



# Easy Money?

**Some Landowner  
Considerations:  
on Wind Energy (and Solar)  
Contracts**

# There's No Free Lunch

Due to the unprecedented amounts of monies being available in the energy area (Trillions of dollars), there is a relentless frenzy to siphon off these funds by lobbyists and other self-serving organizations.

What's lost in the process is sound thinking, and any genuine interest in benefiting citizens, our environment, or our society.

The purpose of this material is to try to put some balance into a particularly egregious infestation: **wind energy developers targeting some of our hardest working, most responsible citizens — farmers.**

Slick salespeople descend on rural communities, full well knowing that they are dealing with inexperienced, non-technical citizens. They take advantage of these people's trusting nature and make speculative, one-sided claims.

To counter this propaganda, please see our website: "**WiseEnergy.org**", and carefully look over what's there. The underlying message is that our energy decisions should be made on the basis of **sound SCIENCE** — *not* on what self-serving lobbyists say.

The future of this issue lies in whether or not citizens get properly educated about basic energy matters. After getting more up-to-speed, they then need to do some **Critical Thinking** about this matter. Unfortunately, Critical Thinking has become somewhat of a lost art — and that has lead to serious consequences to our society as a whole.

This PDF has been made to be in printable format (8.5" x 11"), so consider doing that. We are not lawyers, so none of this should be construed as legal advice. Please hire a competent aggressive attorney to protect your interests.

If there is interest in it, I will consider giving this as a live presentation.

Please see my brief "resume," the copyright notice, disclaimer, and contact info on the last page. "References" are on the page prior to the end. [Note that updates on this document are indicated by a new date on this page.]

— ENJOY!

*john droz, jr.*

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{Pages that might apply to solar have the sun symbol on them...}



**You've been offered a deal that  
sounds too good to be true:  
Big Money, No Work, No Risk, etc.**

*How can you pass that up?*

**The following pages touch on  
40+ legal and economic  
issues that landowners  
(especially farmers)  
who are considering leasing  
to a wind (or solar) developer,  
should seriously consider  
before signing anything.**



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**# 1 - The typical landowner/wind developer agreement is among the most inequitable and restrictive contracts anywhere.**

One lawyer said a wind contract turned out to be:  
“the most one-sided, unconscionable, over-reaching contract I had ever examined in my entire fifty-four years of law practice!”

The result is that the landowner gives up an **exceptional** amount of rights, and **essentially becomes a caretaker for much of his property.**



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#2 - The developer a landowner deals with, is not their friend or partner. The developer has ONE objective: to maximize his profit – *regardless of the impact on the landowner!***

**John Adams, esq:**

“The net result of the agreement is to essentially dedicate the **whole property** to the operation of a wind turbine plant, and **anything** inconsistent with that operation will be prevented.”



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#3 - The developer that landowners are dealing with now, will NOT likely be the people they will be dealing with in a few years.**  
(These projects can be resold several times, as tax breaks and incentives get used up.)

There will be **no one** to complain to that: “this is what I was told” or “this is what I was promised.”

Furthermore, subsequent wind project owners will likely be **shell corporations with no assets.**



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#4 - There are major differences between leases and easements. Most wind contracts are actually easement agreements.**

**University of California, Real Estate Group:**

“A **lease** is an agreement in which the landlord agrees to give the tenant the exclusive right to occupy real property, usually for a specific term... An **easement**, gives the owner’s permission, to use his real property. It transfers to the easement holder an interest in the real property that encumbers the record title.” **Terminating easement rights can be difficult and expensive.**



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#5 - A contract: where two parties commit to exchange something of equal value. This implies a **BALANCE** of **responsibilities** and **rights** between the parties.**

The most important question a landowner should ask a competent attorney:  
*“is this wind contract a **balanced** agreement?”*

Any objective assessment would say **NO**.  
*(See some reasons why in the following **13** pages...)*





The Landowner needs to see the reality of their “economic windfall” in proper perspective:

## #6 - Unbalanced example “a”:

It’s usually specified that the developer may “enjoy” the landowner’s property without **any interference** by the owner (or anyone else), & that the owner must actively “protect and defend” the developer's rights.

