



# Emerald Ash Borer

thiab cov kev tswj xyuas ntoo ash

Cov ntoo ash yog ib co ntoo muaj ntau thiab cov ntoo cog ncig vajtse – muaj ntau tshaj 1 million cov ntoo ash nyob rau ntawm qab vaj tsib taug tsev, tom cov chaw uasi thiab cov tom kev hauv Hennepin County. Qhov ntawd muaj txog li 15% ntawm uas yog cov ntoo ua ntxoov ntxoo. Tagnrho cov ntoo ash uas tsis rau tshuaj yeej muaj cov kab emerald ash borer uas yog ib co kab tuaj Asia tuaj uas tuas tau cov ntoo ash.

Yog koj muaj cov ntoo ash hauv koj thaj chaw, txog cai rau koj xav txog koj yuav ua li cas los kho lossis ntov tshem povtseg



## Qhovtwg thiaj li nrhiav muaj cov kab emerald ash borer?

Cov kab emerald ash borer yog nrhiav muaj nyob rau cov zos thiab xav tias yeej muaj rau hauv txhua lub zos hauv Hennipen County. Yeej xav tias txhua tsob ntoo nyob rau hauv county uas tsis tau rau tshuaj yeej yuav raug cov kab txem los nyob. Paub tias nws yeej yuav siv ob peb xyoo koj thiaj pom yam ntxwv ntawm emerald ash borer, yog li ntawv, koj pom zoo li kuj haum xeeb thiab cov kab twb pib tsob ntoo lawm.



## Ua li cas kuv thiaj yuav paub tias yog tsob ntoo ash?

Thawj kauj ruam koj yuav npaj kom paub txog cov kab emerald ash borer yog xyuas seb koj puas muaj cov ntoo ash ntawj koj thaj av. Nyob rau hauv Hennipen County no muaj ntau hom ntoo ash - ntsuab, dawb, thiab dub. Saib cov yam ntxwv nram qab no koj thiaj paub tias koj tsob ntoo puas yog tsob ntoo ash:

- Cov ceg ntoo tuaj tom ob sab sib ncag.
- Muaj nplooj ntau ntau, lossis ib tug kav muaj ntau nplooj txuas rau tus ceg ntoo. Cov nplooj yeej muaj txog li 5 rau 9 nploog.
- Daim tawv ntoo tawg pleb zoo li lub hau xub.
- Cov noob zoo li ib co duav dais vias ntau ntau uake.

Kawm kom paub ntxiv txog kev qhia tau tias tsob ntoo ash zoo li cas, rub (download) daim ntawv qhia txog tsob ntoo ash ntawm [hennepin.us/ashtrees](https://hennepin.us/ashtrees).



# Yam twg thiaj li qhia tau tias muaj cov emerald ash ki tau rau lawm?

Cov koj pom tshwmsim rau nram qab no qhia tau tias muaj cov kab emerald ash borer ki rau lawm:

- **Canopy dieback:** Cov nplooj saum ntsis ntoo lossis ib ntu ntawm tshob ntoo pib tuag zuj zus, ces tsis ntev xwb ces ki tagnrho tsob ntoo.
- **Tuaj ib co kaus ntoo ntawm lub hauv paus ntoo:** Thaum muaj kaus ntoo tuaj ntau ntau ntawm lub hauv paus ntoo qhia tau tias tsob ntoo tsis zoo lawm.
- **Muaj cov noog woodpecker los thos thos tsob ntoo:** Cov noog Woodpeckers noj cov menyuam kab hauv cov tawv ntoo.
- **Daim tawv ntoo pib dawb tuaj:** Tsim los ntawm cov noog woodpecker thos thiab txhem cov tawv thaum mus thos emerald ash borer cov menyuam, Qhov dawb tuaj ntawd kuj yog tej thaj xwb lossis tagnrho tsob ntoo.
- **Daim tawv ntoo muaj tawg pleb:** Cov menyuam kab tho qhov hauv qav daim tawv ntoo uas muaj feem uas rau daim tawg ntoo tawg pleb.
- **Qauv duab cab li tus nab hauv qab daim tawv ntoo thiab cov qhov zoo li tus D:** Cov menyuam kab noj cov ntshiv ntoo uas tej kab cab zoo li tus nab hauv qab daim tawv ntoo, thiab cov kab uas laus lawm tho qhov zoo li tus D.

