

**Our township areas of concentration:**

1. Launch Day
2. Jobs
3. Zoning and Local Government
4. Environment

**Introduction**

As we don't yet have many specifics about the commercial spaceport proposal, we can learn about currently operating commercial spaceports and FAA licensed small rockets: their history, their operations, their projections for the future. In this approach, good sense guides us to comparisons with the class of rocket and satellite payloads proposed by MAMA and the Michigan Launch Initiative. Thus we can be prepared with questions to get the answers important for our community. Here are questions and facts that may help your understanding of the MAMA proposal for a vertical launch site in Powell Township.

**1. Launch Day**

- How will a FAA licensed "Launch Window of Opportunity" affect township residents?
- Where will the hazard zone perimeter surrounding the launch pad, fuel storage, other hazards be?
- On potential launch days, what roads will be closed, and for how long?
- What existing buildings will be in the hazard zone?
- How will the evacuation of Lake Superior in the hazard zone be assured?
- How will the National Heritage site (Granot Loma Lodge and buildings) be protected?

Each planned rocket launch is licensed by the FAA, designating days and times the launch may take place, the Launch Window. The launch business co-ordinates closing airspace through the FAA, closing marine traffic with the US Coast Guard, and (?presumably) with local law enforcement for road traffic. I found no descriptions of how public and private roads within the hazard zone are controlled.

([spaceportfacts.org](http://spaceportfacts.org))

Launch Windows for the two currently used small rockets have been 10-14 days, each day may close roads and waters in the hazard zone for 3 to 6 hours before launch, while fueling and other preparations take place. The launch may be "scrubbed" for any reason up to launch time, and may be tried again the next day, and the next until the window closes.

([rocketlabusa.com](http://rocketlabusa.com)) ([akaerospace.com/spaceports](http://akaerospace.com/spaceports))

Marquette County obtained a consultation report (Explorer Solutions) discussing possible launch sites in the County. The report says an area of 1 kilometer (about 3200 feet) would be evacuated. However, the FAA regulation for small rocket launches requires a minimum 7300 foot boundary. The author of the consultation report has not answered my query about this discrepancy.

While the specific location of a launch site with fuel storage and handling is unknown to us, using the illustration in the County's consultation, my amateur mapping indicates many homes and a portion of County Rd 550 fall within the FAA mandated hazard zone, thus closed.

(<https://www.ecfr.gov> 14 CFR §420.21 Launch site location review—launch site boundary)

([https://www.co.marquette.mi.us/health\\_and\\_environment/docs/](https://www.co.marquette.mi.us/health_and_environment/docs/)

[Explorer%20Solutions%20Report%20SIA%20MLI%20Application%20Business%20Case%209.18.19.pdf](#))

## 2. Jobs

- What type of jobs, and how many, will be created at this launch site, after the construction phase is completed?
- Will available jobs be offered first to our residents?
- What local jobs might be lost or threatened if this project is realized?

Alaska owns and operates a spaceport with 6 launchpads on Kodiak Island, operating since 1998, launching small and medium rockets into low earth polar orbits for government and commercial missions. In November, 2020, the Alaska Aerospace CEO Mark Lester said they have averaged one launch a year since 1998. He discussed the employees at the spaceport are not highly paid rocket engineers and technicians. They employ electricians, equipment operators, and other labor not specifically educated for space operation positions. "We need people to keep the lights on, to dig in the ground. Our custodian becomes our weather person on launch day, and then goes back to cleaning." A dairy farmer "comes in for a launch." A few years ago, half the employees were laid off, leaving less than ten. For their commercial rocket launches, Astra sends a 5-6 person crew from their headquarters in southern California for a few days before and during the launch, they do not stay. The highly paid jobs are not at the launch site, they are at headquarters, command center, elsewhere.

(Podcast: [theorbitalmechanics.com](http://theorbitalmechanics.com), episode 284, November 10, 2020, interview starts at 18 minutes)

A Mining Journal reporter worked on a story focused on the facts of economic impact. A senior NMU student worked on a capstone report on the economic impact. Neither effort has been forthcoming. The student said she could not come to any conclusion after gathering information.

MAMA CEO Gavin Brown's statements about the economic impact have been variable depending on which interview or report you hear. His latest public statement on May 4, 2021, addressing the Marquette County Board of Commissioners, is that after construction there will be 650 jobs in the state across the three sites: Oscoda Airport for horizontal launches, Chippewa County for the Command and Research Center, and Marquette County for vertical launches.

In considering jobs, we must consider jobs and opportunities lost. The Michigan DNR proposal written in 1986 for obtaining Granot Loma for unique public recreation and historical preservation should be considered by township officials, as the potential still exists for economic development much in line with the values and natural gifts in our area.