Does the contract commit the wind developer to **protect** and **defend** the **landowner’s** right to enjoy his own property? **NO!**



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#7 - Unbalanced example “b”:**

**If someone gets hurt in **any way**, on or off the property, possibly due to the wind turbines, the landowner may be held legally liable.**

Why should the landowner have any liability from actions or inactions of the developer?

A high probability example is a neighbor’s health being affected by proven noise problems.



**The Landowner needs to see the reality of their  
“economic windfall” in proper perspective:**

**#8 - Unbalanced example “c”:  
If the landowner is sued  
because of actions/inactions  
of the developer, some wind  
contracts state the landowner  
must pay his own legal costs.**

**Department of Agricultural, Food and Resource  
Economics, Michigan State University:**

“Litigation with a third party can arise in many situations. For example, assume a neighbor, claiming to be affected by the noise of the turbine, sues to halt the operation of the turbine.” The cost of responding to that lawsuit should be borne by the developer.



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#9 - Unbalanced example “d”:**

**Most wind contracts have an “assignment” clause. This lets the developer assign the contract and turbines to any party of his choosing —without the landowner’s permission (or sometimes knowledge).**

The terms of any contract are only as good as the parties behind them. Subsequent assignees will likely be shell, paper corporations with no assets.



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

## **#10-Unbalanced example “e”:**

**Some wind contracts allow the developer to put a mortgage on some of the lessor’s land. The contract may *require* the landowner to give permission.**

If the developer (or the subsequent assignees) default on their mortgage, the landowner could permanently lose some of his property.



**The Landowner needs to see the reality of their  
“economic windfall” in proper perspective:**

## **# 1 1-Unbalanced example “f”:**

**Developers usually demand  
extraordinarily broad rights  
– like extensive easements.**

### **Martinsburg Wind Project #4.1.1:**

“An easement, right and entitlement on, over, across and under Property for any audio, visual, view, light, noise, vibration, air turbulence, wake, shadow flicker, electromagnetic, television reception, ice or other weather created hazards or other effect of any kind whatsoever...”



**The Landowner needs to see the reality of their  
“economic windfall” in proper perspective:**

**#12-Unbalanced example “g”:  
Easements are NOT an  
ordinary part of a lease,  
and are not advisable.**

**Ontario Federation of Agriculture:**

“Do not allow a conversion to an easement  
as it will be more difficult, perhaps impossible,  
to discharge at the end.”



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

### **#13-Unbalanced example “h”:**

**The developer protects his financial interests, but there usually are no provisions to protect the landowner’s (e.g. the value of his property).**

### **Ontario Federation of Agriculture #13:**

“Add a clause requiring the wind developer to make whole any losses in resale value that might occur as a result of the lease or a turbine being in place. Such losses might not be covered by rent.”





**The Landowner needs to see the reality of their  
“economic windfall” in proper perspective:**

## **#14-Unbalanced example “i”:**

**The developer often demands  
exceptional, open-ended rights.**

### **Martinsburg, NY Wind Lease:**

“Undertaking any activities that the Developer  
(or a sublessee) determines are necessary,  
helpful, appropriate or convenient in connection  
with, incidental to or for the benefit of one or  
more Projects.”



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

## **# 15-Unbalanced example “j”:**

**The developer usually gives himself the right to basically terminate the contract at will.**

Most landowners neglect to include terms about **their** rights and options for termination.

*Landowners are never given the right to terminate at will!*



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

## **# 16-Unbalanced example “k”:**

**Contracts typically say that the state where the developer is incorporated (e.g. Delaware) determines applicable laws, & where court cases will be heard.**

Landowners should insist that laws and court venues, be from the Landowner’s home state.



