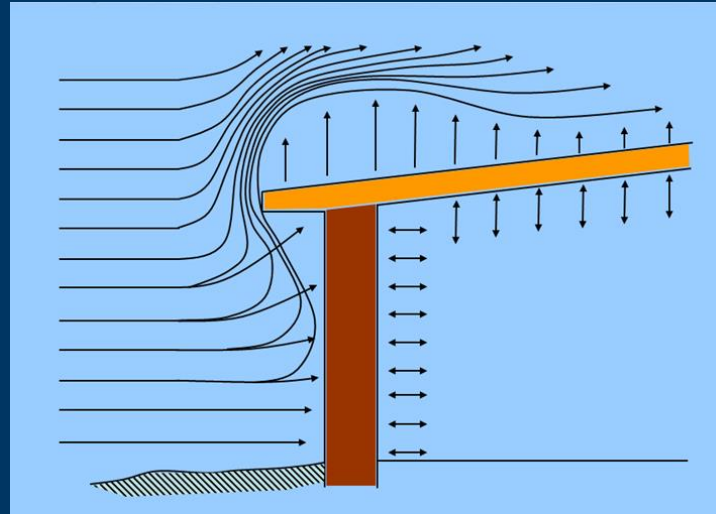


Lesson 7 – Wind Effects

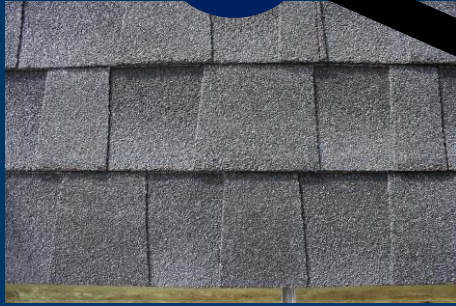
Load



Resistance

- Effect
- Creased Tabs
- Flipped Tabs
- Missing Tabs
- Loose Sections
- Trees are down
- Trampoline is gone
- Fences are down

