

# MINNESOTA'S



## COVID-19 RECOVERY BUDGET



### MDA Division Programs Overview

February 1, 2021



# Plant Protection

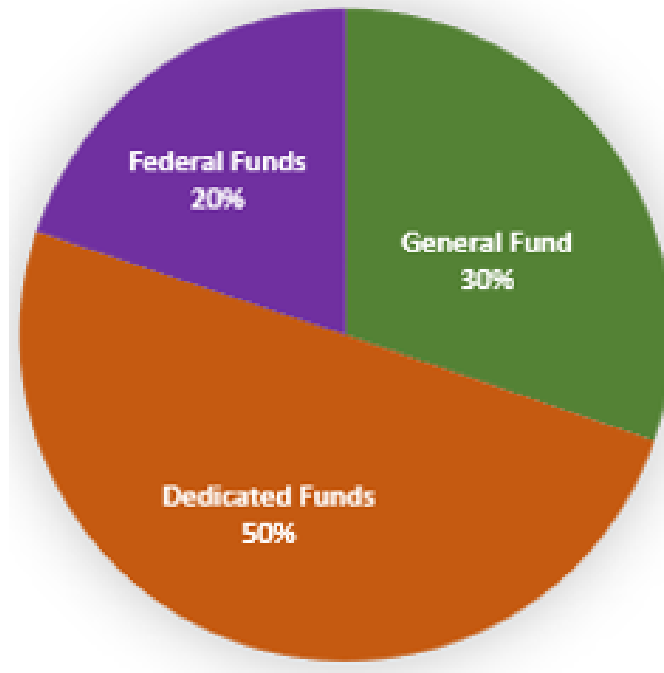
**Mark Abrahamson , Director**

# FY2022-23 Base Budget PPD

## Plant Protection FY2022-23 Base Expenditures by Fund

\$3.948 million  
Federal Fund

\$9.918 million  
Agricultural Fund



\$6.016 million  
General Fund



# Plant Protection

- **Help facilitate fair and transparent marketplaces**
- **Protect natural and agricultural resources from invasive species**
- **Provide Minnesota plants and plant products with access to markets**



# Plant Protection

- Grain purchase and storage
- Seed potato certification
- Hemp production
- Seed labeling
- Nursery stock certification
- Fruit and vegetable grading
- Phytosanitary certification
- Plant pest detection and mitigation
- Noxious weed management
- Wolf and elk depredation



## Noxious Weed Program

- Maintains the state noxious weed list and works with local governments to ensure control of designated weeds
- Advised by Noxious Weed Advisory Committee
- Work closely with County Ag Inspectors as well as Town and City Weed Enforcement



### 2020 Noxious Weed List

The Minnesota Noxious Weed Law (Minnesota Statutes 18.75-18.91) defines a noxious weed as an annual, biennial, or perennial plant that the Commissioner of Agriculture designates to be injurious to public health, the environment, public roads, crops, livestock, or other property. The law protects residents of the state from the injurious effects of noxious weeds. Links to the online lists and species pages can be found at this link: [Minnesota Noxious Weed List](#)

#### Prohibited Noxious Weeds

Attempts must be made by all landowners to control or eradicate species on these lists. These species cannot be transported illegally or sold in Minnesota. There are two Prohibited categories: Eradicate and Control.

**Prohibited Eradicate** – Must be eradicated by killing the above and below-ground parts of the plant.

	Common name	Scientific name	Year added
1.	Black swallow-wort	<i>Cynanchum louiseae</i> Kartesz & Gandhi	2013
2.	Brown knapweed	<i>Centaurea jacea</i> L.	2013
3.	Common teasel	<i>Dipsacus fullonum</i> L.	2012
4.	Cutleaf teasel	<i>Dipsacus laciniatus</i> L.	2012
5.	Dalmatian toadflax	<i>Linaria dalmatica</i> (L.) Mill.	2012
6.	Diffuse knapweed	<i>Centaurea diffusa</i> L.	2017
7.	Giant hogweed*	<i>Heracleum mantegazzianum</i> Sommier & Levier	2012
8.	Grecian foxglove	<i>Digitalis lanata</i> Ehrh.	2010
9.	Japanese honeysuckle	<i>Lonicera japonica</i> Thunb.	2020
10.	Japanese hops	<i>Humulus japonicus</i> Siebold & Zucc.	2012
11.	Meadow knapweed	<i>Centaurea x moncktonii</i> C.E. Britton	2013
12.	Oriental bittersweet	<i>Celastrus orbiculatus</i> Thunb.	2011
13.	Palmer amaranth	<i>Amaranthus palmeri</i> S. Watson	2015
14.	Poison hemlock	<i>Conium maculatum</i> L.	2018
15.	Tree of heaven	<i>Ailanthus altissima</i> (Mill.) Swingle	2017
16.	Yellow starthistle*	<i>Centaurea solstitialis</i> L.	2010

\*Species not known to be in Minnesota, but have been determined to be a threat to invade the state.



## Noxious Weed Program

- Program greatly reduced in early 2000's
- Began pilot projects in 2010's
  - Elimination of Targeted Invasive Plants – FY14-16, 18-20





