

Mosquito Abatement Report Review

AGENDA

1. Overview of Assessment
2. Summary of Report Findings
3. Recommendations

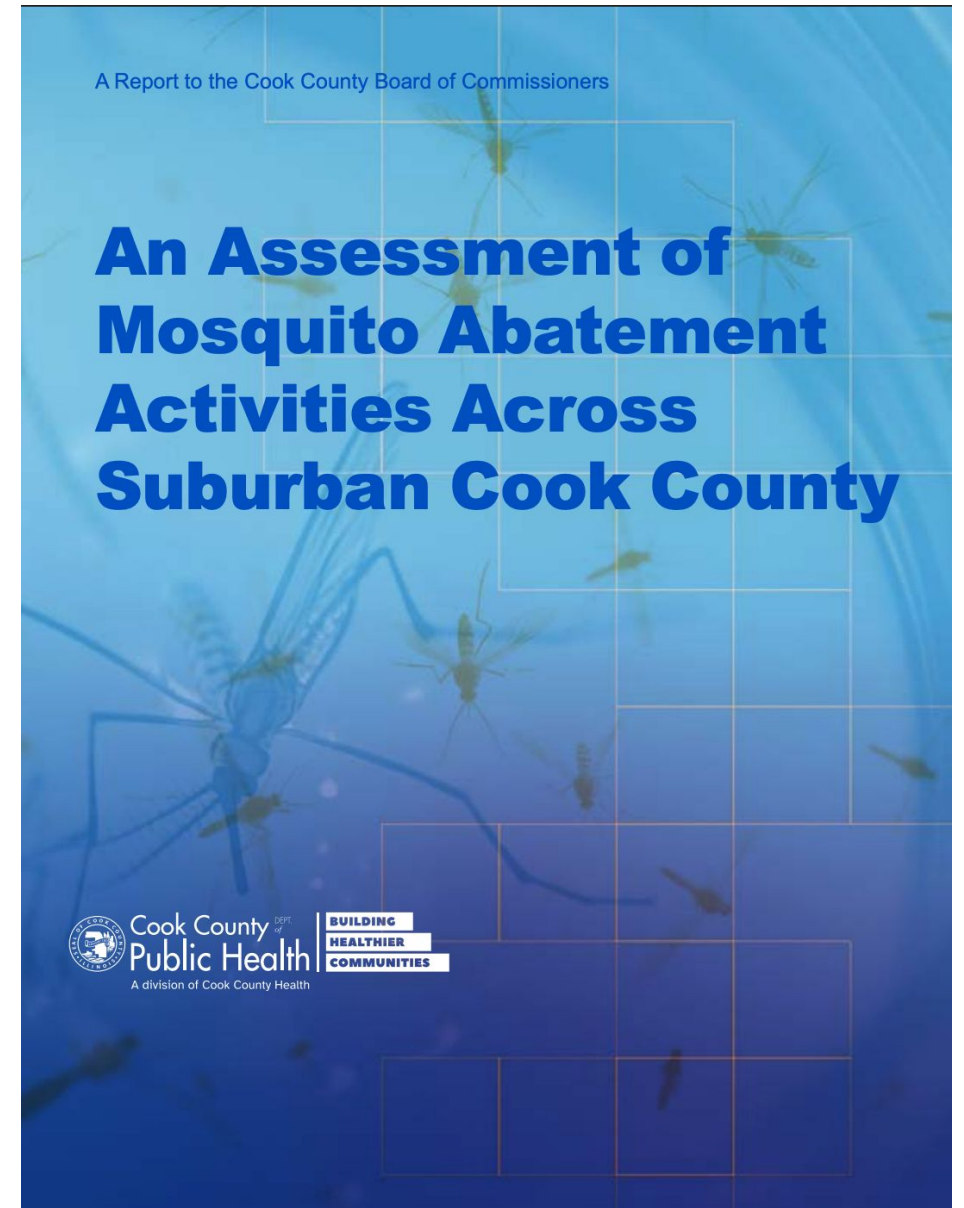
Report Overview

Background & Charge

- Resolution 25-3114 (Sept. 2025) directed CCDPH to assess mosquito abatement across suburban Cook County and recommend governance and service-consistency reforms
- Prompted by past OIG investigations and a Civic Federation consolidation report

