 2: Goals and Policies, pp. 3-4.