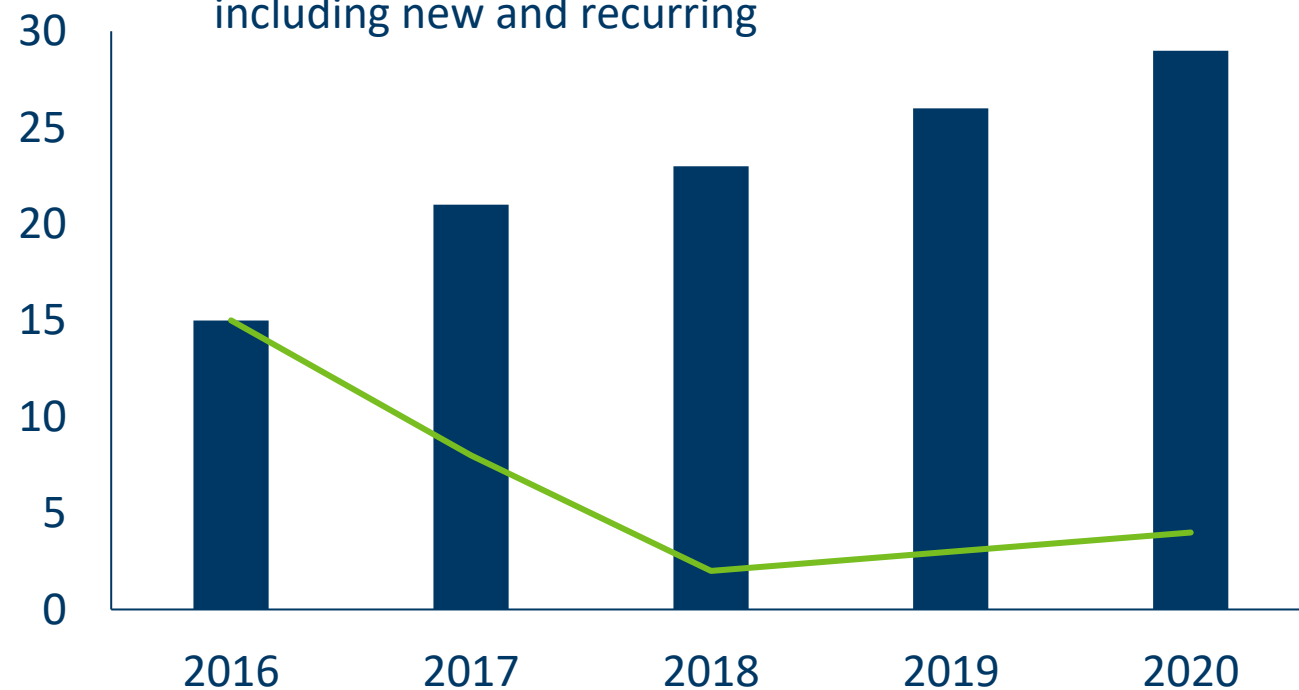
## Noxious Weed Program

Aggressive approach to Palmer amaranth has paid big dividends



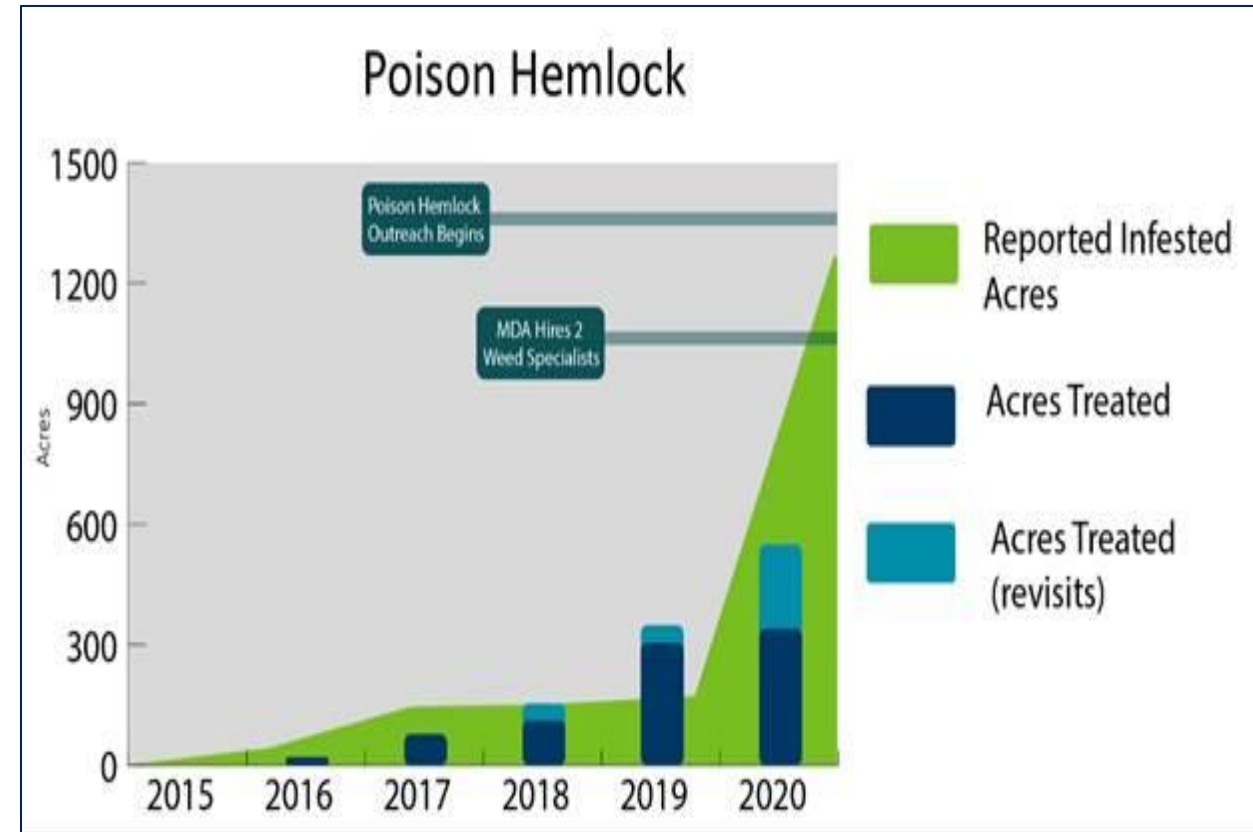
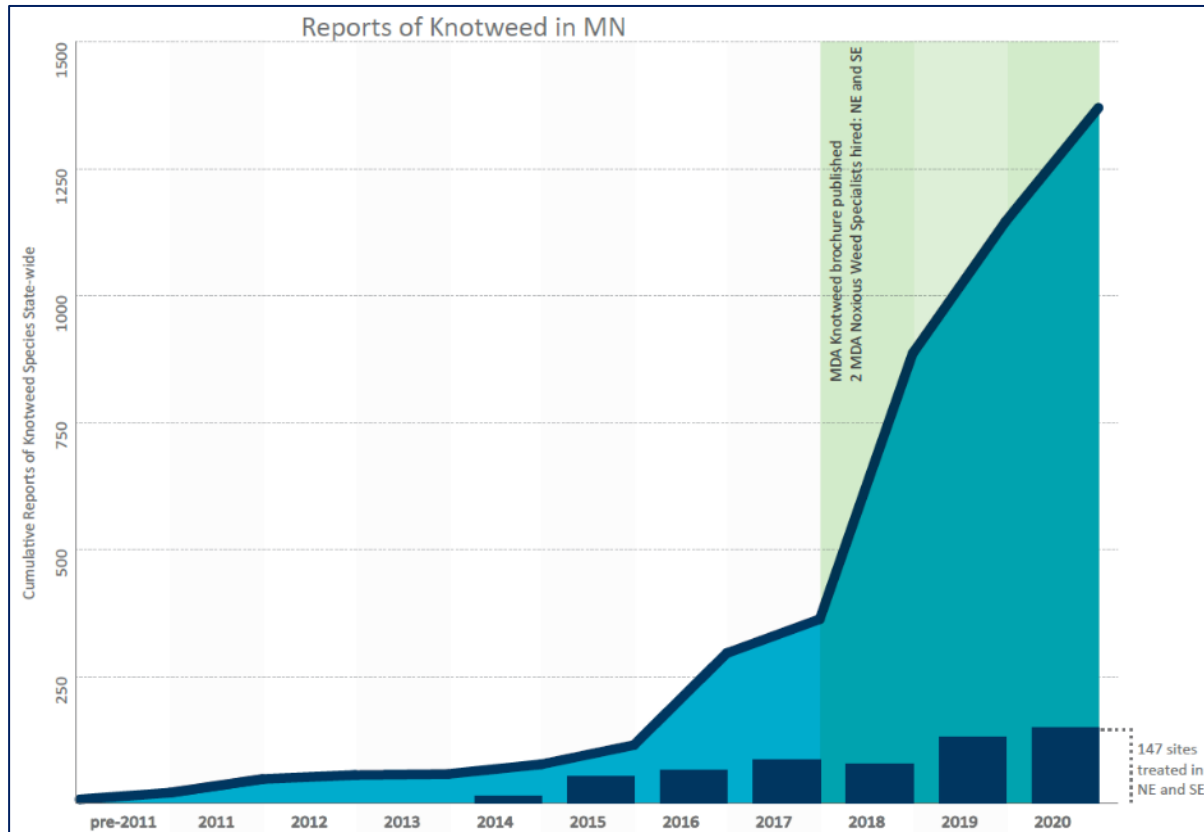
■ Cumulative sites with Palmer amaranth confirmed

