



Patriotism or Pollution?

by Tim Boyle, MNA Information Committee Chair

Let's say you are a marketing director and you were just assigned a new product to promote. It's a dynamic, exciting, All-American, apple pie and Main Street sort of product. Sound good so far?

Successfully promoted, you could probably sell a pound of it to every man, woman, and child in America. You could be very rich.

The only problem is, it only works for about ten seconds then it turns completely into solid waste, air pollution, noise pollution, and unfortunately eventually contaminates the groundwater.

Also unfortunately there are quite a few documented cases where it has started a grass, automobile or property fire either while in use or while being transported, or being stored unused, and there's also a small but undeniable chance it could injure, maim or even kill the user, or an unsuspecting bystander, even if they are not in close proximity to the user.

Sorry, but there are also issues with your new product terrifying family members and neighborhood pets to the point that they have to be drugged or restrained during it's use, and due to an unfortunate illegal copycat market, it causes a substantial drain on the resources of customs, law enforcement, and fire prevention, reducing the effectiveness of your tax dollar.

So whaddaya think, do you want to take the ball and be the project leader on this one? There could be big bucks in it for ya...! Are you a 'team player'...?

Luckily, you don't have to promote your product, it is already successful.

In the United States, we consume well over 220 million pounds of your product - fireworks - EVERY YEAR.

That's over 220 million pounds of WASTE created every year. Matter can neither be created nor destroyed, and it has to go somewhere. It goes into the gutters, lakes, air, soil and landfills.

The waste is made up of plastic nose-cones and wire rods, wooden sticks, residue-soaked cardboard and colored paper that once were trees, and some amount of perchlorate, which was designated a "chemical of concern" in 1997. Perchlorate is the chemical normally associated with pollution from NASA and the Department of Defense manufacturing operations, and is used in rocket, missile, and fireworks propellants. Since it has been more closely monitored, perchlorate has been detected at low levels in a significant number of areas without any apparent military sources.

Perchlorate is the oxidizing chemical in fireworks and road flares. It is currently estimated that perchlorate is present in groundwater in at least 30 states and affects the drinking water supplies of more than 20 million people in the southwestern United States.

So there are a few issues you might have to sidestep. But people LOVE fireworks. At least many say they do. But do they know what they are loving?

Besides the fireworks you buy at the store in Minnesota, there are other types of fireworks available in Wisconsin that are illegal to transport, use, or resell in Minnesota. That unfortunately doesn't prevent it

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The President's Letter

by April Rust, MNA President

Spring started early this year and we had uncharacteristically warm, dry weather in late March and throughout much of April. Except for chilly temperatures at night, it felt like we jumped from winter straight to summer. Then the tables turned and we ended up with a cold, wet May. It seemed like April and May switched places, and spring dashed past leaving summer abruptly once again.

For naturalists, summer brings final school group visits and the start of summer camp season. It's a busy time of year. This is one time that despite the extra minutes of sunlight we're getting each day, time seems to slip away. Wrapping up spring work, preparing and starting new things at work, juggling jobs, home and life is a lot to do. So we must "multi-task".

Multi-tasking is a way of life in the United States – a survival tactic in today's fast-paced world. For me, it's sometimes a successful tactic, but other times just a stressful waste of time. I know I'm not alone in saying yes to too many things, juggling life and work, and scheduling, scheduling, scheduling.

Despite the busyness of the season, summer is one time I try to force myself to slow down a little and to refocus my energy. It's not possible every day, but I am able to recharge by spending time with my son digging for worms, planning and planting my gardens, taking daily walks, and by hanging out with as many interesting people as possible. Each of those things comes with some degree of scheduling, but the thing they have in common is no multi-tasking – just being in the moment. That's one way I recharge myself. Professionally, I recharge myself by interacting with colleagues as much as possible. That's one reason I love attending trainings. I try to plan them as regularly as possible, despite my busy work schedule.

So how do you recharge yourself professionally and personally? Is it when teaching kids and seeing them light up about the natural world? Going out with friends? Spending time with your family? Running? Crashing with a good movie and some popcorn? Reading a good book? Or maybe just spending time outside.