<https://superiorwatersheds.org/learn-more-of-the-history-behind-the-proposed-rocket-launch-site#ecosystem>

To be continued with.....

**3. Local Control** - this should be considered also in the FAA Environmental Impact Statement to come

- What zoning change will be requested? For how much land?
- Is the proposed use compatible with surrounding areas as our zoning requires and our master plan guides?
- What effect will this use have on property values adjacent to the site a throughout the county?
- What special conditions will be sought beyond the established township industrial zoning parameters?
- How will this business compensate the township/s for additional infrastructure and services needed (fire fighting personnel and equipment, emergency medical personnel and equipment, law enforcement, solid waste, for example)?
- Is there a tax abatement offer from Marquette County?

**4. Environment** - look for much of this information in the FAA Environmental Impact Statement to come

- How did the feasibility report consider the surrounding environment?
- How will impact of chemicals into lake water, into ground water, be monitored?
- What will be the source of water for the water suppression system? Will nearby wells (private and township) be impacted? Where will the water used at the time of a launch go? Will the water be tested for contaminants before discharge?
- Will lights be installed all along the fence of the hazard zone?
- How tall will the towers surrounding the launch pad be, with lighting for air traffic to avoid?
- As noise travels very successfully over water, what is the estimated impact of noise generated by ongoing routine operations, and by a launch? Consider night time activities and launches.
- How will environmental concerns for loss of wetlands be addressed?
- How will physical disturbance of adjacent, and eroding, lake shore sandstone be avoided?
- What animal, plant, fungal and lichen species will be impacted by loss or substantial change to habitat in this area? Will migrations be impacted? Will surveys be conducted prior to any construction?
- Is there a reasonable need for this launch site here? is there a reasonable alternative?

Summary:

This area of consideration is complex, and truly IS "rocket science." Let's continue to learn together to help us to make wise decisions applying the knowledge of our community, our values expressed in our laws, and the plans for our future recently renewed for our township. Please let the Research Group know how we may support your work on this proposal.

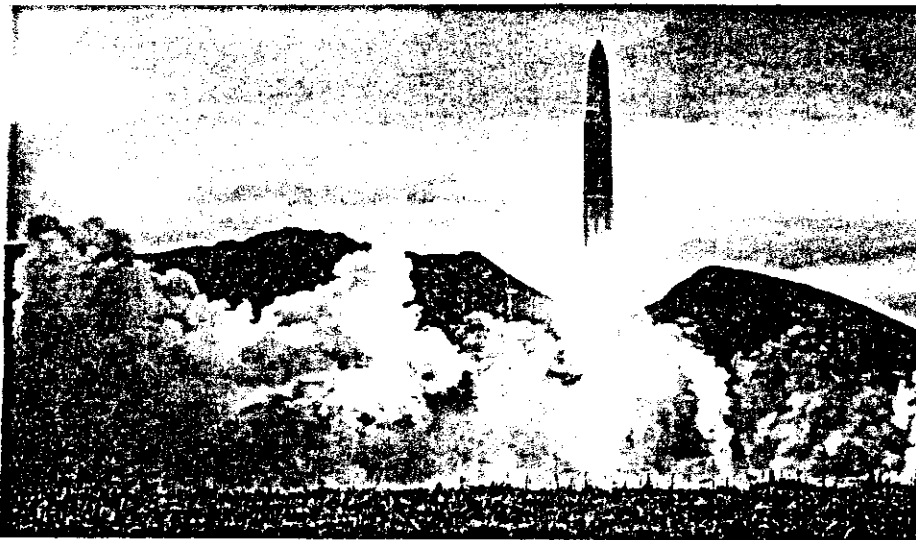
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Submitted by Jeanne Baumann

from September 17, 2020, Kodiak Island:



Astra says its 3.1 rocket had a beautiful lift-off, but its team had to shut down its engines and abort the flight, when it started to drift from its trajectory. Photo courtesy of Astra/John Kraus, a space flight photographer



Explosion of Astra 3.1 rocket after it fell to the ground from 11,000 feet. Photo courtesy of Eric Van Dongen

## Darlene Turner

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**From:** phyllis5460@sbcglobal.net  
**Sent:** Thursday, July 29, 2021 12:37 PM  
**To:** Darlene Turner; phijomo@yahoo.com; bigbaypathway@gmail.com  
**Subject:** Darlene T., Phil M., Sven G

I wish to express my strong opposition to the Rocket Launch proposal currently at issue. Granot Loma is not the place for such an installation as it makes the pristine portion of the UP which is really sacred a terrible place for those who love the UP and enjoy all the natural wonders it holds.

Please make this email a part of the public record at your next meeting.

Thank you.

Phyllis Lathrope  
Squaw Beach Road