— Number of sites each year with Palmer confirmed including new and recurring



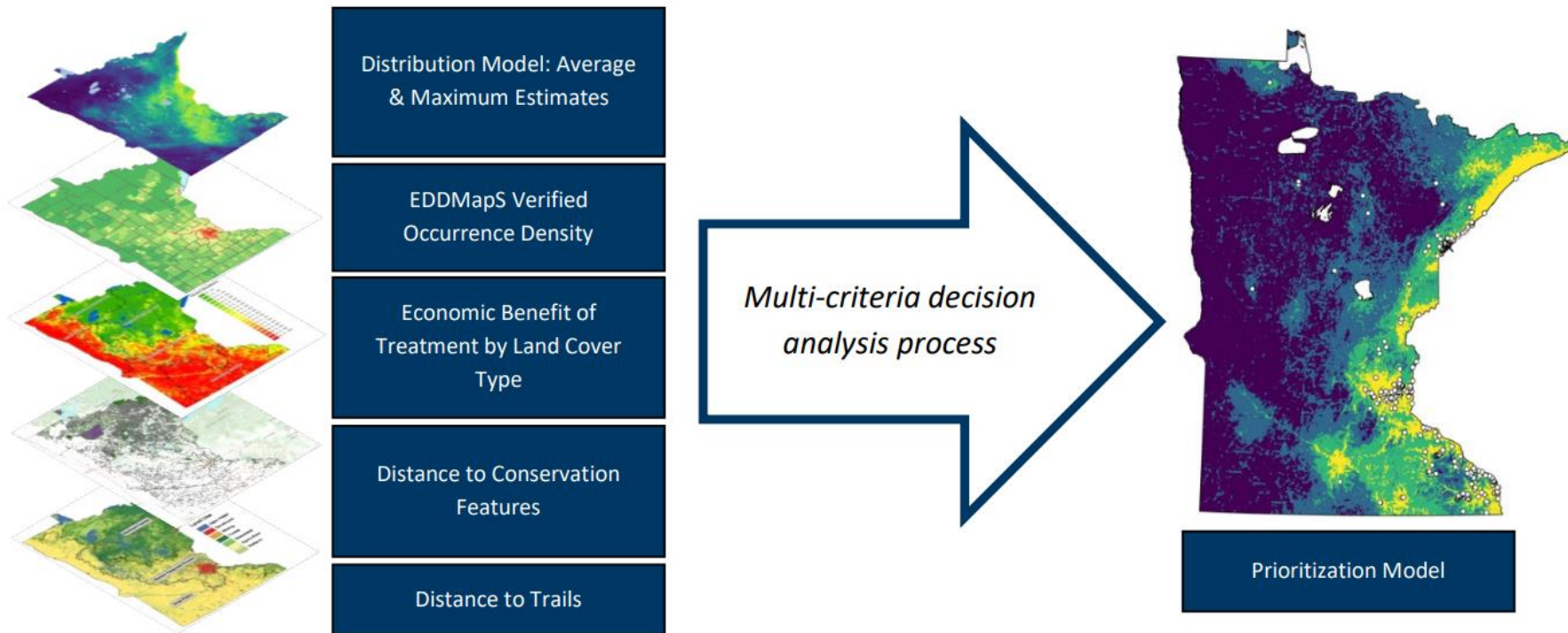


## Noxious Weed Program



## Noxious Weed Program

- Tactical Invasive Plant Management Plan – FY18-20



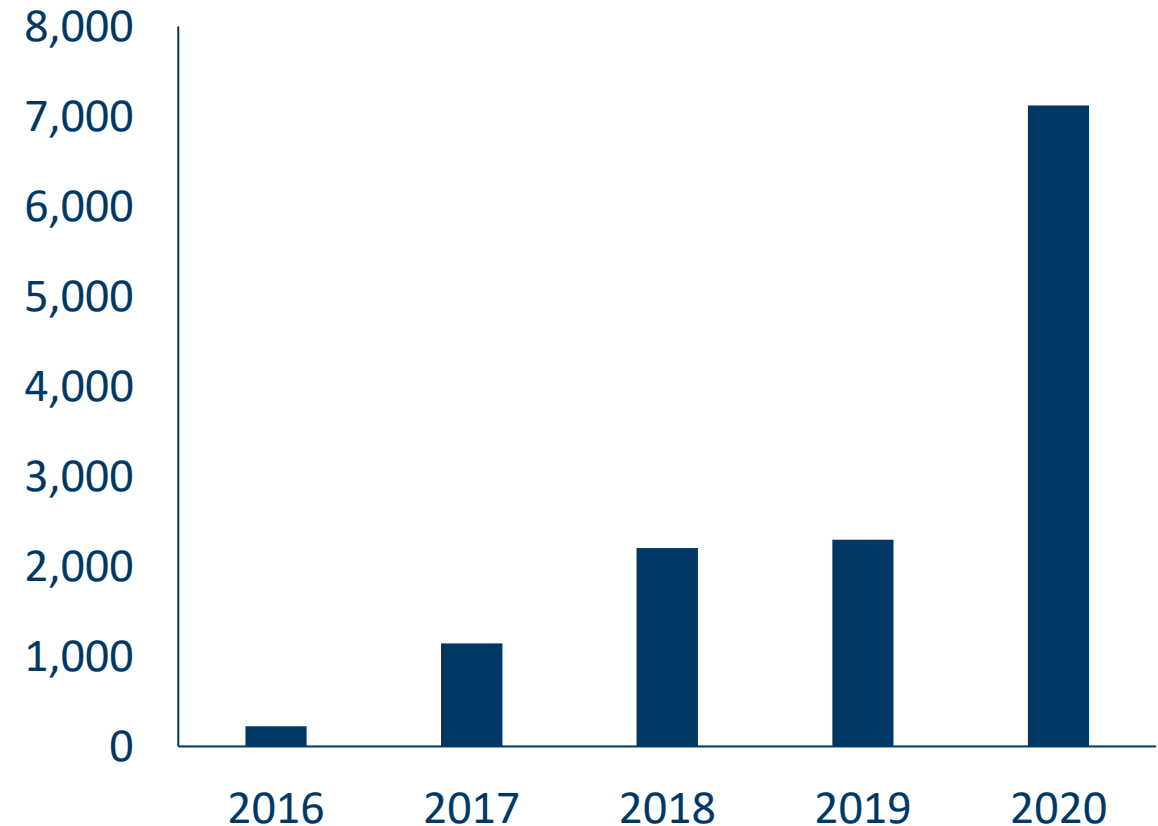


## Noxious Weed Program

- Grants to local governments for weed management
  - Appropriated \$600k for FY18-19 from General Fund
  - Appropriated \$650k for FY20-22 from ENRTF
  - 99 projects funded to date



Noxious Weed Acres Managed



# Governor's Budget Recommendation

## Battle Invasive and Noxious Weeds

- **\$225,000 in each year of the biennium** to fund the Noxious Weed Program to aid local governments, weed law enforcement, training, and the continuation of state-led eradication and management programs for noxious weeds.
- Funding will also help the MDA work directly with local governments and landowners to provide outreach and support for local weed control efforts.



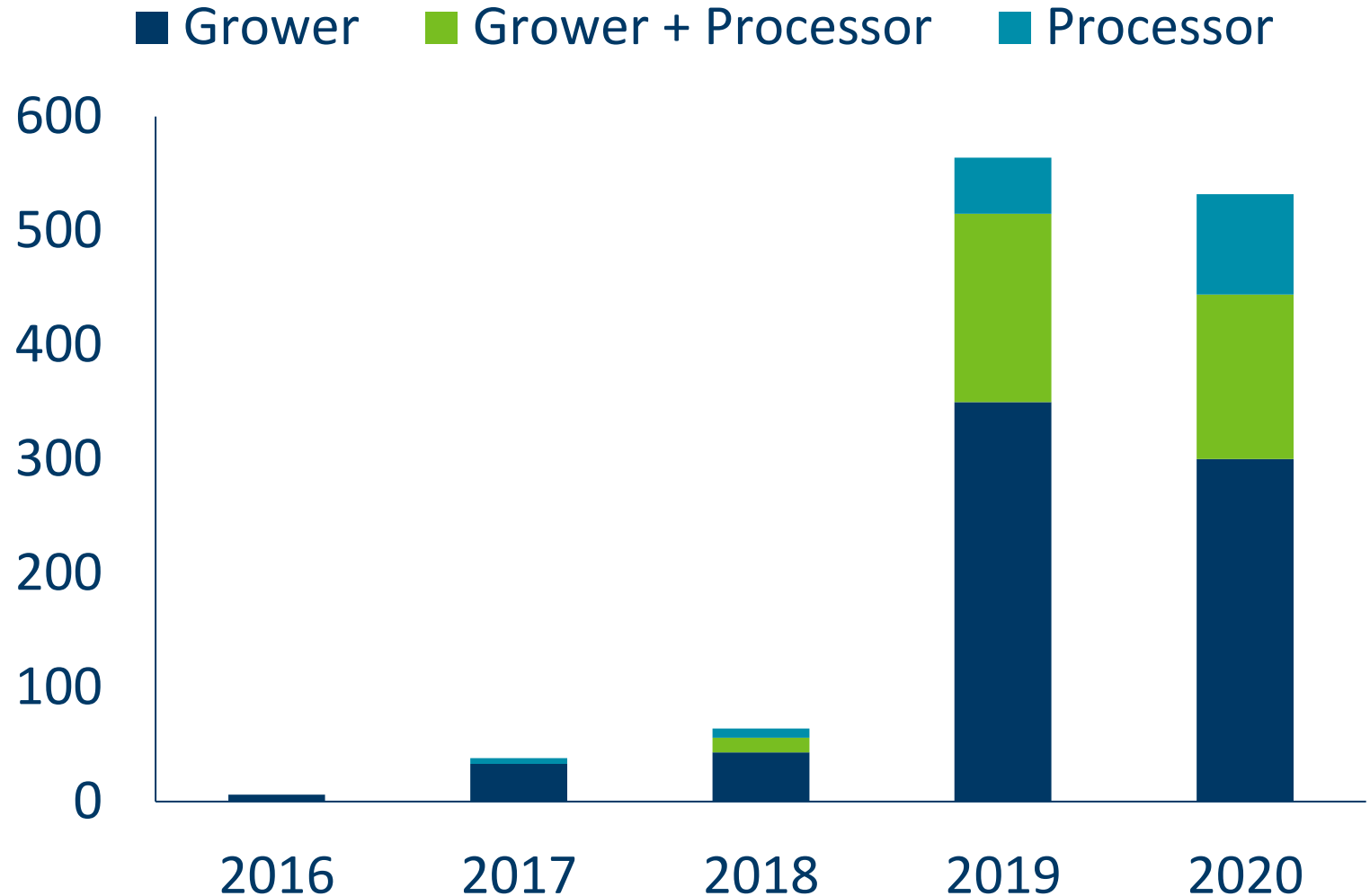
## Hemp Program

- License producers and handlers of raw hemp
- Track locations where hemp is grown, stored and processed
- Each lot sampled and analyzed for THC content



## Hemp Program

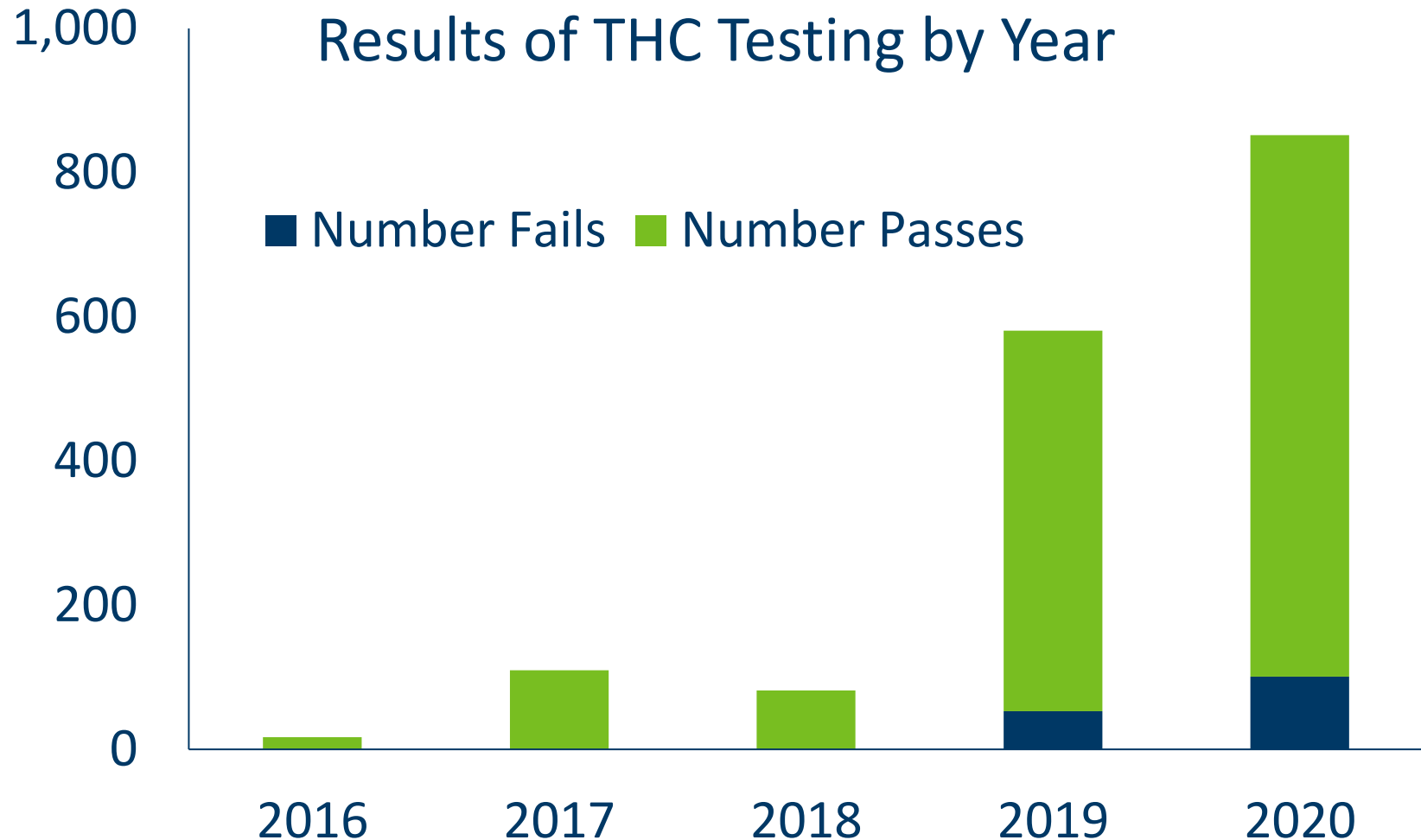
- Interest in hemp production increased dramatically due to CBD (cannabinoid) market opportunities and federal legalization in 2018





