CLCLT Water Intrusion Workshop

March 28, 2020
Agenda Overview

- Water intrusion overview
- The facts about water and houses
- Different types of water intrusion
- Roof (from above) water intrusion
- Walls/windows (from the side) water intrusion
- Basement (from side/below) water intrusion
- Lessons learned – other advice?
- Questions and next steps
Water Intrusion Overview

- In 2019 CLCLT received dozens of calls. No calls in 2020 thus far.
- Water intrusion issues and fixes can be tricky to solve.
- Water intrusion fixes can be costly…and potentially not fix issue.
- One potential fix may cause a water intrusion issue elsewhere.
- Just like eliminating an allergic food from a diet, there are cost-effective ways to isolate water intrusion causes.
- Solutions may require cooperation with neighbors.
The Power of Water

- Think like a raindrop…mostly
- Wind + rain push physics
- Water pressure is a powerful force
- It will find the path of least resistance
- Fixes involve creating paths of lesser resistance
Vulnerability of Houses to Water

- Multiple levels where water can enter a home
- Each level or housing component will require a different response
- Gravity, slope, and natural environment/landscape will all play a role
Different types of water Intrusion

- From Above (roof)
- From the Side (walls/windows)
- From Below (basement floor/walls)
Roof (from above) water intrusion
Roof (from above) water intrusion

Any potential water intrusion risks in this image? Rain? Snow? Ice?
Areas on roofs that require flashing are the usual culprits for water intrusion.
Ensuring roofing components are installed correctly and maintained over time is also critical.
Walls/windows (from the side) water intrusion

Example of good roof overhangs on a home
Walls/windows (from the side) water intrusion

Examples of some not-so-good roof overhangs on homes
Walls/windows (from the side) water intrusion

Lack of flashing can easily cause wall rotting and molding in walls
Walls/windows (from the side) water intrusion

Have you ever seen this in a home? Typically caused by improper flashing around windows or holes in exterior membrane.
Walls/windows (from the side) water intrusion

More than likely some roof valley damage that has run down the inside of the wall.
Think of a home (with a basement) as a boat. A boat with the slightest hole in its hull will take on water.
While there might not be much surface water showing – depending on the make up of soil – there could be much higher concentrations of water at lower levels near the house foundation.
Standing water near the foundation is never a good sign and is an indication of a negative slope toward a home.
Unfortunately, a pretty common image in Minneapolis homes. It’s pretty bad…
Basement (from side/below) water intrusion

…..but not as bad as these situations.
Triage + Fixes.
Step 1: The Clues

Exterior Clues
• Rotting wood
• Flaking paint
• Stain marks
• Pooling water

Interior Clues
• Stained ceilings/walls
• Staining on roof rafters
• Efflorescence on basement walls/floors
• Wet spots/staining on basement walls/floors
• Mold (anywhere)
Triage + Fixes.
Step 2: Triage and/or isolate reason

Ceiling/Wall Stains
• Is the stain growing over time? If not, was there a unique one-time storm?
• If staining on ceiling/walls, more than likely the source is nearby…or at least further up from the staining.
• Begin there.
• Go into attic to try to isolate where there is a leak.
• More often than not it’s from flashing or caulking failure.
Triage + Fixes.
Step 2: Triage and/or isolate reason

**Basement Walls/Floors**
- When is it happening? Seasonal, weather-related, all the time?
- Through the walls or through the floor?
- Are there any fixes (next slide) already in place?
- Is there ever pooling of water outside the house?
- Is the pooling only on place…or all over?
- If one place, what are the physical characteristics on the exterior of the home at that location (rooflines, gutters, downspouts, grading, landscaping?)
Triage + Fixes.
Step 3: Fixes

- Dehumidifier
- Gutters (install, clean?)
- Downspouts (not just yours, but also your neighbors!)
- Landscaping/grading
- Exterior French Drains (poss. rain garden)?
- Interior foundation drain tile
- Sump pump
Lessons learned – other advice?
Questions/comments