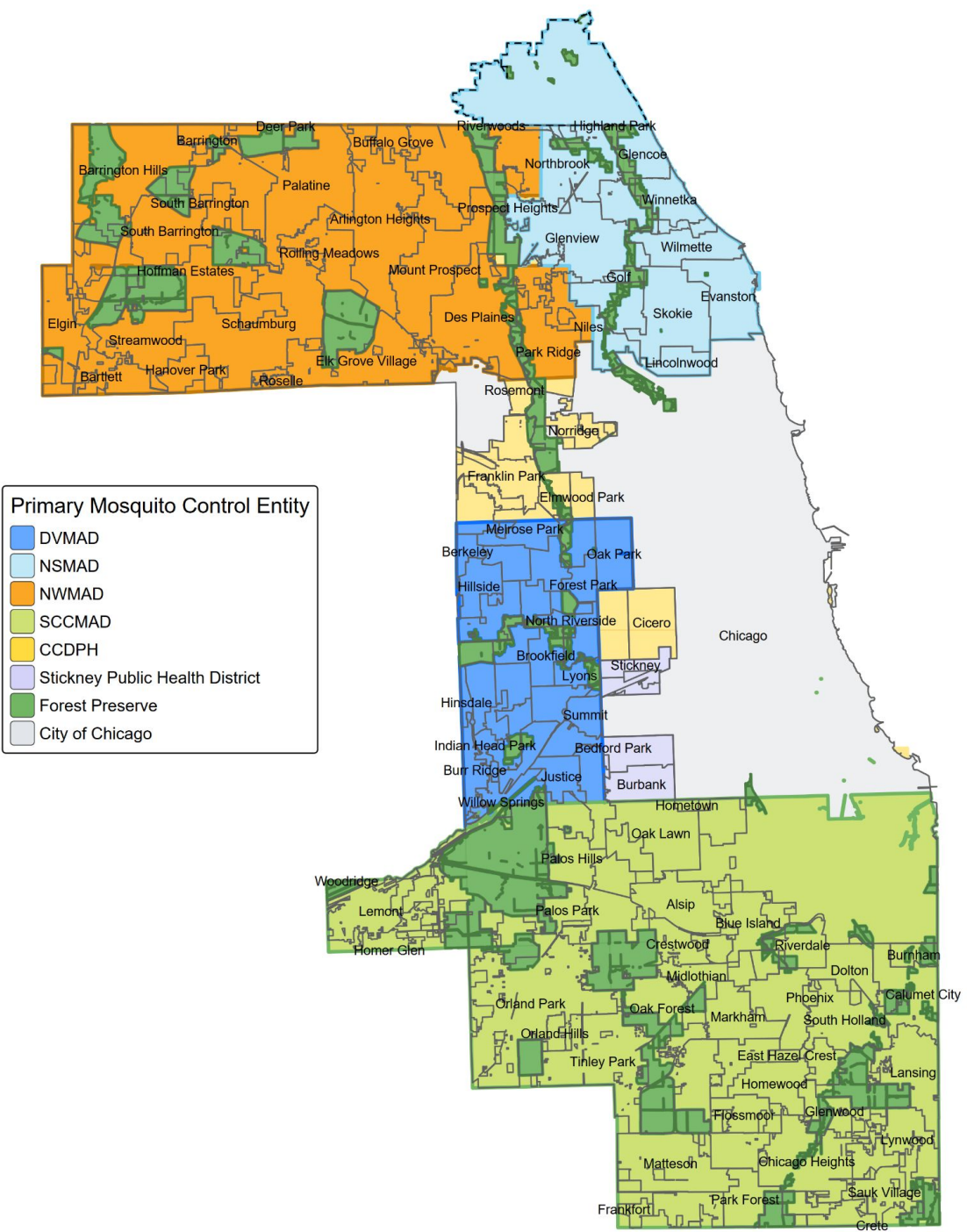
Scope & Approach

- Reviewed organization/governance, operations, and finances of the four Mosquito Abatement Districts: Des Plaines Valley, North Shore, Northwest, and South Cook County
- Based on 30+ stakeholder interviews, District-submitted financial and operational data, and benchmarking against integrated mosquito management best practices



