

# Ekkewe Siwinin Kinikin 3.0

*Ewe nenien tumunu ewe neni ren pekiin unumach safei Washington Environmental Health Disparities (EHD, Ekkewe sokofesenin pekin safei non neni non Washington)*



Ewe neni sikan nomw ian, ach nenien angang, me ach kewe nenien urumwot an ebwe anisi inisich — pwan usun chek napanapen ach chiechi ngeni aramas Ekkewe nenien aninis ren pekkin inis me nenien jufengen Ekkewe pekkin nimwengaw ren jowan nnimwengen nukun imw me nukun kuchu, rebwe ekisadiw bwun ebwe bwan fedaneoch inisich ekkei sokkun ebwe awora ngeni kich efiengawan inisich simi tongeni osukosuk ren

Ewe aewin kokkot ren ewe map EHD ina an epwe affata ekkewe sopw mei kon. a fis ren ekkewe feiengawen pekin safei non neni. Ewe pisekin angang a ran ekkena feiengaw ren ewe taropween census, a menlapei ekkewe sopw mi kon chou ren ewe ekkewe efiengawen nimwengaw. Eh pwarata faniten ach sipwen sinei nonomwuch won ei fonufan ekkewe minen tumun ren pekin safei ren ewe taropwen census, awora mi auchea, mi anongonong won ekkewe pisekin annet mirit ngeni ekkewe aramas, ekkewe chon fori annuk, ekkewe souemwenin muun me ekkewe chon angang me jienan kewe meinisin



## Met minafo non ei kinikin 3.0?

Ewe Washington State Department of Health (Kinikinin Pekin Safei non ewe Muun Washington) a fori ewe kinikin 3.0 seni ach ewe EHD Map non ewe fansoun pwichikar 2026, anongonong won angang a poputa non 2022. Ei porous ewe pekkin kaeo, bwe sipwe sopweno ne fori ekkewe minefoon porous anongonong won ekkewe porous me usun ekkewe pisekin aninis ra mut ngeni.

### Metoch meinisin pekkin aninis mi mwumwuta:

- **Ekkewe minefoon kaeo** ra foruta pwe sipwe awesi ekkewe osukosuk mi pwa ren porausen ekkewe einang me ewe mwichen aramas ekkewe napanap ra foruta pwe epwe awesi iei mi pwa ren porausen ew me ew aramas:
  - Ekkewe Semwen mi fis ren ewe Asepan
  - Ewe nenien kamo mongo enen aramas
  - Ekkewe pisekin angang
  - Ekkesiwinin ekkewe safeien opuchopuch
  - Aramas mei wor ar apwangapwang

Environmental Health Disparities (EHD) Map **Ekkewe pisekin pwarata 3.0**

- Ekkewe fitikoko
- Ekkewe minen ekkei awesen wateno mi tongeni afeiengawa kich
- **Ewe minefoon kinikinin fonuen einang** mi pwano non pwisin an fansoun nupwen chon aea ra suki ewe map. Ei a kapacheta pokiten ekkewe fonuen einang ra kapachelong non ewe wewen "chon aramas mei kon osukosuk" non Healthy Environment for All (HEAL, Annukun Tumunun nenien Aramas Meininis) Act me ekkewe Climate Commitment Acts (CCA, Annukun Tumunun Nenien aramas Meininis), iwe am aua mochen pwe epwe ffat ngeni chon aea ei.
- **Ekkesiwinin meininis ekkewe ukukun** pwe epwe fiti ekkewe minafon kinikinin ewe kinikinin census non ewe Muun Washington (seni 2010 ngeni 2020) pokiten ekkesiwinin chochon aramas:
  - Ewe ran 2010 a wor 1,458 taropwen ran; ewe chochon aramas non 2020 a kapachelong 1,772.
  - Sekoch me nein ekkewe ebwe siwin non fidu kinikin, nge ren ekkewe ekoch ebwe bwn feor sefan.
- **Ekkewe napanap mi siwin** ren chommongun ekkewe mecheresin:
  - Ekkewe fefeorun kewe Imw
  - Ekkewe chon uputiw mi kukkun
  - Ewe Kokkotun mwokutun kewe imw
  - PM2.5 ekann remi wesen nikitu
  - kane ngeni ekkewe nenien safei mi efeiengaw
  - kane ngeni ekkewe nenien kokkotun tumunun feiengaw
  - kane ngeni ekkewe nenien monien aninis
  - Ekkewe feiengaw seni ewe Diesel me ekkewe ekkoch pisekin efeiengaw
- **A murinno an epwe tongeni aneani ekkewe taropwen poraus** me a kapachelong ekkewe poraus seni ekkewe einang me ekkewe chon angangen ewe neni
 