New Aged Old Dead



Small

Strong

Severe



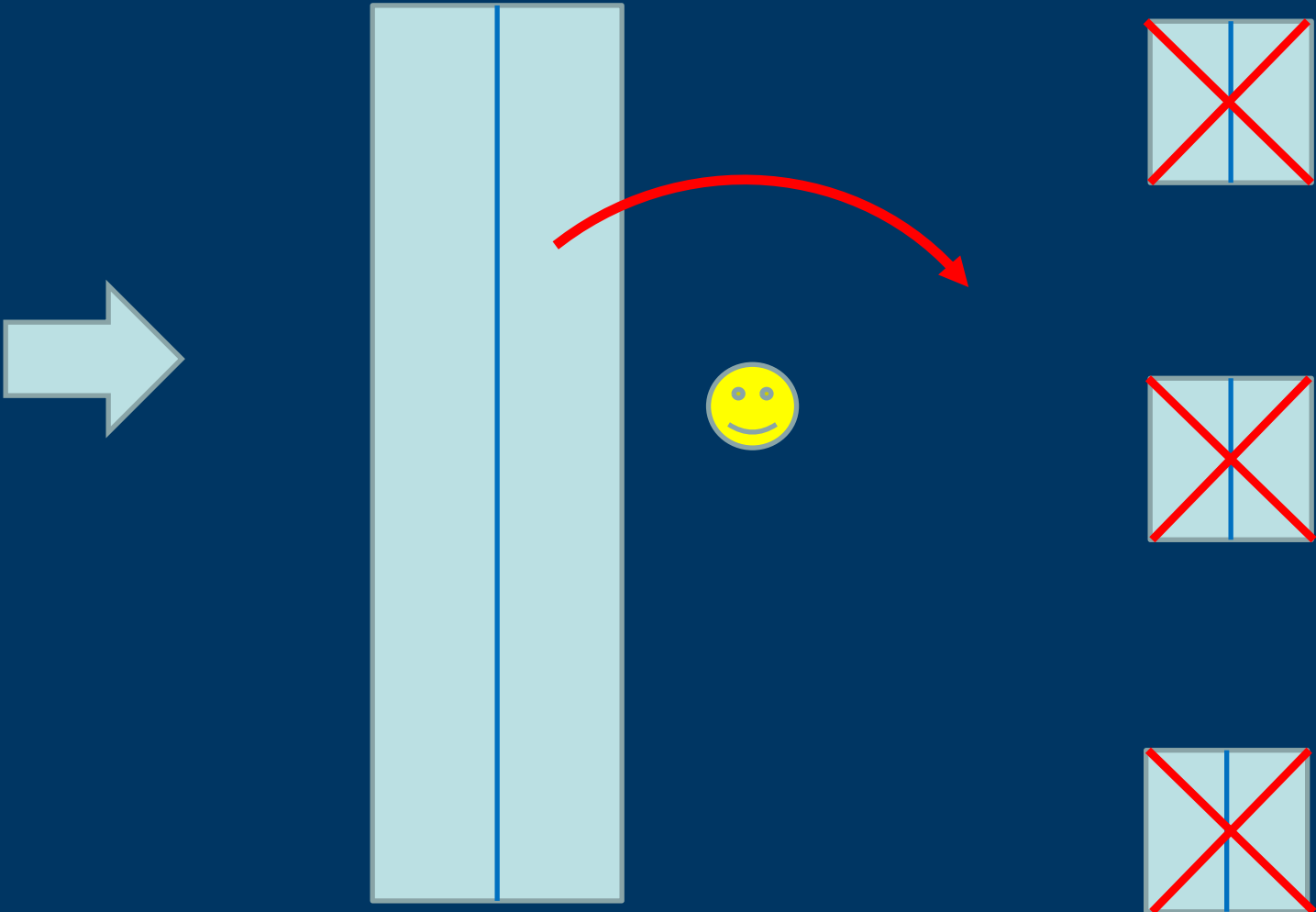
Wind Damage to Asphalt Shingles

Wind damage is indicated by creasing, flipped, or missing tabs.