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

## **# 17-Unbalanced example “I”:**

**It is usually specified that the landowner is prohibited from making any comments about the wind project.**

What good reason justifies removing a person’s fundamental right of free speech?

Why would anyone consent to giving up such a significant Constitutional freedom?



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

## **#18-Unbalanced example “m”:**

**The developer is an LLC. That means that even if the landowner has a legitimate claim against the wind project, that *the developer has shielded himself from most lawsuits.***

An LLC is a “Limited Liability Corporation.” Why would anyone enter into an agreement, where the other party is **immune** from almost any claim against them?



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#19-If a landowner has a mortgage on his property, granting an easement to a wind developer may trigger a default, and necessitate full payment of said mortgage.**

**Farmer’s Legal Action Group:**

“In most cases, when there is a mortgage on the land, the terms of the landowner’s agreement with the lender will require that that lender be involved in the negotiations with the developer.”



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#20-Several NY leaseholders had liens put on their property, due to a dispute the wind developer had with contractors over reportedly unpaid bills. These legal filings were against the landowner, not the developer.**

This shows how easily leaseholders can be legally dragged into something that they have nothing to do with – and no control over.



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#21-In many cases, local laws don't do a good job of addressing decommissioning. This means the landowner may become liable for **substantial** costs when turbines are abandoned – *which will eventually happen!***

Since these costs are **substantial**, the landowner should NOT leave this matter up to legislators to specify. *Those representatives have no obligation to protect the landowner!* It is **solely** the landowner's responsibility to assure that the developer will properly decommission the property.





**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#22-A wind energy contract can undermine farmland value — beyond the owner’s lifetime.**

**Wind Energy in NYS — Issues for Landowners:**

“Often the highest prices for farms or large plots of land are not offered by other farmers, but by residential developers. Not having the ability to sell your land for its maximum value represents a very substantial cost that may be on the scale of hundreds of thousands of dollars.”



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#23-When a turbine is erected on a parcel, the assessed value of that property goes up.**

{In NYS, payment of additional property taxes is exempt for a period of only 15 years (see NYS Real Prop Tax Law, Sec 487).}

Each state handles this differently (so check yours).

{In NY if the developer defaults or goes bankrupt after the 15 years, the property owner would be liable for a substantial increase in property taxes.}



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#24-To reduce the health impacts to his family and employees, landowner should require that all turbines be at least 1 mile from his property’s residences.**

**John Adams, esq:**

Otherwise “the owner waives any right to complain about ‘any effects attributable’ to the property’s turbines.” Which is more important: your **family’s health**, or **extra income**?

**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#25-Having wind turbines on farm property may have other (non-turbine) adverse health affects for people on the landowner’s property and on his neighbors’.**

There is evidence that exposure to high frequency voltage transients may cause an increase in cancer risk.

**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#26-A variety of events can trigger a contract default – which frees the developer from **all** obligations, including making **any more** landowner payments.**

**Martinsburg Wind Project #27.1 & 27.3:**

“Failure to perform any covenants, conditions or terms of this Lease, including but not limited to the obligation to pay the Taxes... or failure to make a payment when due on a mortgage, or to allow the Operating Areas to become subject to a lien...”



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#27-It is in the legal interest of the landowner to have this contract publicly recorded. Most wind developers circumvent this by recording a “Memorandum” instead of the real agreement.**

**Martinsburg Wind Project Witnesseth & #9:**

“Upon execution of this Lease, the Parties shall execute a Memorandum, and take all reasonable steps and execute all documents necessary to record the Memorandum with any appropriate governmental entity. Lessor consents to such recordings.”



**The Landowner needs to see the reality of their  
“economic windfall” in proper perspective:**

**#28-What if (after signing an  
agreement), a landowner finds  
that the developer gave more  
favorable terms to a neighbor?**

**Bernard Nordling, esq:**

Nothing – unless the landowner wisely included  
a “favored nations” clause in his agreement.