Key Context

- Mosquito Abatement Districts are independent, special-purpose units of government funded by dedicated property tax levies with budgets of two to five million dollars.
- They are authorized by state law to surveil, monitor, and exterminate mosquitoes, ticks and rats.
- Each is governed by a five-person Board of Trustees appointed for four-year terms by the Cook County President with the advice and consent of the Cook County Board.
- The four Districts vary in geographic size and population.
- They have year-round staff focused on vector control, including entomologists, biologists, and field staff.
- Improving suburban Cook County's vector surveillance and control capabilities is increasingly important given increasing threats from tick-borne disease, new mosquito species that carry different diseases, and insecticide resistance.



Takeaways

1. Mosquito abatement is an important service to guard against growing threats to public health
2. Generally, Districts align with best practices in integrated mosquito management
3. The non-District mosquito abatement landscape is fragmented, with notable service gaps between District and non-District areas
4. Dissolution is unlikely to reduce costs or improve service
5. There are several other, non-structural opportunities for substantial service improvements across Cook County

Recommendation

Pursue Scenarios 1 + 2 together

- 1 High-Impact Improvements**
Countywide coordination, Board accountability, and IMM alignment. Low cost, low disruption.
- 2 Districts annex non-District areas**
Addresses the biggest within-County inconsistencies in service; new levy revenue would roughly offset recurring cost.

Implementation

- CCDPH would spearhead countywide coordination
- An intergovernmental agreement (IGA) to institutionalize the changes
- Districts acknowledge and have committed to addressing service gaps

Mosquito Abatement as a Public Health Service

Mosquito Abatement Districts provide an important service against growing threats to public health

- Districts monitor and mitigate risks associated with mosquito-borne viruses, including West Nile Virus and St. Louis Encephalitis
- Due to climate change, Chicagoland is seeing new mosquito species capable of carrying new diseases
- Chicagoland is facing new threats associated with tick-borne diseases
- At the same time, growing insecticide resistance makes facing these challenges increasingly difficult

What do Mosquito Abatement Districts do?

Surveillance	Control	Reporting/Compliance	Planning/Strategy	Public Engagement	Admin
Monitoring mosquito and tick populations and disease indicators through field collection, lab testing, and mapping.	Reducing mosquito populations via larval and adult interventions (larviciding and adulticiding), guided by response planning and action thresholds.	Collecting vector data and sharing it with internal teams, state health authorities (IDPH), and the public. Meeting environmental, governance, transparency, and financial obligations imposed by law and regulators.	Setting District direction through planning, analysis, and board-level decisions. Forward-looking work that prepares the District for evolving threats and sets the policies under which staff operate.	Communicating with residents through outreach, education, formal notices, and a service request/complaint process.	Running the back-office operations of the District: personnel, supplies, finances, partnerships, procurement, and capital assets.

District Service Provision and Best Practices

Integrated Mosquito Management (IMM)

- Best-practice framework for controlling mosquitoes and the diseases they spread
- Uses a coordinated mix of methods rather than any single tactic
- Five components, applied based on local population and risk data:
 - Surveillance — trapping and disease testing to guide decisions
 - Source reduction — eliminating breeding sites
 - Larval control
 - Targeted adult control
 - Public education
- Districts use IMM to suppress mosquito populations *before* they threaten public health, reducing disease risk and minimizing reactive, broad-scale adulticiding