I know it's easier said than done, but I'm going to take on a mom tone for a minute and suggest all of us need to take a break and schedule time



both personally and professionally for ourselves.

I challenge you to pick something that can recharge you over the summer and work it into your schedule. It can be something as short as a 15 minute daily walk, or as long as a half-day MNA naturalist training. Take some time to think about yourself and try to slow down both at home and at work. As MNA President, it's my job to set up and run the board meetings, represent and promote MNA and to work with the board to provide direction and leadership to our membership. With Hallie's guidance, the conference planning team is working hard to get the fall conference planned with great presenters and field trips. With Crystal's leadership on the naturalist training committee, we're offering more trainings this year throughout the state. With Cristina's social committee and Tara's marketing committee working together, you'll be seeing more membership events coming up. The board's job is to support all our members and provide the best professional development and networking possible.

As a member, it's your job to keep an eye on what MNA offers and let us know what you like and what works for your schedule. Get together with some MNA friends at an upcoming social event. Maybe say no to a meeting, and yes to a walk or a night out. Take a look at what we've got coming up and see if you can fit MNA events in your summer schedule. You won't regret the time you spend, professionally and personally.

Hope to see you this summer!

- April

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For mailing addresses and
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Announcements!

The MNA T-Shirt Design Contest!

I know you are longing for a cool naturalist t-shirt to wear while you are out on a bird hike, or identifying dragonflies at the next Bio Blitz. I am too—but first...

We are looking for the most creative design for the next MNA t-shirt, so get out your sketch pad or computer and work up your idea of the best way to represent the MNA.

The winning design will be proudly printed on this year's t-shirt—which will be available for purchase with your conference registration. (Convenient, no?)

Please keep your design to 2 colors. We will be screening only the front of the shirts.

Submit your design by July 30th (minimum 200 dpi .jpg or .tif) to MNA member-at-large: Tara Rogness at (tara.rogness@gmail.com)

Also -

The MNA Conference Committee is looking for items for the silent auction to be held at this year's Annual Conference, at Camp St. Croix, in Hudson, WI, November 12 - 14, 2010.

Dig through those nature center closets, prop rooms, curriculum boxes, and libraries for items to be auctioned off to raise money for the MNA scholarship fund. This is your chance to recycle, reuse, reorganize, and help the next generation of naturalists get a taste of our biggest event of the year!

Set aside your items and start thinking about your opening price... this is always a popular part of the conference. It is always a great place to meet people interested in the same things you are, and figuring out ways to outbid them at the last minute!

Pollinators

By Naomi Jackson

Amidst the buzzing, it becomes apparent
that each one has a preference.

Iridescent green flies (or are they bees?)
flit through flowering chives.

Yellow striped bees (or are they flies?)
search the oregano jungle.

Three kinds of bumblebee
lunch on Joe Pye Weed.

A dozen more pollinators
stalk the spearmint spikes.

A solitary predator wasp,
sips bergamot for now,

shimmering between blossoms, until
another wasp appears,

and they dance, flashing blue and black,
spiraling, spinning faster,

higher, abandoning food for flight,
chasing something I

can't see. I lose them suddenly,
and blink to clear my eyes.

Naomi Jackson
3/9/10



Photo by Tim Boyle

A Natural Place to Play

By Mary Eggebraaten,
Lead Naturalist, Wargo Nature Center

As Naturalists we know the importance of playing outside and exposing children to nature. In fact, at our Nature Centers and Learning Centers we set up our environmental education programs to help children and adults learn about the natural world and spend time in it. As Naturalists we also know that the short programs we have created to teach the names of plants, how animals survive the winter, or what woodchucks eat will only introduce lessons about nature to people and tempt them to learn more.

Within our park system, Anoka County Parks, we are always looking for ways to build stronger connections with the land. We are interested in helping to foster a relationship with the land that goes beyond just understanding what it is, but also how people fit into it. We also know that starting with young children is the best way to build a lifelong stewardship with the land. Last year we proposed a Natural Play Area at Wargo Nature Center which would provide a place for young children to spend time in the environment.