Ew me ew taropwen data iei a pachenong ew porousen awewe ren ew mwokutukut mi mwochomwoch usun ewe ukukun me ekkewe aramas mei kon feiengaw.

  - Ew me ew ekkewe napanap ra nenengeni ren ew lens ren pungun finata pwe epwe pwarata ifa usun an epwe atai ekkewe aramas mei nomw non uruwo, akkaewin non ekkewe sopw me ekkewe Muun Einang mei emweni angangen pungun finata.
- **Ekkesiwinin ewe nenien map** seni ewe pisekin angang Poraus ren Neni ngeni ArcGIS
  - Ei siwin a atufichi kich ach sipwe tongeni anisi ekkewe osupwangen angang mei affat me ren chon non ewe neni, ekkewe einang me ekkewe chon angang.



## Pekin Safei Kane Ngeni

### Ekkewe Niwinin Mecheres ra Kawor:

- **Ekkesiwinin ekkewe safeien opuchopuch:** Ei ukukun a ekieki usun an epwe tori — ika epwe tori ekkewe kemikal — ren an epwe nenengeni ukukun ekkewe pesticide mei kawor ngeni ekkewe watten foun ira. A aea ekkewe pisekin atake non 2019 seni ewe U.S. Department of Agriculture (U.S. Kinikinin Atake) me ekkewe pisekin atake iteiten ier seni ewe U.S. Geological Survey (Ewe Kinikinin U.S. mi kao fonu).



Am aua apachanong ei napanap pokiten ekkewe safeien opuchopuch mei tongeni efeiengawa pekin safei, akkaewin ngeni chon angangen atake me aramas mei nomw non ekkewe nenien urumot.

- **Ekkewe Ekkei:** Ei mecheresin aukuuu ewe fitikoko ren fitikoko ren an epwe ionfengenni chochon ekkewe ran fitikoko me watten fitikoko. A aea ekkewe pisekin pwarata usun fitikoko iteiten ran seni ewe National Oceanic and Atmospheric Administration (Ekkewe kinikini mi túmúnú siwilin fansoun) Hazard Mapping System (Aweve ren ewe feiengawen environment) ren ekkewe feiengawen fitikoko me ekkewe pisekin pwarata usun fitikoko non ewe asepan Ewe ukukun a tori June ngeni September seni 2017–2023, nge Oktober 2022 a kapachelong pokiten watten fitikoko.



Am aua apachanong ei napanap pokiten ekkei non fonu pon ra kan fis fan chommong me ra keni ekkewe neni mi watte, ew kinikinin pokiten siwinin climate me fofforun tumunun fonu pon. Ewe pwichikar seni ekkei epwe tongeni efisi an epwe weires an epwe ngasangas me epwe tongeni alapalo ekkewe semwen usun asthma me semwenin netip. Ekkewe watten ekkei ra pwan efisata feiengawen fonu me a wor feiengawen uruwo, pisek, me aramas — pachenong ewe osupwangen achocho ne niwinsefanito me aukuuu ewe feiengau.