## Industrial Hemp

- 9-10% of lots have exceeded legal THC thresholds during the last two years
- These are generally varieties grown for CBD production



## Hemp Program

- MDA Pilot Program ended 12/31/20 and the Minnesota Hemp Program began operation under USDA oversight on 1/1/21
- Amended and improved federal rule was published in 2021 and Minnesota's hemp program will adjust accordingly
- Sampling requirements are more practical and failure rates may be reduced
- Data must be shared with USDA



# Governor's Budget Recommendation

## Support for Industrial Hemp Industry

- **One-time appropriation of \$50,000 in the first year** to complete the development of IT infrastructure for licensing and managing data for hemp producers and processors.



# Plant Protection

## Seed Inspection Program

Ensure accurate labeling of seed offered for sale in Minnesota and prevent the spread of noxious weeds through seed

“Mystery” seeds were a big issue in 2020

- Generally innocuous types
- Potential for pests and disease
- Over 800 reports in Minnesota
- Nearly 700 packages collected





# Plant Protection

## Recent Invasive Species



*Ralstonia solanacearum* Race 3 Biovar 2  
infecting geraniums



Elongate hemlock scale



European chafer



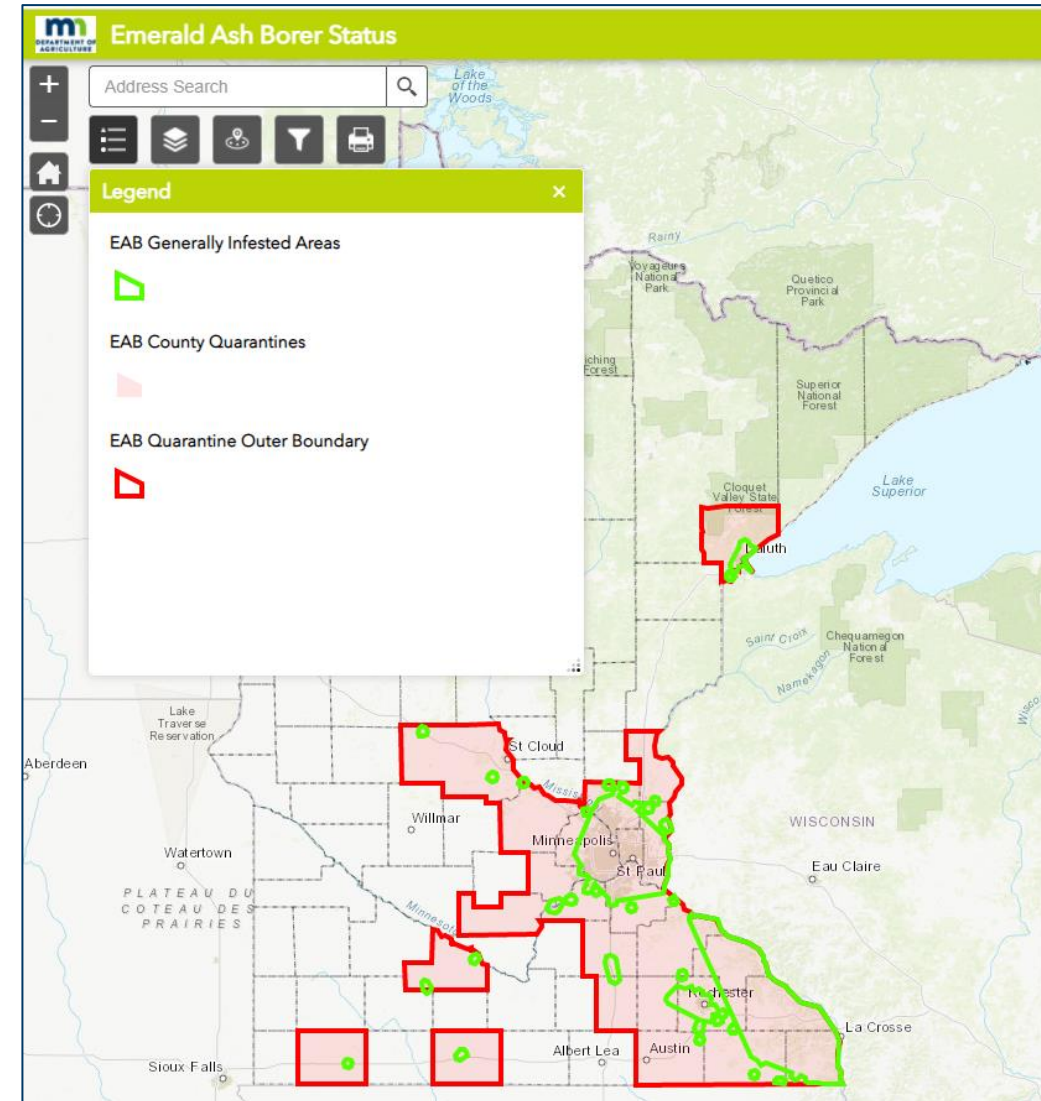
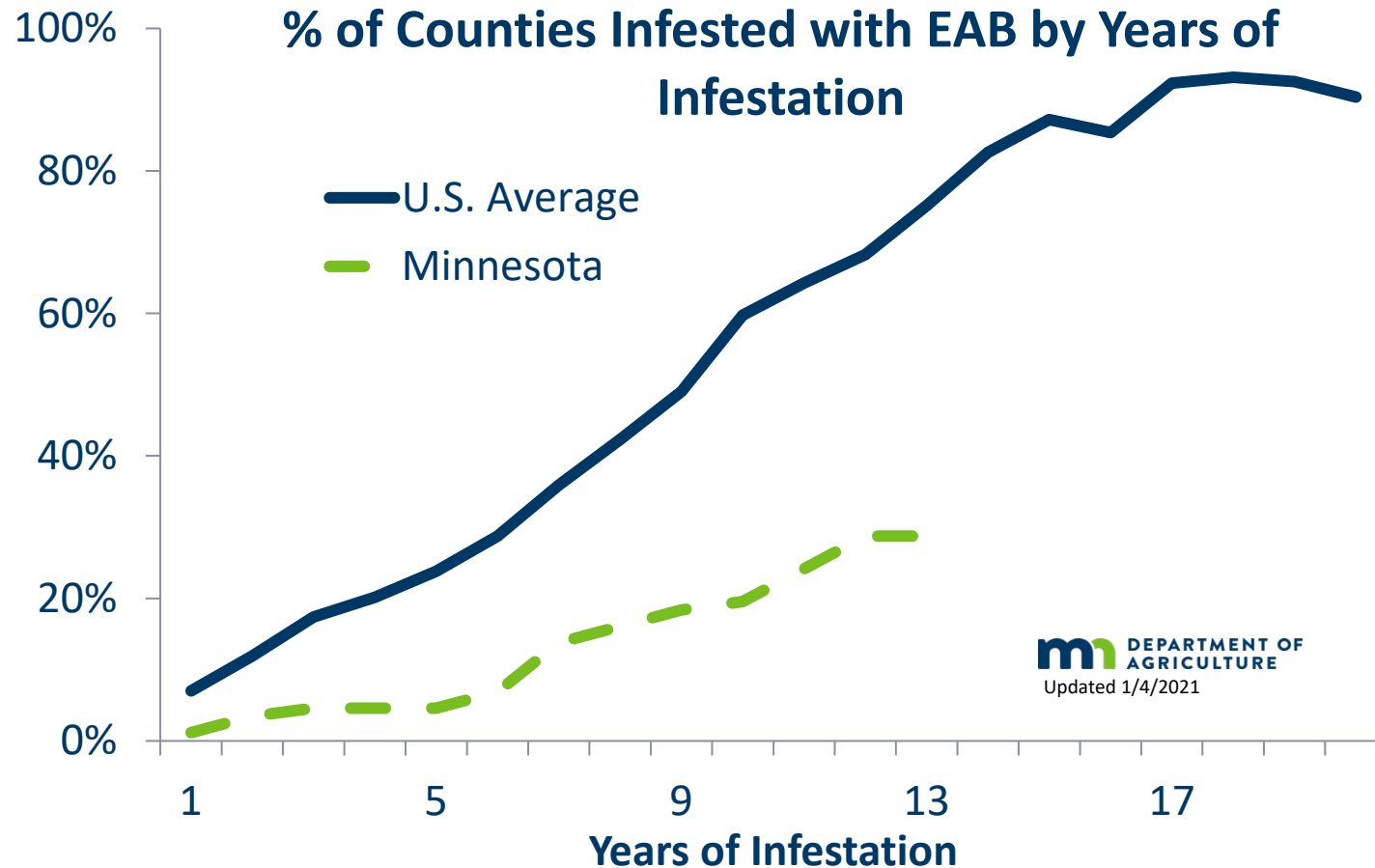
Lily leaf beetle