A Natural Play Area is a set place that includes natural elements for children to explore and spend time in nature. Our Natural Play Area is called Maple Hollow.

Maple Hollow is a fenced in area that includes a climbing space, a music corner, a giant sandbox, an amphitheater, and a fort-building area.

With a grant from MNA we were able to purchase several of the lilac and cranberry bushes that line our entrance. We chose plants that were kid friendly and provided sensory stimulation.

Maple Hollow was created with many hours of help from volunteers and collaboration between the departments within Anoka County Parks. Our Natural Play Area has attracted young families and school groups looking for a place to play outside. Instead of having people come and walk the trails to observe nature, we have invited families to immerse themselves in nature in a fun and hands-on way.

We plan on continually adding to Maple Hollow with an Art Area and more natural features like logs or places to dig.

- Mary Eggebraaten

Committee Updates

by Tim Boyle, Information Committee Chair, with contributions from the Board and Committee Chairpersons

Normally we feature an update from one of the MNA committees in each issue of the newsletter. However, this time around I feel we are way overdue for explaining who is in charge of what with the committees, and what they do.

This would normally be something that would be posted on the website around February or so, as the committee chairs and selections are made during the annual MNA Board Retreat which occurs in January. The new board officers are elected at the annual conference in November, then each year during the retreat, the officers are "connected up" with their interests in chairing or serving on normally at least one committee besides their duties as a board member.

In my case, as Information Committee Chair, I am responsible for the eNews, website, and every second issue of the bi-monthly newsletter. Things were bogged down at the beginning of the year, as the website was being hosted and maintained by a third party, and we didn't have immediate access to editing or changing the postings. We have since taken over the hosting and control of the website, and as you may have noticed, construction has begun on the new site. Right now it is operating as a 'bare bones' front page, and I'm trying to keep it updated with the latest announcements and info. Still to be done are to reconstruct the 'backpages' and the blog, and connect things up.

Here, I am making a personal plea for assistance. If anyone is familiar with Microsoft FrontPage, Adobe DreamWeaver, or really any website editing software, or would like to get their feet wet learning to fix up the site, any help would be appreciated. It is of course the busiest time of the year for everyone, and for me just having moved to Wisconsin and started a new job and life, it's no exception. However I would really like to see the MNA website and Info Committee live up to their potential, and also to complete the form of some of the structure and ideas that everyone offered up when we took on our changes in the board and by-laws at the end of Jamie McBride's term in 2009. So again, if you know anyone that knows anyone... send them our way.

Regarding the other committee chairs, members, and their goals, of course, they need your help too! Seriously, if you see a subject that you connect with, are passionate about, and can offer any assistance with, please contact one of the committee members. Their contact info is back on page 3.

Committee notes:

Our Secretary, formerly **Krista Prokosch**, has a new name, husband, and email address! On May 22nd, 2010 she married her longtime steady Christopher Jensen, and is now **Krista Jensen** at Krista.Jensen@co.dakota.mn.us

Congrats Krista! Krista is the Education Coordinator for Dakota County Parks, and also serves on the Naturalist & Volunteer Training Committee (formerly 'Metro Training') and has the important and often difficult ask of taking the board meeting minutes, along with taking the lead in maintaining the memberships status.

Krista's membership update reads as follows:

Greetings from Lebanon Hills Regional Park! My office is nestled among miles of ski and hiking trails and I'm looking forward to spending some quality time on them! Until then I'll keep plugging away at tasks such as coordinating membership details.

In case you didn't know, we keep track of our members in a database that currently has 130 of your names in it. Some of you are up for renewal (I'll keep sending reminders!) but if you haven't heard from me recently your name is no longer in our membership database. Perhaps you would like to renew your membership and take advantage of MNA Newsletter six times a year, a discount on the annual Conference, and being the first to know about naturalist positions, trainings and conferences. Your dues also provide funding for the MNA Stewardship Fund, which awards members with funds to help with new programming ideas, research, pilot projects, unusual supplies, and other worthy environmental educational projects.