### Ekkewe Metoch mi Siwin:

- **Ekkewe feiengawen Diesel me ekkewe ekkoch pisekin efeiengaw seni ewe asepan:** Sia ionfengenni ekkewe PM2.5 mi tou seni Diesel me ekkewe poison mi tou seni ekkewe nenien angang non ew chok aukukun. Ewe nenien angei poraus ina ewe nenien Environmental Protection Agency (EPA, Ekkewe chon angang mi tumunu ewe neni) AirToxScreen (Tool mi nengeni feiengau lon ewe asapwal sia asoso) (2020). Ei napanap iei a pachenong pwan ekkoch nenien atake ekkewe aramas me ekkewe einang ra fen efisata osukosuk ren — pachenong ekkewe chon fetan non sat, ekkewe stove ren ekkei non imw, me angangen atake.



Pachenong ekkei porous a awora ew sasing mei murino usun feiengawen cancer seni ewe asepan mei ngaw non unusen Washington.

- **Ekkesiwinin Konsensen:** Sia awenewena ekkewe *PM2.5 me ewe chochon Ozone* aukukun seni 2014–2017 ngeni 2022–2024 ren ach aea ekkewe pisekin pwarata seni ewe Department of Ecology (Kinikinin Ekology). Aua pwan siwini ifa usun an ekkewe pisekin annet ra rank pwe epwe fiti ekkewe annukun federal ren pekin safei ikenai.

### Ekkewe pisekin pwarata:

- **Arap ngeni ekkewe aan mi chou** iei a aea ekkewe pisekin fetan won ekkewe aan non 2019 seni ewe Washington State Department of Transportation (WSDOT, Ewe Kinikinin Angangen Mokutukut non ewe Muun Washington) Map Center (Ewe kinikinin Map) me a fen siwin pwe epwe fiti ekkewe taropwen census non 2020 (me nom a anongonong won ekkewe taropwen 2010).



Environmental Health Disparities (EHD) Map **Ekkewe pisekin pwarata 3.0**



## Pekin Safei Ekkewe feioch

### Ekkewe Niwinin Mecheres ra Kawor:

- **Ewe Napanapen Konik:** Ei ukukun a fiti chochon ekkewe mettoch mei ngaw mei sokono mei nomw non ekkewe nenien konik mei ngaw ren an aea ekkewe pisekin pwarata seni ewe Washington State Department of Ecology's 2018 Water Quality Assessment (Ecology 2018 Assessment usun napanapen konik) me Water Quality Atlas (Ewe Napanapen Konik Atlas). Ekkewe Muun einang me ekkewe mwichen aramas mi anongonong won konikin fonufan ra kuna watten feiengau seni ewe limengauen fonufan, minne a atai pekin safei me ekkewe uruwon aramas. Ekkewe chon angangen einang ra affata pwe pwungun konik epwe eu mettoch mi lamot won ewe map. Ewe napanapen konik a pwa won ekkewe kinikinin reservation; nge, Ecology ese atittina ika fori ekkewe sakopaten pwungun konik ren ekkewe konik non ekkewe nenien tumun.