**The Landowner needs to see the reality of their  
“economic windfall” in proper perspective:**

**#29-Most wind contracts tie up a  
property for 20 to 40 years.  
That is a VERY LONG time.**

**Bernard Nordling, esq:**

The landowner should give very careful thought as to how the developer's legal constraints on the property will affect any possible future sale or transfer. A lot can happen in 20+ years!





**The Landowner needs to see the reality of their  
“economic windfall” in proper perspective:**

**#30-Wind turbines will likely  
reduce crop yields:  
as they can have an adverse  
affect on local weather –  
*for up to 15 miles away!***

**Study:** “Results show that wind farms significantly  
affect near-surface air temperature and humidity”  
**for 15± miles downwind of the turbines.**

“Wind turbines increase water loss from the soil  
**by 30%± downwind.”**

**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#31-Wind turbines will likely reduce crop yields: as unavoidable bat killings will dramatically increase harmful insects on all nearby farmland.**

A study from the University of Colorado, estimates that as many as **900,000** bats were killed by wind turbines in 2012.

This will either reduce crop yields **or** necessitate a large increase in use of pesticides (which has many other adverse consequences).

**The Landowner needs to see the reality of their  
“economic windfall” in proper perspective:**

**#32-Wind turbines will likely  
reduce crop yields:  
as turbines can severely  
restrict the ability to do  
crop-dusting in the area.**

**Illinois Agricultural Aviation Association:**

“Farmers with wind turbines may lose the option of aerial application of farm protection products, seed, fertilizers, etc. on their land. Possibly more significant is that neighboring farmers, who have no wind turbines (and consequently no income from them), stand to lose that option as well...”

**The Landowner needs to see the reality of their  
“economic windfall” in proper perspective:**

**#33-Wind turbines will likely  
reduce crop yields:  
from extensive soil compaction  
that results from the delivery  
and assembly of turbines.**

**Penn State Agricultural Extension:**

Soil compaction is the reduction of soil volume due to external factors; this reduction lowers soil productivity and environmental quality.

**The Landowner needs to see the reality of their  
“economic windfall” in proper perspective:**

**#34-Having wind turbines on farm  
property may be a fire hazard  
for the buildings and crops in  
the vicinity.**

Due to such events as lightning strikes, wind turbine fires have caused as much as \$6 million in nearby property damage.

Most local fire departments are not equipped to handle such high-rise fires.

**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#35-Having wind turbines on farm property may adversely affect animals on the landowner’s property and his neighbors’.**

**Reason #1:**

Wind turbines produce “dirty” electricity. Underground cables to wind turbines can cause significant stray voltage. One non-participating (but adjacent) farmer who sued was awarded \$1.7 million in a jury trial.

**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#36-Having wind turbines on farm property may adversely affect animals on the landowner’s property and his neighbors’.**

**Reason #2:**

There is documented evidence of wind turbines’ low frequency noise, etc. causing problems with a variety of farm animals (e.g. dairy cows, pigs, poultry, sheep and goats).

**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#37-Having wind turbines on their property adds major new risks, and will substantially increase the landowner’s need for extra insurance coverage.**

**Bernard Nordling, esq:**

Before signing any agreement, the costs of this new insurance should be carefully calculated, and factored in.





**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#38-Having wind turbines on their property can adversely affect federal estate taxes, which may come into play in 20+ yrs.**

**Roger McEowen, professor of Agricultural Law:**

“The placement of wind turbines on farmland will impact valuation for federal estate tax purposes upon the owner’s death.”



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#39-Having wind turbines on farm property may make the farm ineligible for certain federal subsidy programs.**

**Roger McEowen, professor of Agricultural Law:**

“For farmers considering wind energy easements and participating in the Direct and Counter-cyclical Payment Program, authorized by the 2002 Farm Bill, there is a prohibition against making non-agricultural use of acreage enrolled in the program.”