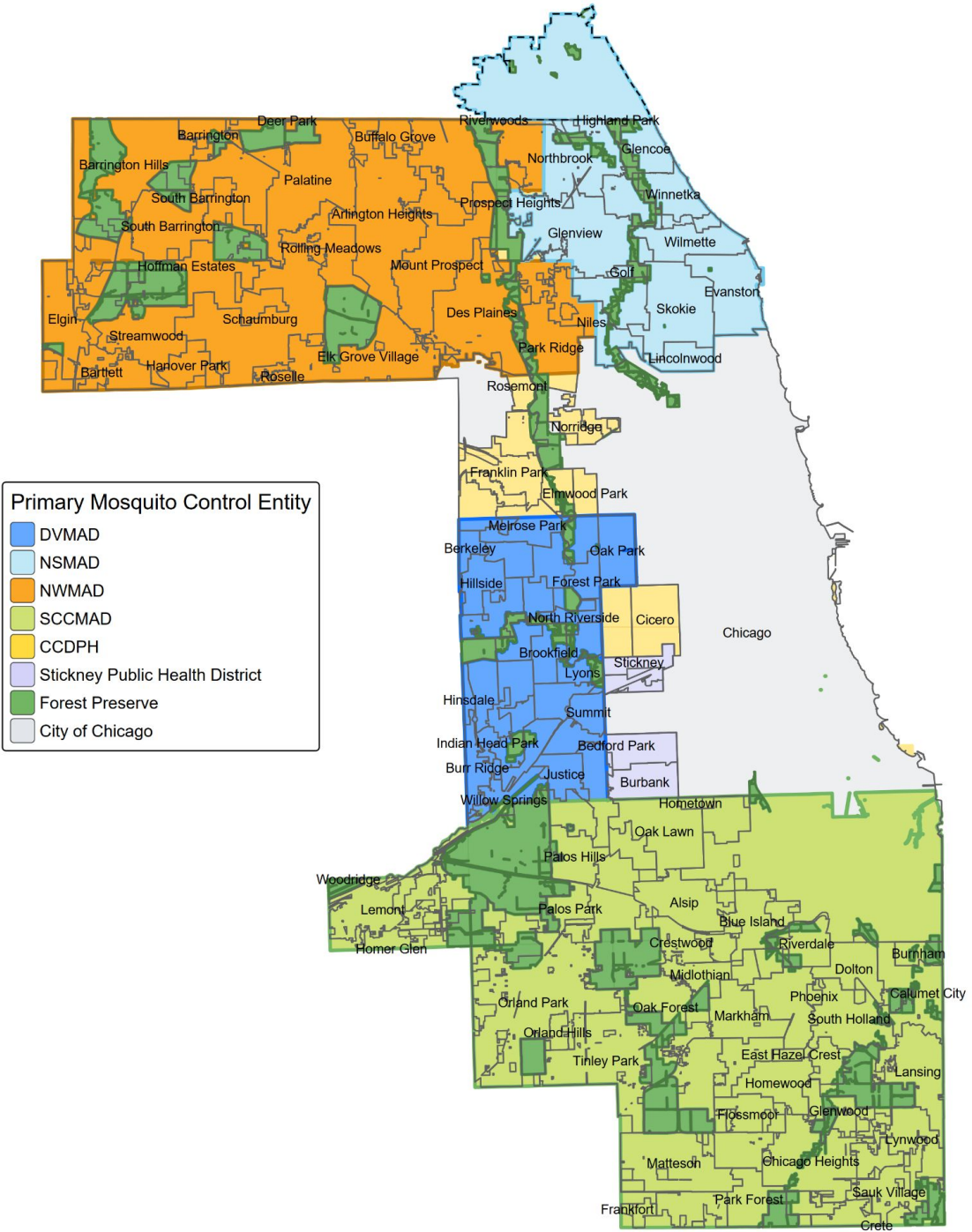
“IMM programs utilize public health pesticides in a targeted manner after surveillance results provide objective evidence that they are required according to established intervention thresholds, and only after the potential public health benefits have been evaluated... The intervention methods are identified and used in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment while effectively managing mosquito populations.”