### Ekkewe Metoch mi Siwin:

- Sia awenewena ekkewe 5 ierin American Community Survey (ACS, Angangen kutta porausen aramasen Merika) ren ewe **Ewe feiengawen Lead seni Imw** ukukun 2015–2019 ngeni 2019–2023. Aua pwan awenewena ukukun imw mi kauuta non iteiten engon ier mi wor lead non, anongonong won minefoon pisekin kaeo.
- Arap ngeni ekkewe nenien tumun, nenien tumun, me nenien atai pisek mei efeiengaw iei a iteni **Arap ngeni ekkewe nenien tumun pisek mei efeiengaw**. Ewe nenien angei poraus a siwin seni EPA EJSCREEN ngeni ew nenien poraus a for me ren Washington Department of Ecology ren an aea pwisin an kewe poraus. Ei minefoon poraus a anapano kinamwe, a anapano fatafatoch usun ekkewe neni mei pachenong, me a aea ew watten wewen ekkewe neni (pachenong ekkewe nenien Department of Defense (Ewe Kinikinin Tumun) Ewe nenien anapanap a fen watteno seni 5 kilometer ngeni 10 kilometer. Ekkewe pisekin annet ra siwin seni 2021 (EPA) ngeni ew ririfengennin 2022-2023 (Ecology).
- Ren **Arap ngeni ekkewe nenien kokkotun tumunun feiengaw**, ekkewe pisekin pwarata ra siwin seni 2021 ngeni 2024 ren ar aea ewe EPA EJSCREEN Ewe anapanap a fis seni 5 kilometer ngeni 10 kilometer.
- Arap ngeni ekkewe neni mei auchea ngeni ewe fonu (Superfund) iei a iteni **Arap ngeni ekkewe neni mei auchea**. Ei napanap iei a foruta me ren ewe Washington Department of Ecology ren an aea ekkewe pisekin EPA, a anapano an epwe fat usun ekkewe neni mei pachenong. Me mwan, ewe nenien angei poraus ina ewe EPA EJSCREEN. Ewe anapanap a watteta seni 5 kilometer ngeni 10 kilometer. Ekkewe pisekin annet ra siwin seni 2021 (EPA) ngeni 2024 (EPA).

### Ekkewe pisekin pwarata:

- Ewe **Ewe sakopaten konik mi ngaw a fen siwin** seni 2021 ngeni 2024 ren an epwe aea ekkewe pisekin EPA EJSCREEN.



## Socioeconomic Mettoch

### Ekkewe Niwinin Mecheres ra Kawor:

- **Ewe nenien mongo ngeni aramas:** Ei mecheresin a nenengeni tufichin angei mongo mei murino ren an epwe awewe ngeni ekkewe sitowa mei awora mongo mei fo, mei wor mongo mei murino ren ekkewe mei akkomw kamo mongo mei for ika mongo mei mwitir. A aea ewe 2023 Data Axle ren ewe ESRI ren ewe ArcMap v10.8 ewe Anapanapen Pisek. Aua apachanong ei napanap pokiten ewe nenien mongo a wor ew angang mei auchea non an epwe forata tufichin angei mongo, me kukkunun tufichin angei epwe tongeni anisi an epwe wor sokofesenin pekin safei. Chon ewe neni ra pwan affata pwe ei ew porous mei auchea repwe pachenong.



**Kose:** Ei ukukun a rank ekkewe taropwen census seni 10 ngeni 1 – nap seni 1 ngeni 10 – ina minne ekkewe neni mei kukkun ar tufichin angei mongo mei murino ra angei ewe rank mei nap seni 10.

- **Ekkewe pisekin angang non pekin digital:** Ei minen aukuuk a pwarata ewe tufichin me mwitirin internet tonong, ren omw kopwe aea ekkewe pisekin angang/angangen angang (INFA) non ewe ier 2023 seni ewe kinikinin Purdue Digital Divide. Aua apachalong ei mettoch pokiten ekkewe pisekin angang mi digital ra riri ngeni aramas ngeni sukun, angang, me angangen tumunun pekin safei (pachenong telehealth), ekkewe esinesin usun fansoun osukosuk, me sopai ekkewe tufich. Ika ese wor ewe tufichin digital mi nukuchar, aramas repwe tongeni kuna ekkewe minen eppet mi atai ar pekin safei me ar kinamwe.



### Ekkewe pisekin pwarata:

- Ewe Fosun Merika mei kukkun iei a iteni **Ewe Fosun Merika Esapw chok Merika.**
- Sia awenewena ewe 5 ierin American Community Survey (ACS) seni 2015–2019 ngeni 2020–2024 ren:
  - Ese wor noun sukun tekia
  - Aramas mi Manau Non Osukosuk
  - Ekkewe Fosun Merika Esapw Fosun Merika
  - Imw Ese tongeni kamo
  - Ese wor angang
- Ewe **Aramas mei sokono (Aramas/Einangaw)** a fis seni 2019 ngeni 2024 ren an aea ekkewe estimate seni ewe Ofesin Moni.
- **Ekkewe monien uwei pisek** ekkewe pisekin pwarata ra siwin seni 2019 ngeni 2022, ren ar aea ekkewe pisekin pwarata seni ewe Center for Neighborhood Technology.