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#40-In addition to paying for legal and financial advice, etc. the landowner will incur additional costs to get this contract.**

**Farmer’s Legal Action Group:**

“In most cases, before finalizing a wind contract a developer will want a title report prepared by a title insurance company... Many developers will also require a physical survey of the property....”



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#41-Contracts are for 1+ acre plots for each turbine, but there are “sweeping ancillary rights” that affect the rest of the property.**

**John Adams, esq: says these include—**

- roads and general access to each of the turbines to be as the developer determines,
- transmission lines and transformer stations to be sited as the developer determines,
- the right to patrol property (security guards),
- the right to remove trees on and immediately adjacent to the licensed lands,
- the right to free and unobstructed wind,
- the right to veto (for any reason) any structure within 3000± feet of a turbine.



**The Landowner needs to see the reality of their “economic windfall” in proper perspective:**

**#42-The “deal” offered to the landowner is very high risk, severely limits his property use, and is distressingly low.**

T B Pickens said he expected to make 25%± profit as a wind developer. For each \$3± million turbine, that amounts to **\$750,000± /year**. Out of that annual profit, the landowner gets **\$5000±**.

**Roger McEowen, professor of Agricultural Law:**

“From a landowner's perspective, many wind energy leases and/or easements are inadequate, unfair and offer limited economic benefits when compared to the revenues generated (and tax subsidies received) by wind energy developers.”

**The Landowner needs to see the reality of their  
“economic windfall” in proper perspective:**

## **#43-Watch these short videos!**

*(Click to watch – or go to [WiseEnergy.org](http://WiseEnergy.org).)*



Wind Turbine Land Agent Part 1



Wind Turbine Land Agent Part 2



Wind Turbine Land Agent Part 3



Wind Turbine Land Agent Part 4



**The Landowner needs to see the reality of their  
“economic windfall” in proper perspective:**

**This is just a sample of the  
ramifications (**economic** and **legal**)  
that can occur with these very  
restrictive leases... Please consult a  
competent, aggressive attorney, and  
a CPA for legal and financial advice.**

**The salient message to remember:  
“There is no free lunch!”**

**The Landowner needs to see the reality of their  
“economic windfall” in proper perspective:**

One of the main arguments used by landowners for entering into wind agreements, is that they have the right to do whatever they want to with their land.

Yet by signing most wind contracts they agree to **give up** an **enormous amount** of their **rights** as to what they can subsequently do with their land!





# What if a Landowner has already signed a contract? They should consult with a lawyer to see what their options are.

## Some Possible Outs Are —

- 1 - misrepresentation on the part of the developer,
- 2 - if the developer withheld some key information,
- 3 - the developer didn't live up to some condition,
- 4 - the landowner got inadequate legal representation,
- 5 - claim based on it being an Adhesion Contract,
- 6 - violation of the "right of quiet enjoyment"  
of the property (*the hardest to prove*).



THANK  
YOU

for Giving This  
Matter, Some  
Critical Thought!