American Mosquito Control Association

The four Districts deliver essential, science-driven vector control services, with some variation in capabilities and alignment with best practices

- Broadly, all four Districts operate IMM programs grounded in deep, place-specific knowledge of breeding sites, local mosquito populations, and community relationships built over decades.
- To varying degrees, all four Districts conduct the core surveillance and control activities considered best practice by AMCA, including larval and adult surveillance, viral surveillance, source reduction, larval and adult control, and public education.
- Two Districts, NWMAD and NSMAD, are nationally recognized for their scientific leadership.
- Districts also vary in the maturity of newer functions such as tick surveillance and resistance testing, which are important to combating emerging threats.
- SCCMAD varies in relying more on adulticide treatment as requested by the community, and has a less defined action threshold policy.

District Boundaries



Due to fragmentation of non-District operators, the largest equity gaps in the system are not between Districts, but between Districts and non-District areas

- Inequities in protection from vector-borne disease exist most prominently between residents served by a District and residents who are not.
- In non-District areas, mosquito abatement is delivered not only through CCDPH service but also through limited municipal programs and private contracts. These smaller operations sometimes do not appear to leverage an IMM approach, such as by only spraying adulticide or not conducting surveillance.
- This finding is consistent with the National Association of County and City Health Officials (NACCHO) 2023 assessment, which found that Mosquito Control Districts are more likely than other vector control program types, including public health departments, to perform key vector control capabilities.
- Districts have incentives that are aligned with public health and public services rather than a profit motive

Mosquito Surveillance and Control Capacity

Percent of Program Capacity, by Responding Organization Type



n(LHD)=245
n(MCD)=116
n(City/County)=86
n(Other)=27

National Association of County and City Health Officials (NACCHO) 2023 Assessment

*Note: Percents may not sum to 100 due to rounding.