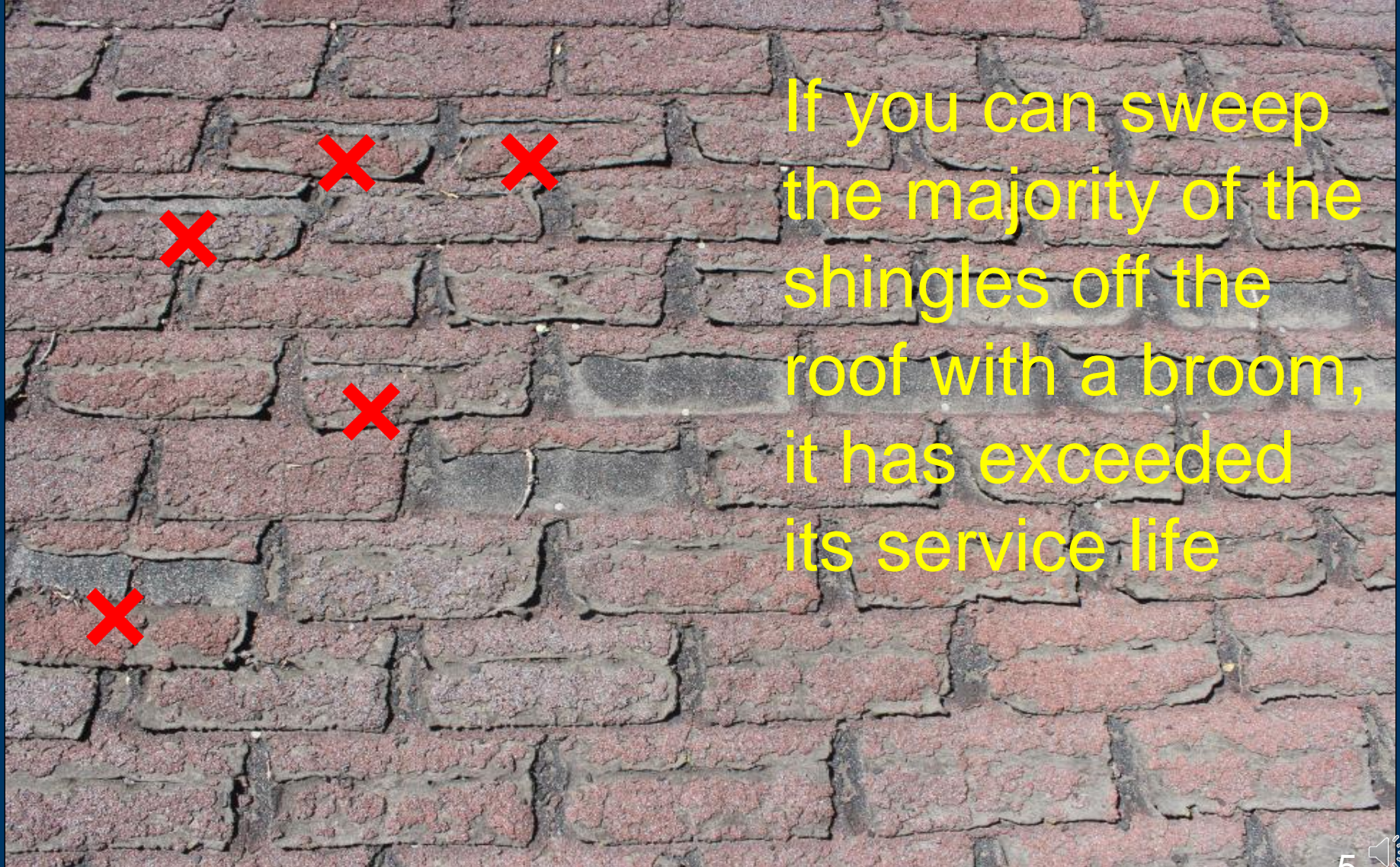
Note: creased tabs can be the result of repeated bending or “flapping” in the wind.



Example 7: Wind Evaluation



Example 7: Old Deteriorated Roof



If you can sweep the majority of the shingles off the roof with a broom, it has exceeded its service life