Viburnum leaf beetle

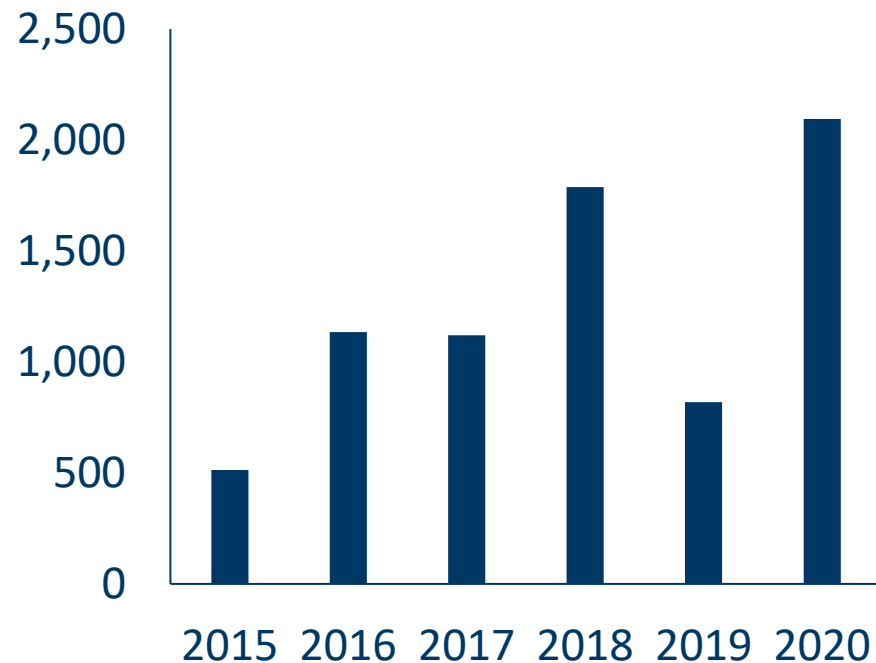


## Emerald ash borer



## Gypsy Moth

Annual number of acres in MN treated with Btk





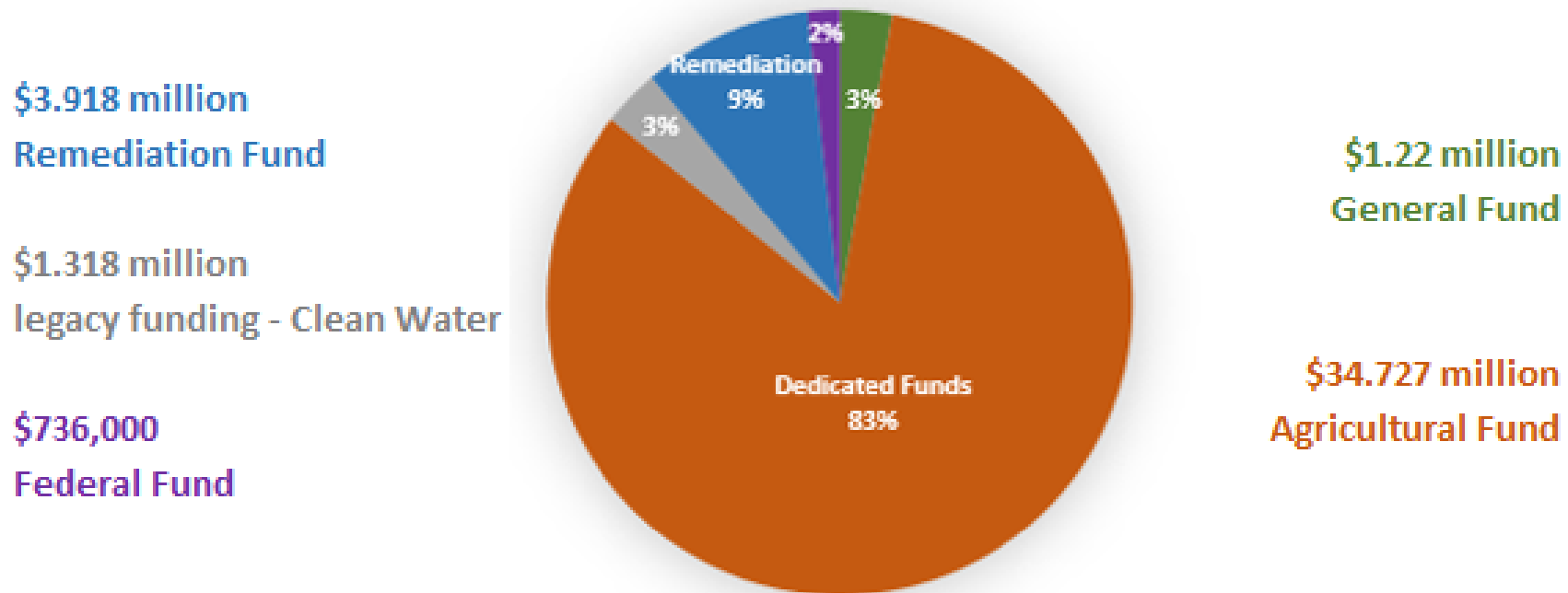


# Pesticide and Fertilizer Management

Joshua Stamper, Director

# FY2022-23 Base Budget PFMD

## Pesticide and Fertilizer Management FY2022-23 Base Expenditures by Fund





# Pesticide and Fertilizer Management

## What We Do

### We are the lead state agency for:

- Pesticide regulation
- Fertilizer regulation
- Protection of groundwater from 'ag chemicals'
- Emergency response
- Spills and clean-up
- Waste pesticide collection
- Minnesota Agricultural Water Quality Certification Program (MAWQCP)

Product	Use	Pounds Sold
Chlorine	Water disinfectant	21.9 million
Glyphosate	Cropland herbicide	21.6 million
Chromic acid	Wood preservative	14.0 million
Copper carbonate	Wood preservative	13.4 million
Arsenic pentoxide	Wood preservative	9.4 million
Sodium hypochlorite	Disinfectant (bleach)	7.2 million
Metam sodium	Soil fumigant	5.7 million
Copper oxide	Algaecide	5.5 million
Acetochlor	Cropland herbicide	5.1 million
Didecyl dimethyl ammonium bicarbonate	Antimicrobial	4.0 million
Atrazine	Crop herbicide	3.2 million
Zinc borate	Antimicrobial	2.1 million

# Pesticide and Fertilizer Management

## How We Do This

- We work with farmers, regulated industry, and interested parties on the front end, as much as possible
- We employ 110 agronomists, soil scientists, and hydrologists (40% in greater MN)
- Many staff have graduate degrees, a farm background, and some still farm
- PFMD Budget ~\$30 million/year, mostly from fees and Clean Water Fund

# Pesticide and Fertilizer Management

## Regulatory Activities

- Pesticide/fertilizer product registration
- Applicator licensing
- Complaint response
- Facility inspection
- Emergency response
- Anhydrous ammonia regulation



# Pesticide and Fertilizer Management

## Incident Response Activities

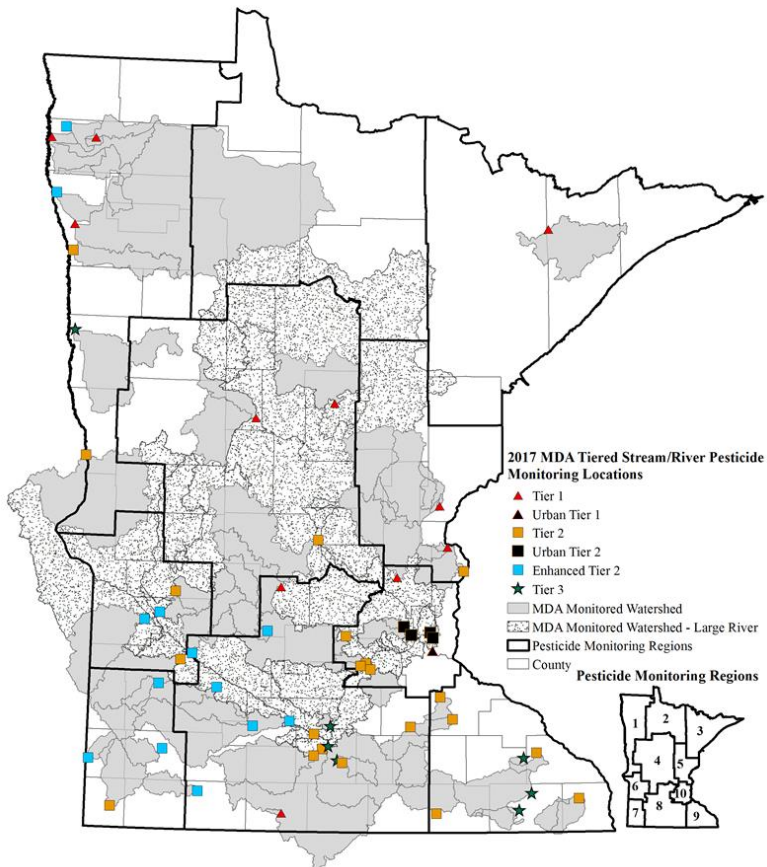
- Emergency site clean-up
- Long-term site clean-up
- Voluntary clean-up
- Agricultural Chemical Response Reimbursement Account (ACCRA)
- Superfund