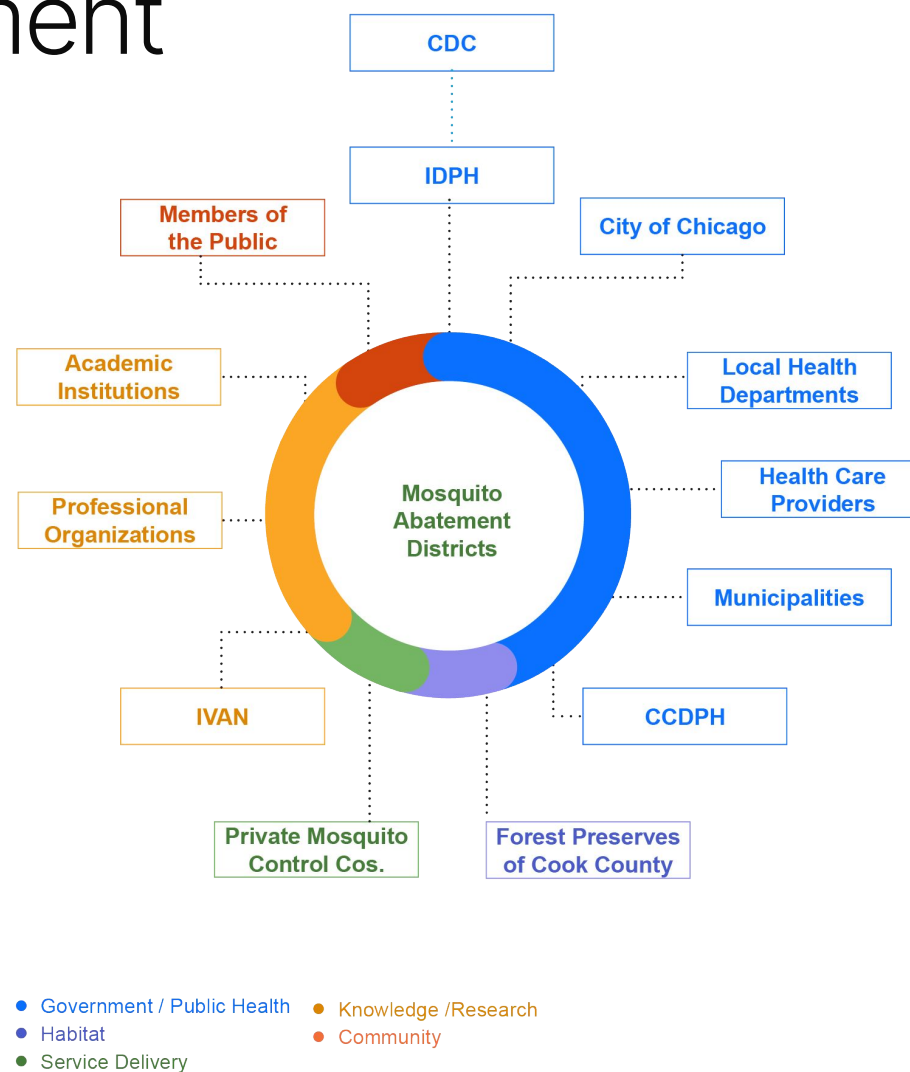
CCDPH's Role in Mosquito Abatement

WHERE CCDPH PROVIDES SERVICES

- County-level public health authority and local health department (LHD)
- As part of vector control, covers areas of suburban Cook County outside any District or LHD boundary — and outside areas served by other known government operators
- Other operators include municipalities (direct or contracted) and private groups/individuals hiring vendors

HOW CCDPH PROVIDES SERVICES

- Delivers control services via a commercial contract with a private vendor
- Posts countywide West Nile virus (WNV) data; facilitates data sharing across Districts
- Receives reports of human WNV and other vector-borne disease cases, and shares them with Districts
- Most vector control work — including the vendor contract and part of one employee's time — is funded by a state Vector Control and Surveillance Grant



Recommendations

Scenario Benefits and Risks

RECOMMENDED	RECOMMENDED			
<p>1) High-Impact Improvements</p>	<p>2) Districts Annex Non-District Areas</p>	<p>3) Annexation of Underperforming District(s) into Higher-Performing District(s)</p>	<p>4) Consolidation of District(s) into Cook County</p>	<p>5) County-Initiated Dissolution of Districts</p>
<p>BENEFITS</p> <ul style="list-style-type: none"> • Highly likelihood of improving service consistency & quality • Minimal disruption • Low cost; some recs are doable with existing CCDPH resources 	<p>BENEFITS</p> <ul style="list-style-type: none"> • Closes the biggest gap: District vs. non-District areas • Low disruption • New levy revenue would roughly offset recurring costs 	<p>BENEFITS</p> <ul style="list-style-type: none"> • Targeted fix under proven management 	<p>BENEFITS</p> <ul style="list-style-type: none"> • Simplifies countywide coordination • Easier for residents to navigate services 	<p>BENEFITS</p> <ul style="list-style-type: none"> • Only path available without District Board consent • Option to preserve property tax revenue through an SSA
<p>RISKS</p> <ul style="list-style-type: none"> • Voluntary; requires an IGA under current law 	<p>RISKS</p> <ul style="list-style-type: none"> • Process hurdles to annexation 	<p>RISKS</p> <ul style="list-style-type: none"> • High service-disruption risk (major territory change) • Receiving District's service level could decline • Contiguous Districts only; annexation must be voluntary 	<p>RISKS</p> <ul style="list-style-type: none"> • Requires expertise beyond CCDPH's current capacity • Reduces local control & responsiveness • Unlikely to reduce costs without significantly reducing service levels 	<p>RISKS</p> <ul style="list-style-type: none"> • High disruption • Rarely used path; backdoor referendum applies • Unlikely to reduce costs without significantly reducing service levels