## Environmental Health Disparities (EHD) Map **Ekkewe pisekin pwarata 3.0**



## Netip chachak Aramas

### Ekkewe Niwinin Mecheres ra Kawor:

- **Ewe Semwenin Ngasangas mi Rifiti Ewe Napanapen Asepwan:** Ei ukukun a pwarata ukukun ekkewe chon fiti ewe nenien emergency ren ekkewe semwen non pekin ngasangas mei fis ren ewe ataieno asepwan. A aea ekkewe pisekin nengeni ren 2023 ewe Rapid Health Information Network (RHINO) ren ekkewe chon churi ekkewe nenien tumunun inis mei riri ngeni semwenin asthma, semwenin ngun (COPD), me pwan ekkoch semwen ese tongeni tori aramas.



Am aua apacha ei napanap pokiten aramas mei wor ar semwen non rong ra kan menemenoch ren non nenier ekkewe pisekin pwarata usun chok ewe asepwan. Chon ewe neni me ekkewe Tribes ra pwan affata pwe asthma ew porous mei auchea repwe pachenong.

- **Aramas mei wor ar terin inisir:** Ei ukukun a pwarata ukukun aramas ra repotei pwe mei wor ukukun ew apwangapwang, ren ar aea ekkewe 2019–2023 ACS 5-ierin aukukun.



Am aua pachenong ei napanap pokiten aramas mei wor terir ra kan kuna watten feiengaw seni siwinin climate me feiengawen neni – me ra kan nomw nukun achocho ngeni pungun finata. Ewe angangen kapachelong ekkewe mi apwangapwang mi auchea ngeni angang ngeni pungun finata me non neni.

### Ewe Mettoch me Data mi Siwin:

- **Malo seni Semwenin Netip:** a fen siwin seni 2015-2020 ngeni 2020-2024, aea poraus seni ewe Washington State Department of Health Center (enien tumunun pekin safei non ewe muun Washington Center) ren ekkewe Statistik ren Pekin Safei.
- **Ekkewe semirit mi kukkun choun uputiw** iei a pachenong ekkewe semirit rese mwo tori fansoun, ren an epwe ponuwani ekkewe kapasen pesepes seni ewe 2022 Washington State Institute for Public Policy (WSIPP, Annukun Muun Washington fan iten aramas meinisin) ewe nenien nengeni ewe EHD map. Ekkewe semirit mi uputiu mwen fansoun ra kapachelong pokiten ra pochokkul le kkuf ren sopai me en-ekewe osukosuken non neni. Ekkewe pisekin pwarata ra fen siwin seni 2015-2019 ngeni 2020-2024 ren ar aea ekkewe pisekin pwarata seni ewe Washington State Department of Health Center for Health Statistics data.