Don't you dare miss:
The 2010 MNA Annual Fall Conference:
"Life in the River Valley"
November 12-14, 2010
at Camp St. Croix, WI
20 Minutes East of St. Paul, MN

We are now accepting Proposals for Speakers
and Concurrent Session Leaders!
Contact: Hallie Wunsch - Hallie.wunsch@gmail.com

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Committee Updates (continued)

Our longtime Treasurer, **Pam Welisevich**, works as an interpretive naturalist at Dodge Nature Center and has served many years in her important position, often transparent to fame and celebrity. Pam can tell you what money came in what money went out, and is also involved in the Conference Planning Committee.

Working with Pam (figuratively but no longer literally, they both used to work at Dodge Nature Center together) is at-large MNA member **Brett Sieberer**, who chairs the Scholarship/Stewardship Committee, and is also involved with the Conference Planning, and Fund Raising/Social Committees. Brett now works at Lowry Nature Center as an interpretive naturalist and can tell you such things as that the monies awarded for MNA Stewardship projects last season were as follows:

MNA Stewardship Funding Awards

Cara Rieckenberg	\$100.00
Teresa Root	\$300.00
Mary Eggebraaten	\$200.00
Melanie Sorenson	\$100.00

Mary's write-up of her organization's use of the funds is in this issue, Melanie's was featured in the March/April 2010 issue, and a general overview of the funds is described in the Jan/Feb issue. All of the issues going back to 2008 are available as PDFs on the MNA website at: <http://mnnaturalists.org/>

In the future we hope to scan ALL of the previously archived MNA Newsletter issues to PDF and post them on the site. Again, if you'd like to help...

Hallie Wunsch is our Vice-President. She works as an interpretive naturalist at Springbrook Nature Center, chairs the Conference Planning Committee, and has her fingers in the pies of the Naturalist Volunteer Training and Scholarship/Stewardship Committees. Word has it she will be getting hitched soon as well. We'll let you know if she changes her name and/or email.

Jodi Gustafson is a long-time veteran of the Info Committee, and is currently serving as Junior Chair. She has excelled at putting up with me and whipping the newsletter and the sagging sides of the Info Committee into shape. Jodi is also involved in the Conference Planning Committee, (you are maybe getting an idea how much goes into conference planning?) and is employed as a naturalist at Eloise Butler Wildflower Gardens, and as a paralegal.

Besides being an MNA Member-at-large, **Josh Leonard** is the Education Director for Valley Branch ELC, a Saint Paul Public Schools program housed at the Belwin Conservancy. Josh is a member of the Naturalist & Volunteer Training Committee, and has been proposing ideas for professional development ideas through MNA to teachers.

People often ask what an "At-large" member of MNA does. Josh is a great example, bringing a perspective from a different discipline of environmental education into the mix. There are many duties and points-of-view involved in environmental education and naturalist work, and our at-large members diversify and often educate *us* to what is going on in other parts of our interconnected organization.

Tara Rogness is also an at-large member of the board and chairs the Fund Raising Committee, as well as being involved in the Field Trip/Social and Conference Planning Committees. Tara is the Interpretive Program Supervisor at Springbrook Nature Center and has delivered a ton of education to all ages of interested and uninterested students during her career.

Our Naturalist & Volunteer Training chairperson **Crystal Wold** has been involved in the MNA for quite some time and has been tirelessly promoting the Naturalist & Volunteer Training sessions with our hosting locations. In addition, she is involved with the Field Trip/Social committee. Crystal works at Eastman Nature Center.

Cristina Palmisano is the remaining piece of the quintet of At-large members, she works at Richardson Nature Center in Bloomington, MN while maintaining a quest for distance running and gushing about her daughter Gia. Christina chairs the Field Trip/ Social Committee, and is currently working with Fundraising Committee to plan a social/fundraising event for this summer. She also is a proud member of the Fundraising and K-12 committees.

Last but far from least is our current MNA President, **April Rust**. April somehow manages to work like a rabid dog for the MNDNR and to chair the Nominating Committee and knit all of the board members, committee chairs, committee members, and volunteers together into a functional yet decorative unit.

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from happening. There are also the large-scale fireworks displays put on by municipalities and large private entities. 11,000 firework shows per year makes Walt Disney World the largest consumer of fireworks in North America.