# Pesticide and Fertilizer Management

## Non-Point Source Programs



The MDA is responsible for addressing:

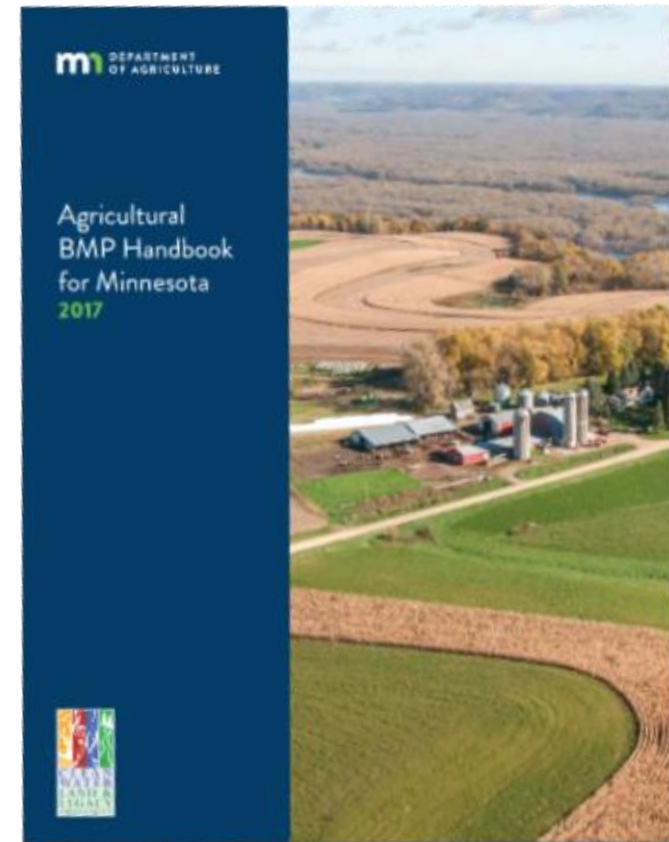
- Non-point source impacts to groundwater from nitrate from fertilizer
- Non-point source impacts to surface water and groundwater from pesticides
- Other health or environmental risks from pesticides
- Water quality monitoring for pesticides and nitrate

# Pesticide and Fertilizer Management

## Non-Point Source Programs

### Fertilizer non-point activities:

- Nitrogen Fertilizer Management Plan and Groundwater Protection Rule for nitrate in groundwater
- Fertilizer best management practices (BMPs)
- Technical assistance for impaired waters
- Funding priority research
- Certification of soil and manure testing labs



# Pesticide and Fertilizer Management

## Non-Point Source Programs

### Pesticide non-point activities:

- Pesticide Management Plan for water resource protection
- Pesticide best management practices
- Assist sister agencies on pesticide issues



#### Water Quality Best Management Practices for All Agricultural Herbicides

In order to protect Minnesota's water resources, the Minnesota Department of Agriculture (MDA), along with University of Minnesota Extension and other interested parties, has developed a set of core voluntary Best Management Practices (BMPs). The core voluntary BMPs are provided on the opposite side of this page and should be adopted when applying all agricultural herbicides in Minnesota. The BMPs may also refer to mandatory label use requirements. Always read product labels. Additional information and references accompany the BMPs.

The MDA has also developed unique voluntary BMPs (on separate pages) for the use of specific herbicides due to their presence in Minnesota's groundwater or surface water from normal agricultural use. The herbicide-specific BMPs should be adopted when using herbicides that have been, or whose breakdown products have been, frequently detected in groundwater (acetochlor, alachlor, atrazine, metolachlor and metribuzin) or those detected at concentrations of concern in surface water (acetochlor and atrazine). If the BMPs are proven ineffective, mandatory restrictions on herbicide use and practices may be required. For information on monitoring results for herbicides in Minnesota's water resources, refer to the MDA's Monitoring and Assessment webpage: [www.mda.state.mn.us/monitoring](http://www.mda.state.mn.us/monitoring)

Careful planning in the use of herbicides – as part of an integrated Weed Management Plan – can help protect water resources from future contamination and help reduce the levels of herbicides currently in Minnesota's waters. Always rotate herbicides with different site-of-action and use full label rates of herbicides to delay weed resistance. Planning also promotes the efficient and economical use of herbicides.

State and federal law can require that the use of a pesticide be limited or curtailed due to the potential for adverse impacts on humans or the environment. The Minnesota Pesticide Control Law (Minn. Stat. 158) outlines state regulatory authority to prevent these impacts. The Minnesota Groundwater Protection Act (Minn. Stat. 103H), allows for potential regulations on the use of herbicides frequently detected in groundwater. In addition, there are other state and federal laws that could lead to restrictions on the use of herbicides contributing to surface water impacts. Adopting these BMPs, and a sensible and cautious attitude regarding the proper use of herbicides, will help growers to maintain access to a variety of herbicides as important and diverse tools in the effort to control weeds and protect water resources.

#### Best Management Practices (BMPs) for insecticide use

- Voluntary BMPs are designed to prevent and minimize the degradation of Minnesota's water resources while considering economic factors, availability, technical feasibility, implementability, effectiveness, and environmental effects.
- From a practical standpoint, these BMPs are intended to reduce the movement of herbicides to the environment and to encourage the efficient use of herbicides, chemistry-rotation, and non-chemical approaches to weed control. These practices should be part of an Integrated Weed Management program to reduce development of herbicide resistant weeds, save costs, and increase profitability.

#### Integrated Weed Management

Reducing crop losses by combining cultural, chemical and mechanical techniques in ways that favor the crop and suppress weed populations and vigor.

See "Additional Information & References" for more details and practical examples.

# Pesticide and Fertilizer Management

## Non-Point Source Programs

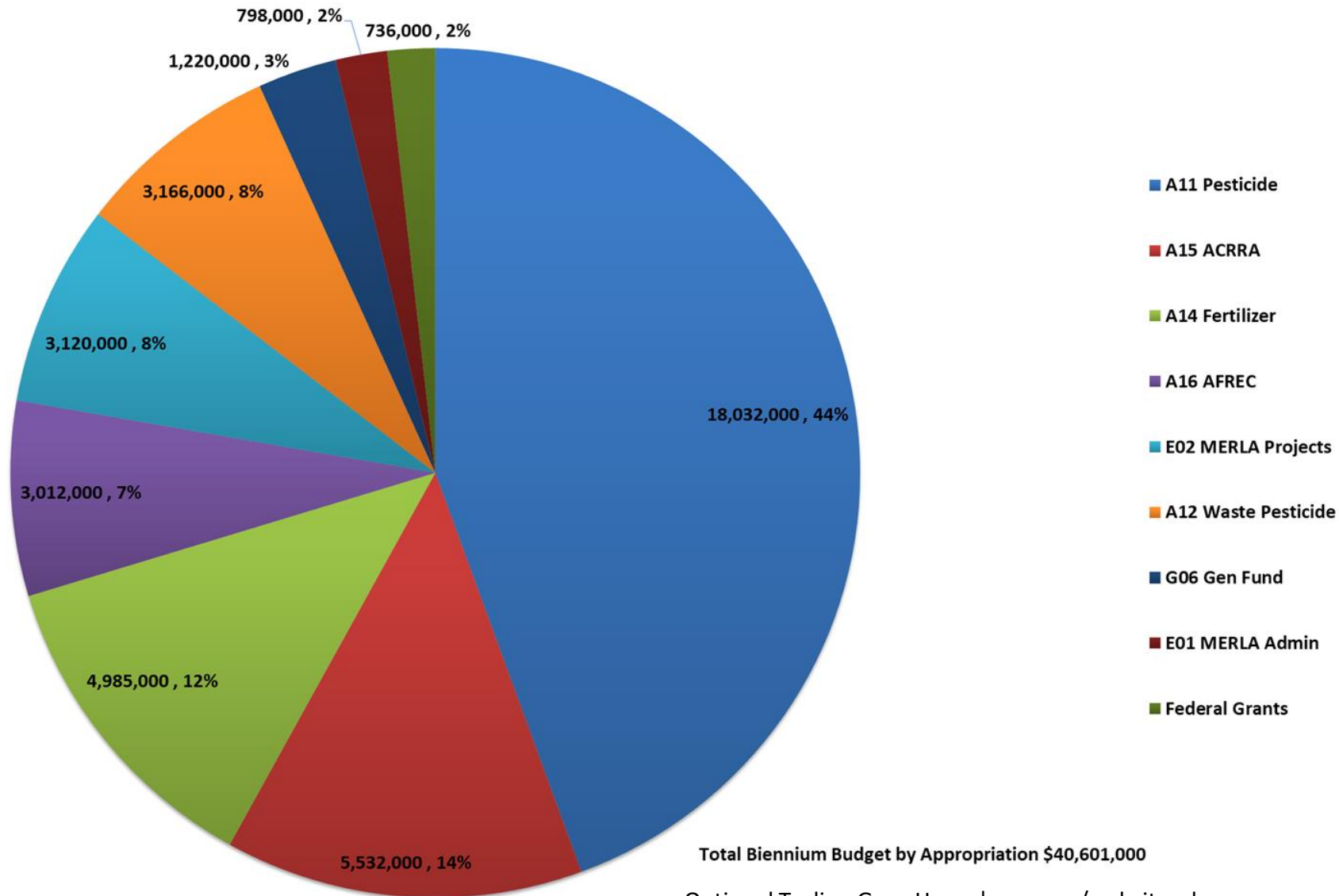
### Water monitoring activities:

- Long-term pesticide monitoring (25 years)
- Edge-of-field and tile line monitoring
- Monitoring for Discovery Farms Minnesota
- Monitoring private wells for nitrate
- Coordinate with other monitoring programs
- Annual monitoring reports



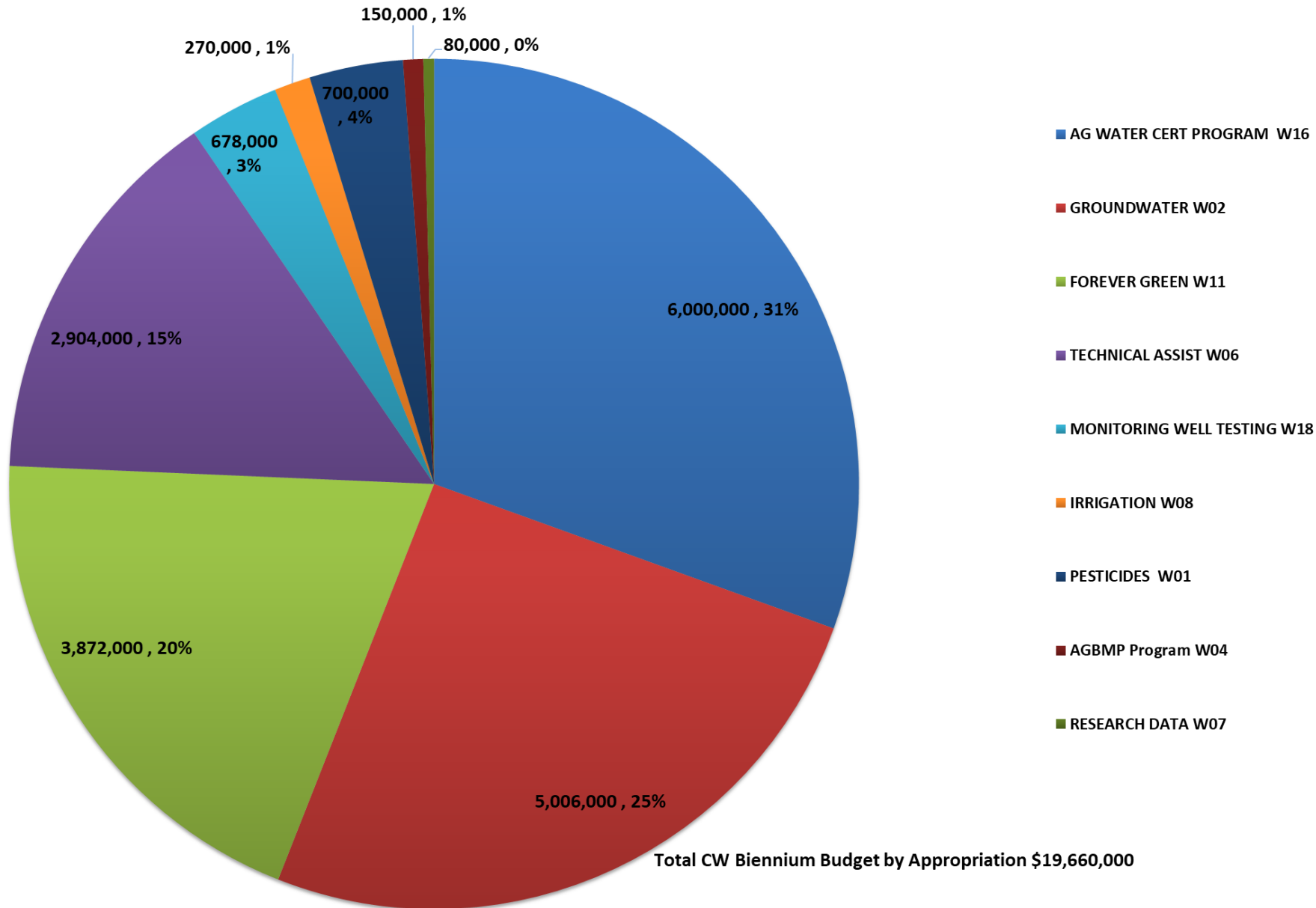


FY22/FY23 Total Biennium Budget by Appropriation



# Clean Water Fund

FY22/FY23 Total Clean Water Biennium Budget by Appropriation



# Governor's Budget Recommendation

## Increase Pesticide Fee to Fund Lab & Urban Programs

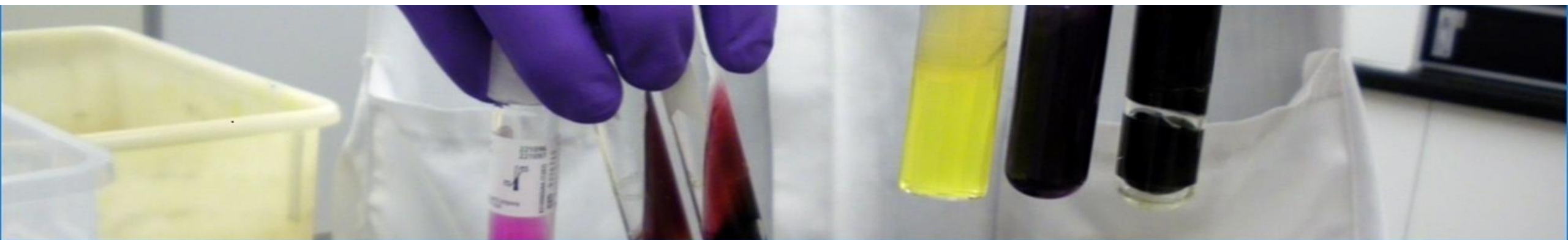
- A recommended increase in the pesticide gross sales fee rate by 0.35% for ag pesticides and 0.4% for non-ag pesticides would generate approximately \$2.251 million in the Agriculture Fund beginning FY23.
- This request represents an increase in revenue of approximately 64% over the actual receipts collected in FY20 of \$3.5 million.
- This would provide:
  - 1) Stable source of revenue to replace or add high-cost analytical equipment.
  - 2) Funding for urban pesticide education and outreach.
  - 3) Respond to OLA recommendation that MDA expand its pesticide monitoring program.



# Governor's Budget Recommendation

## Establish Climate Smart Farms Project

- **The Governor recommends a one-time general fund appropriation of \$500,000** to establish a Minnesota Agricultural Water Quality Certification Program (MAWQCP) Climate Smart Farms Project.
- The MAWQCP is a federal-state partnership between the State of Minnesota, the USDA, the EPA, and private industry as a first of its kind program that to address water quality in agricultural areas.
- The funding would support a limited-term 5-year bridge-payment program available to MAWQCP-certified farmers that obtain a Climate Smart Endorsement through implementation of climate change mitigation practices.



# Laboratory Services

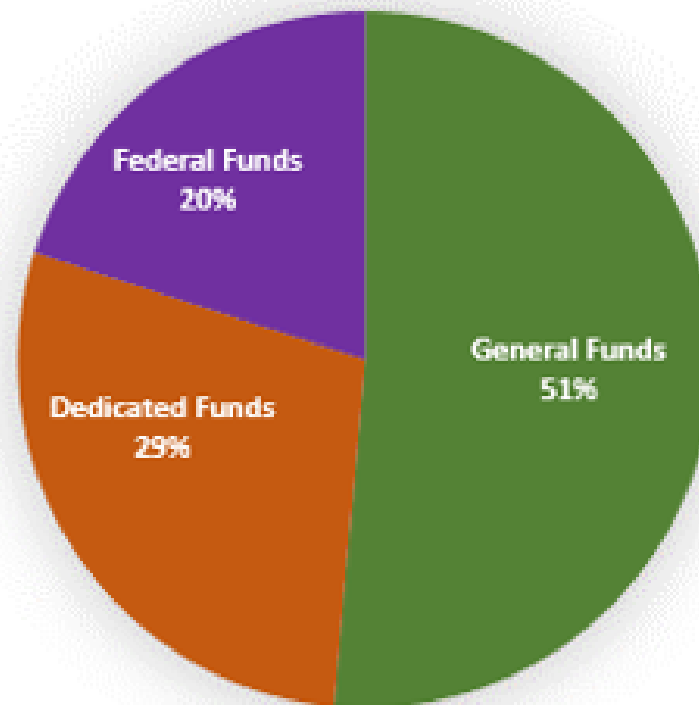
Gary Horvath, Director

# FY2022-23 Base Budget Laboratory Services

## Laboratory Services FY2022-23 Base Expenditures by Fund

**\$4.003 million**  
**Federal Fund**

**\$5.707 million**  
**Agricultural Fund &  
Misc Special Revenue**



**\$10.284 million**  
**General Fund**



A robust laboratory producing high quality data is the cornerstone of strong technical programs, whether they are regulatory, monitoring or research in nature.