Example 7: Old Deteriorated Roof

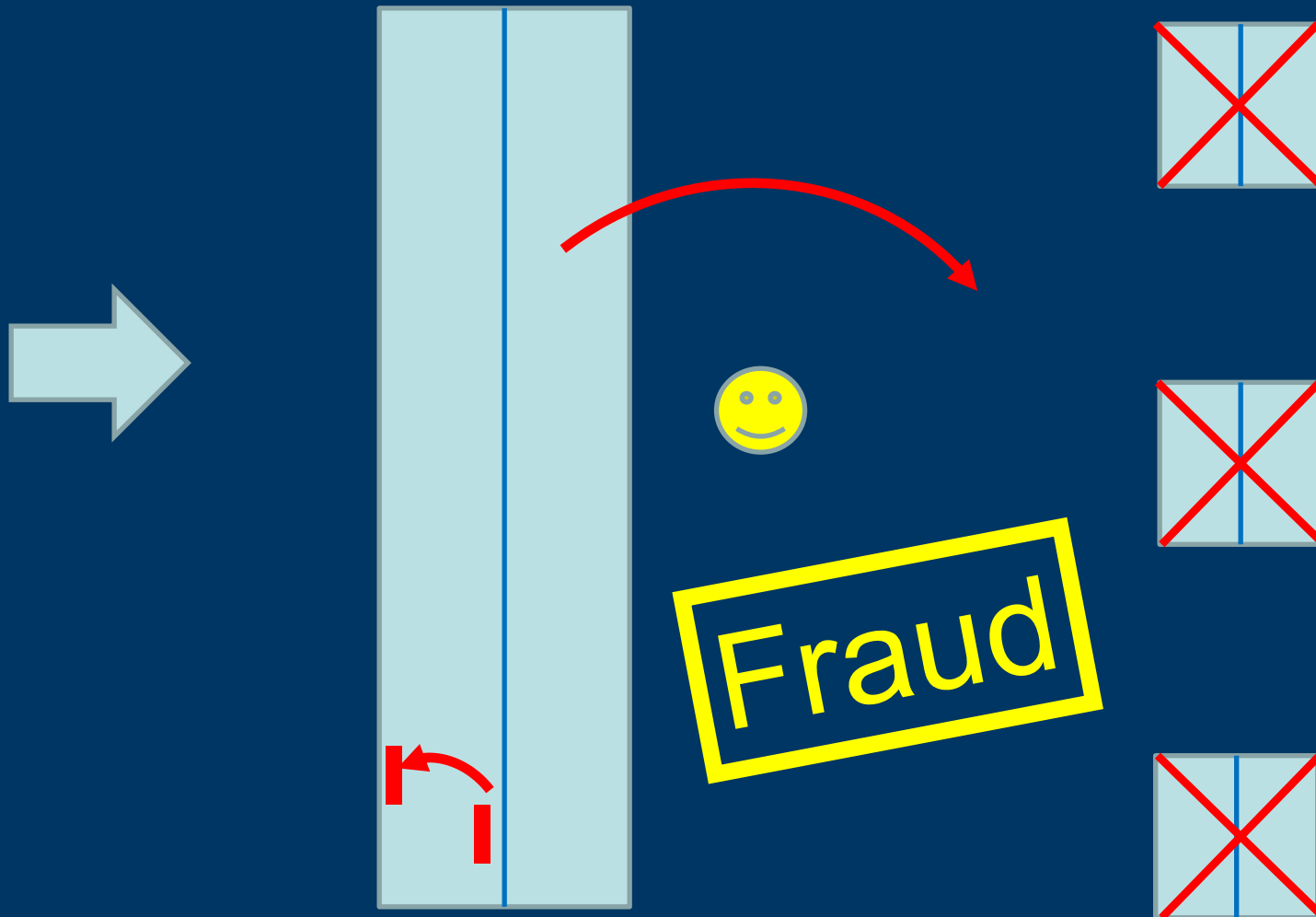


Every Roof Eventually Dies

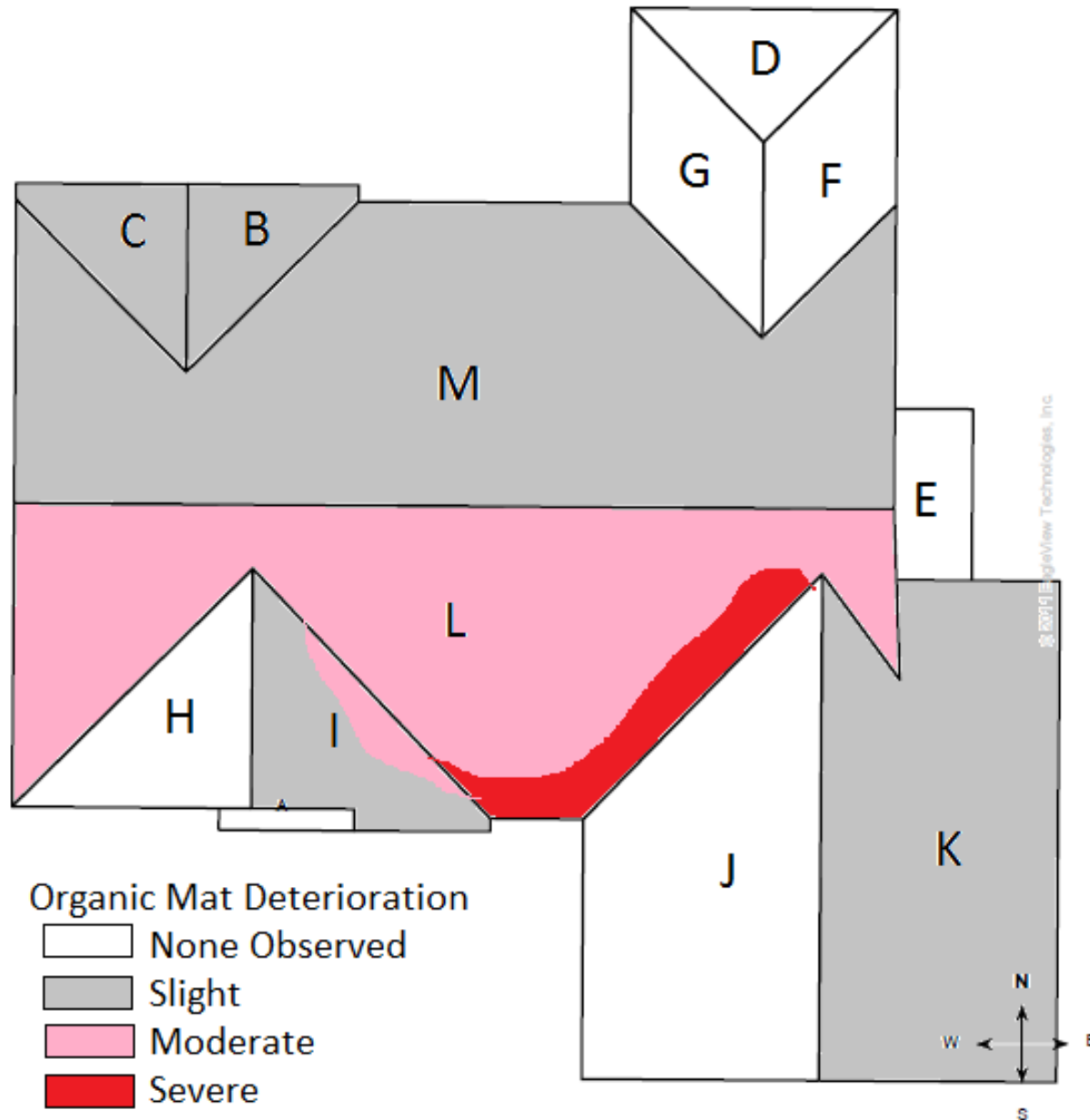
If we leave them on long enough wind will remove every roof.



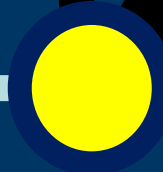
Example 7: Old Deteriorated Roof



Wind Damage Study on a Deteriorated Roof



New Aged Old Dead



Small

Strong

Severe



Early Stage
(Slight Deterioration)

Middle Stage
(Moderate Deterioration)

Advanced Stage (Severe Deterioration)

Integrity to resist wind load

Some, but definitely weakened due to curled edges and deteriorated sealant strips.

Little or no resistance to wind. Shingles are unsealed, and easily lifted.