These municipal displays are put on primarily over water for safety reasons; rivers, lakes, and ponds, and it is up to the water source to deal with the fallout of ash and debris. Most municipalities clean up their launch waste but few, if any, clean up their discharge waste.

From the sciencebuzz.org blog: "Ever wonder what kind of chemicals rain down into the Mississippi River during a fireworks display?" Fireworks are colored by burning chemicals giving off particular frequencies of light. "Lithium yields red, copper gives blue or blue-green, sodium provides yellow, aluminum and titanium produce the whites."

Chemists are always attempting to make fireworks less harmful to the environment.

Perchlorates, which are used to help the fireworks' fuel burn, were named in an EPA health advisory earlier last year (which recommended a maximum of 15 micrograms per liter of drinking water), as they have been linked to disruption of the thyroid gland. - Scientific American

A 2007 U.S. Environmental Protection Agency (EPA) study found that perchlorates spiked by up to 1000 times normal after the fireworks display and took 20 to 80 days to return to normal depending on surface temperatures.

To make fireworks whistle, crackle, and pop, chemists add bismuth trioxide to the flash powder to get that crackling sound, dubbed "dragon eggs." Ear-splitting whistles take four ingredients, including a food preservative and Vaseline.

Tubes, hollow spheres, and paper wrappings work as barriers to compartmentalize the effects. More complicated shells are divided into even more sections to control the timing of secondary explosions.

The issue of the environmental impact of fireworks on our lakes was raised during the Northwest Wisconsin Lakes Conference, held last June at Telemark Lodge. In a session titled "Fireworks and Water ... Do They Mix?"

Bob Korth, UW-Extension, and Ted Griggs, Whitefish Lake Conservation Organization, shared the pros and cons of fireworks in lake communities.

In an open forum that raised more questions than answers, participants were asked to contemplate the following questions:

- Are fireworks a patriotic expression, or a hazard to our health?
- How do I approach a neighbor that is driving me crazy with fireworks, or a person that wants to stop me from using them?
- How should lake communities approach these issues?



"Fireworks going off over our water is a significant problem, or joy, depending on how you look at it," said

Korth. "It is a difficult issue to deal with in many ways."

On the positive side, Korth mentioned the lower chance of fire when fireworks are shot over water, the idea that reflection on water doubles the beauty, and the patriotic tradition of fireworks.

On the negative side were the burned paper and cardboard on the lakeshore, noise disturbance to pets and wildlife, and safety factors. Korth also presented a list of chemicals used in the production of fireworks such as aluminum, nitrates, copper, lithium, lead dioxide, sulfur dioxide, and mercurous chloride.

"Fireworks have a public good," said Korth. "People don't usually pay to see them; no matter how many people watch, they still look great; and it is often government bodies that put on the displays." *(ed. note - This brings up who actually does pay for the displays and the cleanup. If I am a non-fireworks believer or a fiscal-conservative, do I get a say in how much is spent on these displays? I have not been able to get a clear answer on this at this point. It seems to depend on the local circumstances.)*

Korth also shared statistics showing that over time the amount of fireworks used is increasing, while the number of injuries per use is down. He noted that sparklers cause the most injuries, followed by small fire crackers. Of those injuries, burns are the most common.

According to the U.S. Consumer Protection Agency, 940 million dollars worth of fireworks were imported into the U. S. in 2008, primarily from China.

In Wisconsin, it is not illegal to sell projectile fireworks, however, it is illegal to use them without a permit.

Simone Tremblay, owner of the 'Celebration Station' in Hayward, WI, has been in the business of selling fireworks for 16 years.

"We are over the top when it comes to safety," said Tremblay. "Everyone that comes in the shop is told about fireworks safety. Everything we shoot is made in China and made from rice paper."

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"It's all totally biodegradable. There is no negative impact on the environment from our products."

When asked about the chemicals used to manufacture fireworks, Tremblay said, "The chemicals are all dissipated in the air. Nothing reaches the water. Within a day, the rice paper disintegrates."

Bob Walters, who is known for his professional fireworks displays in Bayfield County, agreed with Tremblay.