## — Some Sample References —

- Page 1 & 49: <<<http://www.worldofmonopoly.co.uk/fansite/>>>
- Page 4: <<[http://swkroa.com/docs/wind\\_energy\\_speech\\_6.pdf](http://swkroa.com/docs/wind_energy_speech_6.pdf)>>
- Page 4: <<<http://betterplan.squarespace.com/wisconsin-farmer-regrets-sayin/>>>
- Page 5: <<<http://tinyurl.com/p36zntu>>>
- Page 7: <<<http://tinyurl.com/mb3phbd>>>
- Page 8: <<<http://tinyurl.com/cvpwuwo>>>
- Page 11: <<[https://www.msu.edu/~steind/WindLease-Easement\\_WorkSheet-V5.pdf](https://www.msu.edu/~steind/WindLease-Easement_WorkSheet-V5.pdf)>>
- Page 14: <<<http://docs.wind-watch.org/TugHillLease.pdf>>>
- Page 15: <<<http://tinyurl.com/ma7jlad>>>
- Page 16: <<<http://docs.wind-watch.org/wind-power-lease-suggestions.pdf>>>
- Page 17: <<<http://docs.wind-watch.org/TugHillLease.pdf>>>
- Page 21: <<[https://www.incorporate.com/limited\\_liability\\_company.html](https://www.incorporate.com/limited_liability_company.html)>>
- Page 22: <<<http://tinyurl.com/mezzcuk>>>
- Page 23: <<<http://rivercitymalone.com/wind-energy/liens-r-us/>>>
- Page 24: <<<http://tinyurl.com/k7fpewl>>>
- Page 25: <<<http://tinyurl.com/n73fa66>>>
- Page 26: <<<http://tinyurl.com/pwuocfs>>>
- Page 27: <<<http://tinyurl.com/p36zntu>>>
- Page 28: <<<http://tinyurl.com/mx85vem>>>
- Page 29: <<<http://docs.wind-watch.org/TugHillLease.pdf>>>
- Page 30: <<<http://docs.wind-watch.org/TugHillLease.pdf>>>
- Page 31: <<[http://swkroa.com/docs/wind\\_energy\\_speech\\_6.pdf](http://swkroa.com/docs/wind_energy_speech_6.pdf)>>
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- Page 33: <<<http://tinyurl.com/pog78ca>>>
- Page 34: <<<http://tinyurl.com/keh7bgv>>>
- Page 35: <<[http://www.agaviation.com/wind\\_farms.htm](http://www.agaviation.com/wind_farms.htm)>>
- Page 36: <<<http://tinyurl.com/oj757nh>>>
- Page 37: <<<http://tinyurl.com/o3rkvp4>>>
- Page 38: <<<http://www.electricalpollution.com/windturbines.html>>>
- Page 39: <<<http://tinyurl.com/ooy3xb7>>>
- Page 40: <<[http://swkroa.com/docs/wind\\_energy\\_speech\\_6.pdf](http://swkroa.com/docs/wind_energy_speech_6.pdf)>>
- Page 41: <<<http://tinyurl.com/ph5pps9>>>
- Page 42: <<<http://tinyurl.com/ph5pps9>>>
- Page 43: <<<http://tinyurl.com/mezzcuk>>>
- Page 44: <<<http://tinyurl.com/p36zntu>>>
- Page 45: <<<http://tinyurl.com/ph5pps9>>> & <<<http://tinyurl.com/kdvrhga>>>
- Page 46: <<<http://tinyurl.com/qgf4dp3>>> & <<<http://tinyurl.com/q6n9zz2>>>
- Page 46: <<<http://tinyurl.com/pqjy8g7>>> & <<<http://tinyurl.com/kee7pac>>>

John Droz, jr. is a physicist, and has been an environmental activist for over 30 years. He has been a leading individual on four NY statewide issues (electrical energy, water extraction, water quality, and property taxes), and is currently working on similar NC issues (like electrical energy and sea level rise).

He received undergraduate degrees in physics and mathematics from Boston College, and a graduate degree in physics from Syracuse University. He has been a participating member of several environmental organizations (like the Adirondack Council, Adirondack Wild, Protect, and the Sierra Club).

*[Disclaimer: The science oriented views expressed in this presentation may not necessarily reflect the political agenda of these organizations.]* Due to his love of nature, he has a Summer lakefront cottage in the Adirondacks (NY).

These areas of interest and expertise (science & environmentalism) have merged with his focus on energy matters. John's basic position is that we should be taking **aggressive** measures to solve our energy and pollution issues, but should not be wasting time and money on *illusionary* solutions – which are primarily promoted by those with vested financial or political interests in them.

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All information is believed to be accurate, but is not guaranteed. If errors are noted, please email John the scientific evidence of same and a correction will be made.

For questions, comments or permission to use any material in this presentation, please email John at: "aaprjohn at northnet dot org".