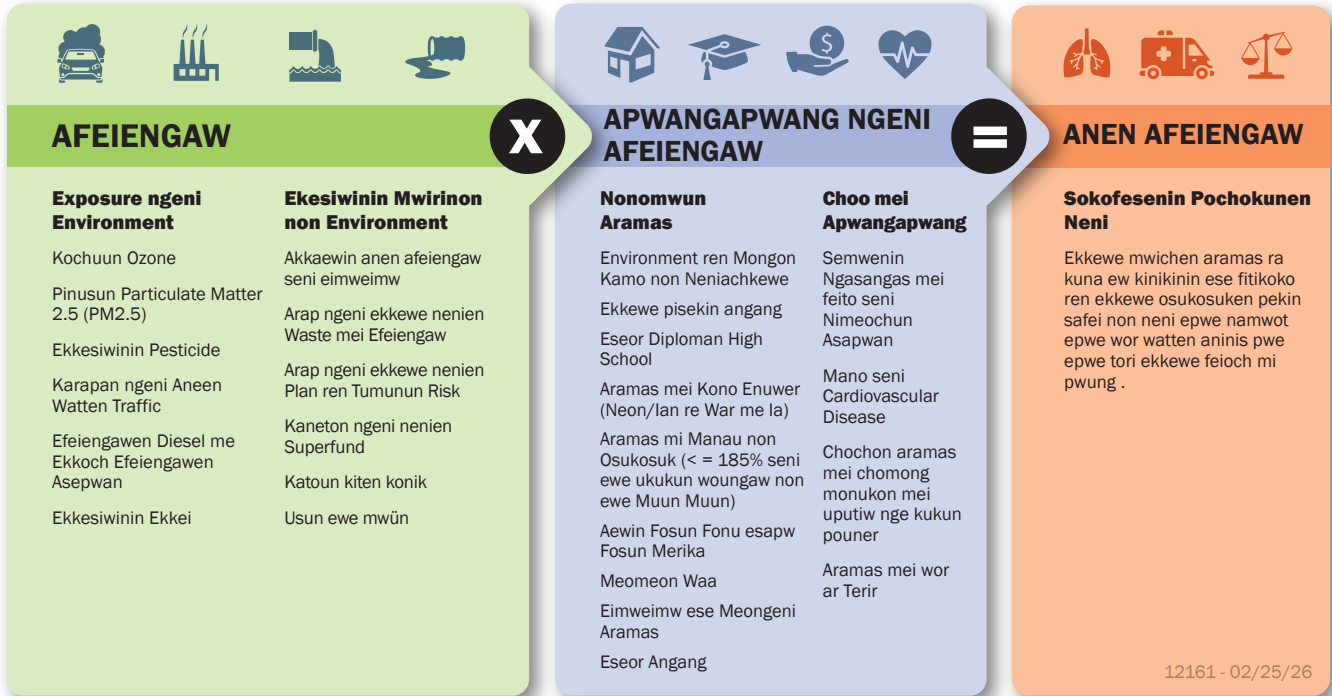


**Ewe Model ren Efeiengawen EHD**

Ewe map EHD a aea ew modelin fitikoko, minne a pwarata ifa usun ekkewe mettochun manau, aramas, me neni ra angang fengen. Ekkewe mettoch usun limengawen fonu, fitikoko, fitikoko, niwinin manau, me ekkewe osukosuken pekin safei mi fen nomw me nomw ra tongeni chufengen me fori pwe epwe ngaw ekkewe feiengawen pekin safei.

Ewe model a sinei pwe ekkei mettoch rese nom non ew chok napanap – ra ririfengen.

**Afeiengaw X Apwangapwang = Anen Afeiengaw**



Pollution, monien manau, me pwan ekkoch osukosuken aramas rese pwisin fis. Ra ririfengen me ekkewe feiengaw mi sopwosopwolo ren lifilifl aramas, lifilifl aramas, me pwal ekkoch foffor ese pwung pwe epwe atai pochokkulen aramas.

**Ren sopusopun poraus**

Ren omw kopwe sinei usun ewe angangen awenewen ngeni ewe EHD Map me ekkewe napanap mei fatafatoch, kose mochen kopwe nengeni ewe [Repotun Map EHD](#) (non fosun Merika).

**Kori Kich**

Ren omw kapas eis ika pwan ekkoch poraus, kopwe email ngeni [EHDMap@doh.wa.gov](mailto:EHDMap@doh.wa.gov).



**DOH 334-603 February 2026 CS Chuukese**

Ika ke mochen kopwe nounou ei taropwe non pwan ew sokkun nikinikin, kopwe kokori 1-800-525-0127. Ren kastomer mi pung seninger ika weires ar rongorong porous, kose mochen kori 711 (Washington Relay) ika emailini [doh.information@doh.wa.gov](mailto:doh.information@doh.wa.gov).