"The only debris that comes out of the cakes I use disintegrates into the water," said Walters. "The manufacturers in China are very environmentally conscious. Fireworks are used more often over there and with that many people living in such a small area, they have to be careful. If there were any environmental hazards associated with it, they would fix the problem right away."

As a professional, Walters said he takes care to make sure that any debris from his shows is cleaned up. "All my cakes go in a dumpster and get recycled," he said. "When we are done shooting, we go and rake the area. Everything is cleaned up."

Walters also noted that all companies need to follow EPA guidelines. Walters also said that safety is a bigger issue than any environmental concerns.

Tremblay summed up her comments by saying, "The fourth of July comes only once a year. Let people have a little fun. Fireworks are the least of our concerns when it comes to the environment."

However the fireworks regulations in our area are not like those on other countries that only allow the use of certain fireworks on certain days.

Also, police response to fireworks complaints on a day such as the Fourth of July are admittedly difficult to enforce, and because of the American heritage aspect of the event, enforcement is normally quite lenient.

Bayfield County sheriff Bob Follis responded by saying, "We enforce the fireworks law in Bayfield County. We prefer to not have to prosecute the good people who use fireworks, but we will. We would rather educate and gain compliance through other means."

Griggs countered with, "It's year-round now." "Fireworks are used to celebrate any auspicious occasion, not just the fourth of July. The most common problems are safety, litter and noise."

"Law enforcement is stretched," said Griggs. "It comes down to local associations. It helps to have a courtesy code around the issue of fireworks on your lake or in your neighborhood. Educate your

neighbors about the effects of fireworks. Consider alternatives such as laser light shows, biodegradable confetti, or shortening the number of hours that fireworks are permitted on your lake."

Last year for my own curiosity I looked up the Twin Cities Air Quality Forecast for the 5th of July.

It was prefaced by the somewhat ominous statement, "FYI. This alert was sent on Sunday since air quality was affected by 4th of July fireworks displays."

The results were as follows:
Today and Tomorrow's Air Quality Forecast:

Sunday, Jul 5, 2009:	Monday, Jul 6, 2009:
Particle Pollution (2.5 microns):	Particle Pollution (2.5 microns):
115 AQI - Unhealthy for Sensitive Groups	67 AQI - Moderate
Ozone: 42 AQI - Good	Ozone: 64 AQI - Moderate

"Last night's fireworks displays in the Twin Cities led to increased particle levels across the region. Calm to light winds overnight limited pollutant dispersion, keeping particle levels high. However, northwesterly winds developing by midday will disperse pollutants and bring cleaner air into the area.

"While these conditions will improve air quality this afternoon, AQI levels will be Unhealthy for Sensitive Groups for the day due to the high morning particle levels. Tomorrow, weak surface high pressure to the northwest will generate light to moderate northwesterly winds in the Minneapolis-St. Paul region, bringing cleaner, drier air into the region. However, carryover pollutants, along with enhanced ozone formation due to partly to mostly sunny skies, will still result in Moderate AQI levels.

Tuesday, southeasterly winds ahead of an approaching low-pressure system will bring a warm, moist airmass into the Upper Midwest. These conditions, combined with carryover pollutants, will result in mid- to high-Moderate AQI levels.

Wednesday, surface high pressure over northern Minnesota will produce light to moderate northerly winds across the Minneapolis-St. Paul region, dispersing some pollutants and ushering cleaner air into the area.



Fireworks trash collected on the beachfront at Ocean Park, Washington, six months after the Fourth of July

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However, warm temperatures and partly to mostly sunny skies will increase ground-level ozone formation. Therefore, AQI levels will remain Moderate. Thursday, southerly winds will bring moisture and pollutants into the area, enhancing particle formation. Therefore, despite mostly cloudy skies and scattered rain showers limiting ozone formation, AQI levels will remain Moderate. Friday, northerly winds developing during the day will disperse pollutants and bring cleaner air into Minneapolis; however, warm temperature and mostly sunny skies will cause ozone levels to be in the mid-Moderate AQI range.

So in the case of last year's festivities, it took nearly a week to disperse the pollutants from the larger fireworks festivals down to normal levels.