None

Criteria used for “Wind Damage

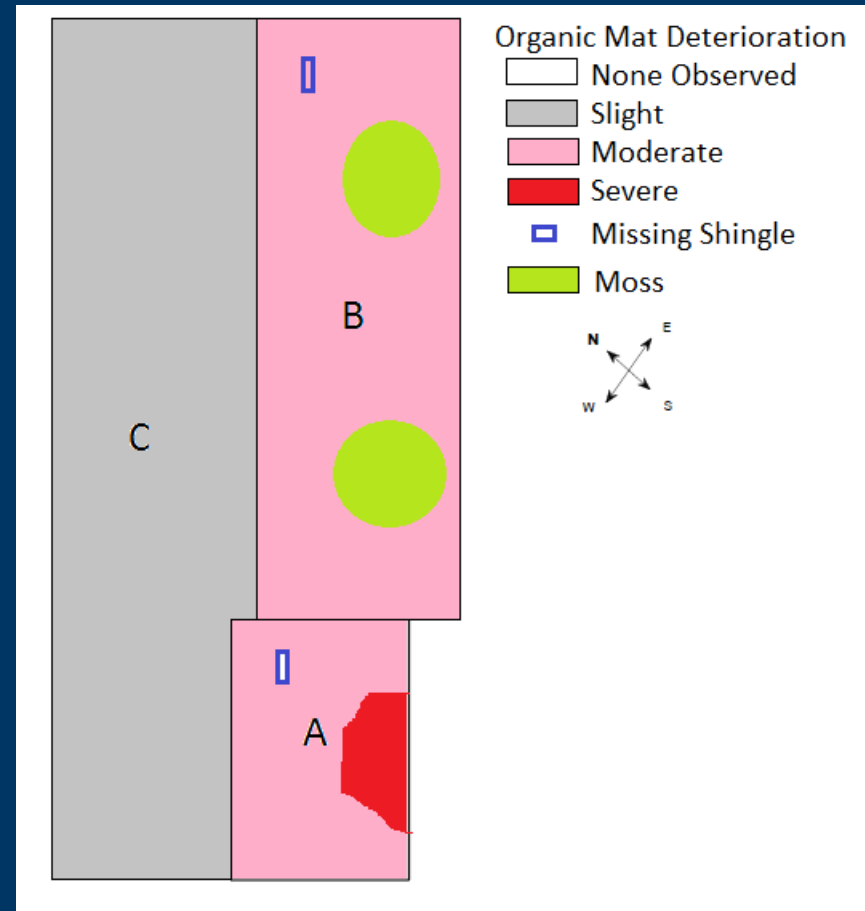
Treat similar to a new roof. Creased, flipped, missing, or whole sections missing.

Whole sections missing and roof is cleaned. No loose granules. No loose unattached shingles.

Dead. If it is still on the roof and looks like this, wind did not damage it. Deterioration. Exceeded its life.



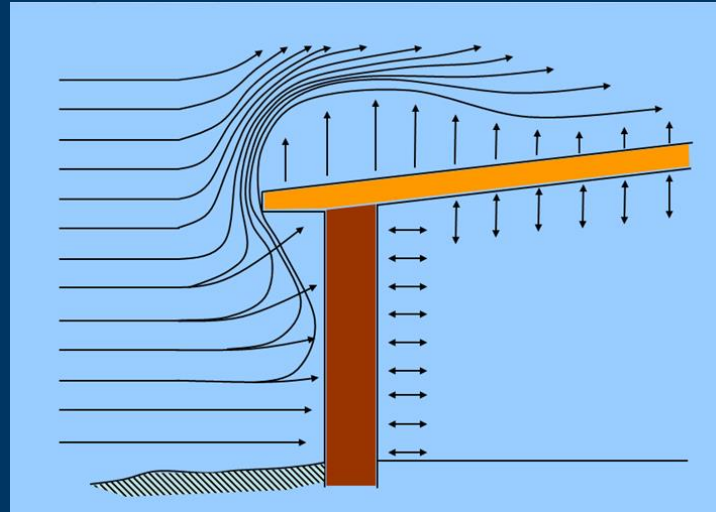
Example 8: Organic mat deterioration



Wind Summary

Load

- Wind Speed
- Wind Direction
- Angle with Roof



Resistance

- Condition of Roof
- Type of Roof
- Age of Roof
- Structure Behind
- Are there 2 layers?
- Installation issues
- Nailed or staples
- Sealed or not

Effect

- Missing Tabs
- Loose Sections
- Creased Tabs
- Flipped Tabs
- Trees are down
- Swings are gone
- Fences are down

The Proper Wind Damage Inspection

1. What were the wind speeds?
 - NWS Storm Prediction Center Storm Reports
 - Radar Weather Data
 - Were the wind speeds “severe”?
2. What collateral damages was evident?
3. Was the roof inherently susceptible to wind damage?
 - Were the shingles properly sealed?
 - Were the shingles properly nailed?
 - Were the nails overdriven, under driven or of proper size?
 - Were the nails in the right location
4. Are there creased, flipped, or missing shingle tabs?
Are there larger areas of unattached shingles?

Questions?