Yog koj xav tias tej zaum koj tsob ntoo ash ki kab lawm tivtas city tus neeg saib havzoov lossis qhov chaw saib chaw uasi kom paub tias yuav ua li cas ntxiv.



## Cov hau kev los tswj saib cov ntoo ash

Muaj ob txog haus kev los tswj xyuas cov ntoo ash ntawm koj thaj av: Cawm cov ntoo los ntawm kev siv tshuaj los tua cov kab lossis ntov thiab tshem povtseg xwb.

### Cawm cov ntoo ash

Siv tshuaj los tua cov kab yog ib txoj hau kev los cawm cov ntoo ash uas muaj nqe. Ib tsob ntoo hlob txaus uas zoo neej yog muaj 30 inch ib ncig (lossis 10 inch dav) thaum ntsuas txij hauv siab, thiab qhov muaj nqe rau tus tswv, ua rau tsim nyog cawm tsob ntoo. Yog koj txiav txim siab cawm tsob ntoo ces pib sai li sai tau. Kev muab tshuaj cawm tsob ntoo yuav tsum yog muab los ntawm ib tug kawm tiav kho ntoo li ob xyoo twg ib zaug rau lub caij nplooj ntoo hlav yuav tag. Tus nqe yog nyob ntawm tsob ntoo seb loj los me. Tus nqe feem ntau nyob li ntawm \$200 txog \$300 rau ib tsob ntoo rau kev muab tshuaj ib zaug.



Hennepin County yog siv cov tshuaj emamectin benzonate los txhaj rau cov ntoo uas zoo nyob rau hauv County cov av. Qhov no yog ib qho hau kev zoo heev es tsis yog ib qho tshuaj luam yeeb (neonicotinoid) tuas kab uas tsis zoo siv vim tuas tau cov kab xa hmoov paj

ntoo. Emamectin benzonate yog tsim los tuas cov emerald ash borer thiab vim li ntawd thiaj li tsis tuas lwwm yam kab. Tshaj no ntxiv tsob ntoo ash yog cov cua tshuab xa hmoov paj ntoo thiab tsis yuav cov kab xav hmoov paj ntoo kom nws txawj ua noob.

Muaj tej lub sijhawm, qhov kev tso tshuaj no kuj yuav tsis zoo rau tej cov ntoo ash thiab. Yog tias muaj li ntawm 30% lossis tshaj ntawm cov nloog thiab cag ntoo twb tuag tag lossis yog cov tawv ntoo twb pib dawb lawm qhia tias twb muaj cov kab emerald ash borer ntau dhau lawm es tsob ntoo tsis zoo tso tshuaj cawm lawm. Kev kawm yav tag los qhia tau tias thaum heev txog nqeb no lawm, cawm tsis tau lawm thiab txawm yog cawm tau los yuav tau, tu txiav cov ceg ntoo lossis qhov ntoo tuag povtseg.

## Ntov tshem thiab povtseg

Tsob ntoo ash twg uas tsis rau tshuaj pab ntxov lig los yuav raug ntov tshem povtseg. Tsob ntoo yuav tsum yog tshem los ntawm lub chaw ntov ntoo zoo, muaj issula, yog ib tug kws kho ntoo uas muaj daim ntawv ISA-certified. Yuav tsum tshem cov ntoo tuag ua ntej cov ntoo ua tau kev piamsij. Koomtes nrog koj tus neighbor es mus ntiav ib lub chaw ntov ntoo rau ntau tus lub tsev kom txo tau nqe mentsi rau koj kom pheejyig zog.

Cov ntoo ash uas raug ntov lawm muab coj mus pov tom qhov chaw cuam khoom qab vaj tsib taug nyob rau hauv lub county thiab tsis pub thauj mus dhau Twin City sab nrauv kom txhob kis cov kab emerald ash borer. Nrhiav qhov chaw cuam khoom qab vaj tsib taug tseg ntawm [hennepin.us/yardwaste](https://hennepin.us/yardwaste).