Under current law, Scenarios 3 & 4 require votes by the relevant District Board(s) and/or Cook County (Scenario 5 covers only the three Districts wholly within Cook County; NSMAD's multi-county territory is handled separately). *The full report assesses eight scenarios (A–H); this slide shows the five most viable under current law, plus the recommended pair (B + C).*



Assessment Recommendation

- The report recommends pursuing **Scenarios 1 and 2** in combination.
- Scenario 1 would improve organizational performance and strengthen governance, and Scenario 2 would increase consistency of service across the County by extending District-level service to areas less aligned with Integrated Mosquito Management.
- Together, they would support consistency of service, preparedness against emerging threats, and more effective mosquito surveillance and control while preserving the current operational capacity and local knowledge held by the Districts.
- The possibility of additional structural reforms may continue to encourage improvement among Districts.

1) High-Impact Improvements

**2) Existing Districts Annex
Non-District Areas in Cook County**

Categories of Improvements

Coordination

- Convene quarterly meetings with CCDPH, Districts, and interested municipal vector control officials.
- Align on and clarify discrepancies in mosquito abatement boundaries
- Engage municipalities to encourage IMM best practices.
- Engage municipalities outside of Districts annually to assess control and surveillance plans
- Establish standard practices for notifying neighboring Districts and relevant County/municipal entities of upcoming treatments
- Share timely updates on resistance/efficacy testing results
- Align across Districts and the Forest Preserves on use of the U.S. Fish and Wildlife Service framework for mosquito management on federal wildlife refuges.

Education and Outreach

- Convene stakeholders to organize shared continuing education and training, especially on new and emerging threats
- Coordinate across CCDPH, Districts, and municipal health officials to promote public education on personal mosquito and tick protection
- Create a County webpage that provides a one-stop-shop for vector control information for residents

Budget

- Ensure Districts comply with State law on timely passage of budget ordinances; encourage passage before the start of the fiscal year where possible
- Explore opportunities to optimize District asset management

District Boards

- Collaborate to recruit and appoint qualified District Trustees in a timely manner.
- Create expectations of active review of Trustee performance prior to timely reappointment.
- Share materials and best practices for onboarding new Trustees across Districts, and explore collaboratively developing new educational materials.

Preparedness

- Collaborate to strengthen surveillance through human case data
- Work with stakeholders to consider an updated emergency preparedness plan for vector-borne disease outbreaks
- Integrate vector-borne disease risks and considerations into relevant natural disaster preparedness planning and response

Surveillance

- Fully implement and institutionalize tick surveillance as an ongoing function in vector control programs across Cook County
- Engage the Forest Preserves in broader strategic planning and surveillance discussions to provide ongoing visibility into trends and emerging threats, including ticks

Treatment

- For organizations that don't already have them, develop written action threshold policies to support consistent IMM practices
- Continue to identify opportunities to align abatement strategies with IMM best practices

Source Reduction

- Explore opportunities to support tire collection initiatives to reduce breeding habitats

To successfully implement most improvements in which they are involved, particularly around coordination, CCDPH would require additional resources.

To institutionalize these practices and promote mutual accountability, Districts could enter into an intergovernmental agreement pursuant to the Intergovernmental Cooperation Act in support of coordinating strategies and activities, sharing information, and leveraging Countywide expertise.

INSTITUTE
FOR HEALTHCARE DELIVERY
DESIGN

Thank you

Appendix

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APPENDIX

Districts spend \$1-4 million each year

- CCDPH has ~\$350,000 budget, which is mostly a private mosquito contract
- Based on costs from DuPage County, it is generally more expensive to contract for mosquito abatement services than to provide them in-house.
- SCCMAD has the lowest operating budget per capita and per square mile, followed by NWMAD, DVMAD, and then NSMAD.
- Districts' budgets and actual expenditures have similar compositions. The largest category of expenses for all Districts is personnel, which comprises 52 to 65% of Districts' total actual expenditures. Districts spend about 10-18% of their total expenditures on professional services, and 9-35% of their budgets on supplies.

Actual District Operating Expenditures Over Time