Like them or not, we ARE breathing them in after the oooo's and ahhhh's are over.

"That one day accounts for some 60 percent of our business," says fireworks retailer, Jim Souza, referring to the Fourth of July. Souza knows that the Fourth of July means more than fireworks - "It's American flags, hot dogs and family gatherings" - but he is proud of his displays, seeing them as rooted in a prediction of the nation's founders.

Perhaps he is referring to a quote from John Adams. Having just participated in the vote declaring the United States independent of England, John Adams wrote his wife, Abigail, in 1776, predicting that the July day would "be celebrated by succeeding generations, as the great anniversary festival... with pomp and parade; with shows, games, sports, guns, bells, bonfires and illuminations from one end of this continent to the other."

And so it is. However, not all the fireworks and explosions are appreciated by everyone, including some war veterans. In talks with recent military members returning from the Middle East, some expressed dismay that the explosions brought back ominous feelings and grief for their fallen friends and their own debilitating injuries. They felt confused and disturbed that they felt obligated to be present at fireworks festivals when they didn't want to be so forcefully reminded of haunting memories from their recent past.

The loud sounds of firecrackers scare small children and set off car alarms. For the Chinese, the sounds are also meant to scare off bad spirits, and to help ensure that the new year will be a good one.

In 2005, of the estimated 10,800 people treated

in emergency rooms for fireworks-related injuries, nearly half were under 15 years old. Children between the ages of 10 and 14 were at three times the risk of fireworks injuries than the general population; about a third of the injuries were from small firecrackers, 21 percent from bottle rockets and 20 percent from sparklers, which burn at temperatures considerably over 1000 degrees. Approximately one-third of the injuries are thought to be caused by illegally obtained fireworks.

In Lima, Peru, illegal fireworks once set off an inferno that killed about 300 people. Dozens of sidewalk firework vendors were packed into narrow streets shortly before New Year's Eve. A single, careless firecracker is thought to have touched off hundreds of others. In seconds victims were incinerated on the street, while others were trapped in blazing cars and buildings. Most victims were burned beyond recognition.

- On Independence Day in a typical year, fireworks cause more outdoor fires in the United States than all other causes of outdoor fire combined.
- Six states ban the use of fireworks by consumers (AZ, DE, MA, NJ, NY, and RI). The other 44 states and the District of Columbia permit some or all consumer fireworks.

Admittedly, fireworks are a difficult subject to approach simply because the US population feels so strongly about them, both pro and con.

There will always be a certain patriotism associated with fireworks in the US and I feel the sentiment associated with them is valid - I don't want to downplay that. However, maybe it's time to step back and look at the scale that fireworks, both personal and public, have gravitated to and consider the larger, long term picture.

I have a hard time with the concept that so many people spend a lot of money on something that only lasts a few seconds, and leaves so much residue in it's wake. Some are willing to spend the time and money to drive to another state to purchase large amounts of fireworks, risk arrest and endangerment of their lives, their families lives, and property to transport explosives back home for an illegal celebration.

It's ironic that we can pass legislation such as that requiring the keeping of pop-top tabs attached to aluminum cans to reduce litter, yet we allow much more impactful "litter that literally invents itself" - just stick it in the ground, light it, and walk away. Off it shoots, a hundred feet away, creating air, noise, ground, and water pollution all at one time.

Who will clean it up?

- Tim Boyle

MINNESOTA NATURALISTS' ASSOCIATION
PO Box 75127
St. Paul, MN 55175



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MNA Membership Form

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How did you hear about MNA?

How long have you been a member?

Membership runs one year from payment of dues.
Please make checks payable to **MNA** and mail to:
**MNA Membership, c/o Krista Prokosch, Lebanon Hills
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I am a:

- NEW MEMBER
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- MAEE MEMBER

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- \$25 Professional
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Please check if applicable:

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Our Mission:

"The Minnesota Naturalists' Association exists to advance natural and cultural resource interpretation for the purpose of fostering wise stewardship of all resources.

The MNA offers its members growth opportunities in skill and career development and serves as a forum for interpreters to pool knowledge, share ideas, and establish contacts with colleagues."