## Nyaj pab them nqe tshem

2024 xiab no, Hennepin County tau txais \$10 million los ntawm lub koomhaum U.S. Forest Service los pab ntov tshem cov ntoo kis mob, cog ntoo tshiab, pab qhia rau cov pejxeem, thiab txhawb cov lagluam thiab tsim haujlwm. Cov haujlwm npaj rau qhov kev npaj no pib rau lub caij nplooj ntoo hlaw 2024 txog ntuas lub IB Hli tim 31 xyoo 2029. Hennepin County yuav pab cov tswv tsev uas khwv tau nyaj tsawg kom ntov thiab tshem cov ntoo povtseg thiab cog ib co tshiab los hloov cov qub ntawm lawv thaj av. Yuav pib txais cov ntawv thov rau thaum lub Rau (6) Hli Xiab, 2024.



Mus saib [beheardhennepin.org/urban-community-forestry](https://beheardhennepin.org/urban-community-forestry) kom paub ntxiv, teev npe kom txais xov xwm ntxiv, thiab kom tau cov ntawv thov.

## Cog Dua



Cov ntoo muab tau txiaj ntsim ntau yam, xws li pab lim pa kom huvsu thiab kom cov dej ntshiab zoo tuaj, cheem kom av txhob pob thiab kom cov dej nag txhob hlob hlob, ua vajtse rau tshiaj txu, pab kom tshav txhob kub kub thiab kom txias tau, pab kom

neeg zoo neej thiab kom lub tsev muaj nqe ntxiv. Yog li ntawv cog ntoo tshiab los hloov tsoob qub yog ib lub tswv yim zoo heev.

Thaum cog cov ntoo tshiab, xaiv ob peb yam ntoo uas haum rau ntuj ntawm koj nyob ko. Cog tsoob ntoo kom zoo chaw tsoob ntoo thiab hlob zoo thiab haum xeeb thiab muab tau cov txiaj ntsim ua zoo tshaj.

Tiv tas city tus tswj saib hav zoov kom paub ntxiv txog kev xaiv cov ntoo ua zoo rau koj cheeb tsam.

Yog xav paub ntxiv txog kev cog ntoo thiab tus ntoo, mus saib Minnesota Department of Natural Resources ntawm [dnr.state.mn.us/treecare/residential\\_plant.html](https://dnr.state.mn.us/treecare/residential_plant.html) lossis U.S Forest Service Tree Owner's Manual ntawm [usfs-public.app.box.com/v/TreeOwnersManual](https://usfs-public.app.box.com/v/TreeOwnersManual).

## **Hawm txog cov muab duab**

*Daim Plhaub Duab: Macroscopic Solutions, LLC*

*Phab 3: U.S. Department of Agriculture (EAB ntawm daim nplooj), Hennepin County Master Gardeners (raug tsob ntoo puas), U.S. Forest Service Region 5 (EAB ntawm ntoohlawv), David Wright (tsob ntoo ash), Lindy Buckley (cov nplooj ash), Eli Sagor (Daim tawv ntoo ash dub), a200/a77Wells (cov noob ash); tagnrho cov duab yog nrhiav tau los hauv **flickr.com** thiab tau kev tso cai siv los ntawm Creative Commons license 2.0*

*Phab 4: Eric R. Day, Virginia Polytechnic Institute and State University, **Bugwood.org** (Kaus Vov); Minnesota Department of Agriculture (raug tsob ntoo puas, cov qhov tawm thiab tawv ntoo dawb zuj zus); Joseph O'Brien, USDA Forest Service, **Bugwood.org** (kaus ntoo)*

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*Lub chaw ua hauj lwm no yog ib lub chaw uas muaj vaj huam sib luag*

*Cov nyiaj tau txais los ntawm Txoj Cai txo nqi nce nqi thiab USDA Forest Service*

**Hennepin County**  
Environment and Energy

[hennepin.us/ashtrees](https://hennepin.us/ashtrees)  
[trees@hennepin.us](mailto:trees@hennepin.us)  
612-348-3777