# Laboratory Services

## Provides Analytical Services:

- Dairy & Meat Inspection Division - MDA
- Food & Feed Safety Division - MDA
- Pesticide & Fertilizer Management Division – MDA
- Plant Protection Division – MDA
- Ecological and Water Resources Division - **DNR**
- United State Environmental Protection Agency
- USDA/FDA Food Emergency Response Network



## **Assists in Regulatory Enforcement and Monitoring:**

- Develops and implements methods specific to the needs of the agency
- Identifies emerging issues and produce methodology that supports potential regulation or monitoring
- Analyzes “routine” or established methods that support regulatory and monitoring programs
- Provides data that is legally and scientifically defensible



## **Provides Legally and Scientifically Defensible Data:**

- Accredited in 2012 to the International Organization for Standardization, Laboratory Standard ISO/17025
- Continuing to implement ISO/17025 compliant quality system throughout the laboratory
- Successfully Accredited to the Revised Standard in 2019

# Laboratory Services



**Accredited Laboratory**

A2LA has accredited

**MINNESOTA DEPARTMENT OF AGRICULTURE**  
St. Paul, MN

for technical competence in the field of

**Biological Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This laboratory also meets the requirements of A2LA R204 – Specific Requirements – Food and Pharmaceutical Testing Laboratory Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 14<sup>th</sup> day of August 2019.



Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 3171.02  
Valid to August 31, 2021  
Revised on August 19, 2019

*For the tests to which this accreditation applies, please refer to the laboratory's Biological Scope of Accreditation.*



**Accredited Laboratory**

A2LA has accredited

**MINNESOTA DEPARTMENT OF AGRICULTURE**  
St. Paul, MN

for technical competence in the field of

**Chemical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This laboratory also meets the requirements of A2LA R204 – Specific Requirements – Food and Pharmaceutical Testing Laboratory Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 14<sup>th</sup> day of August 2019.



Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 3171.01  
Valid to August 31, 2021

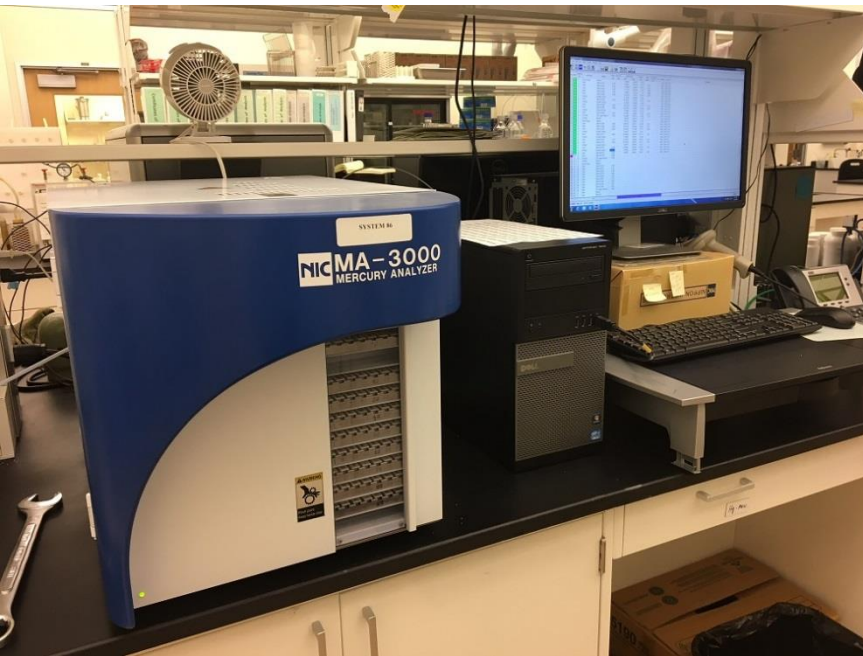
*For the tests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.*

# Laboratory Services

- Instills confidence in the integrity and validity of laboratory data used in decision making.
- Program Managers have confidence in taking actions based on laboratory data.
- The regulated community has accurate information on which their actions or responsibility is judged.
- Data is acceptable for use by federal and other governmental partners.



# Laboratory Services



- Provides higher quality data that is fit for purpose and is an added value beyond just the test result
- Laboratory generated data is undergoing increased scrutiny by the regulated community and the general public
- Helps ensure successful defense of data challenges

## **Contributes to a Healthy Minnesota through Activities that Support Food Safety:**

- Pathogen Analysis
- Compositional Chemistry
- Pesticide Residues
- Toxin Identification
- Species Identification
- Pasteurized Milk Ordinance
- Compliance Testing
- Nutritional Labeling Verification

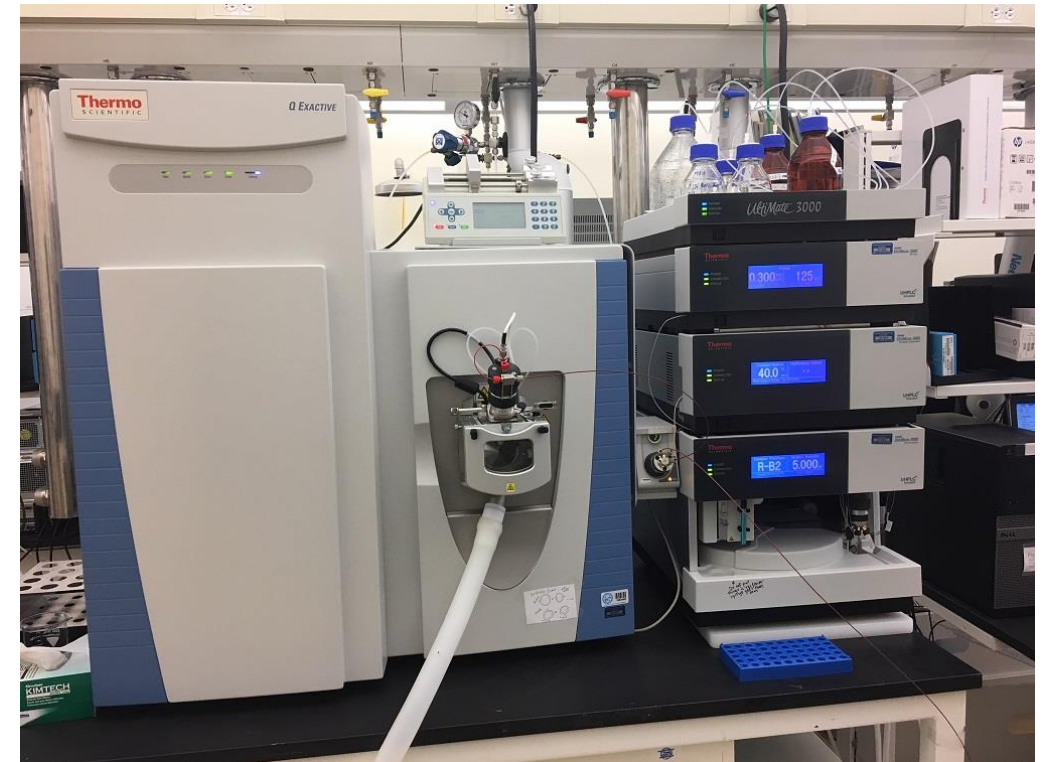
## Cooperative Agreements with USDA and FDA under the Food Emergency Response Network to Maintain Food Safety and Security:

- Provides analysis of food for select agents
- Responds to state and national outbreaks involving pathogens
- Responds to state and national incidents involving chemical agents



## Contributes to a Clean and Healthy Environment:

- Monitoring of inorganic nutrients
- Monitoring of pesticides in water
- Pesticide enforcement
- Compositional chemistry of fertilizer





# Laboratory Services

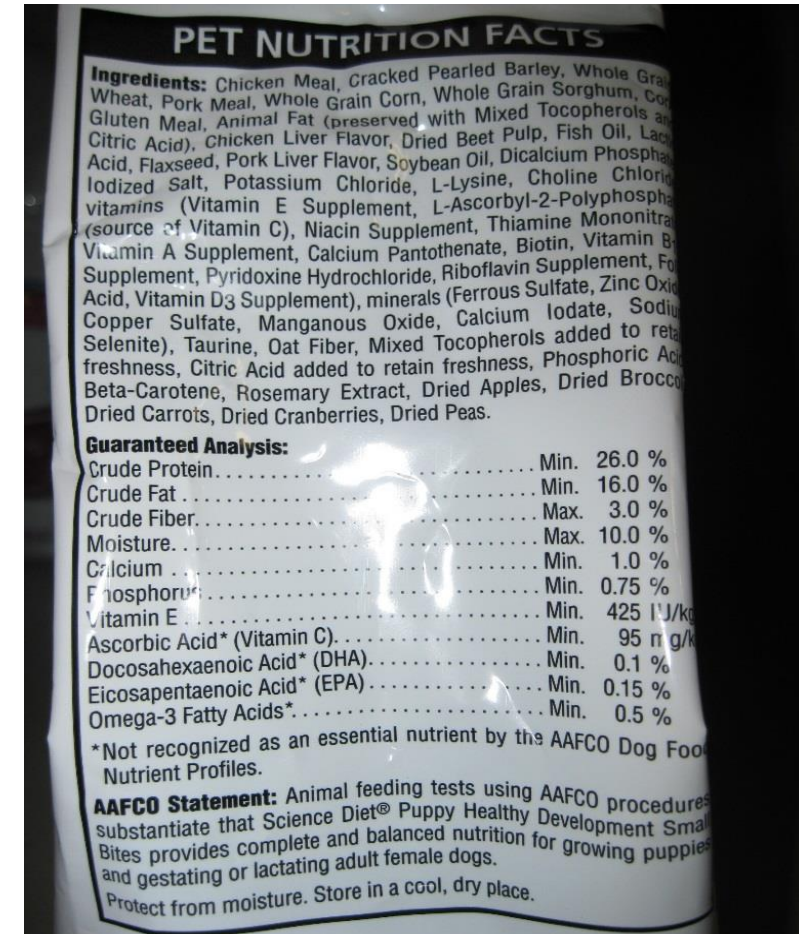


## **Provides Chemical Testing Services to the DNR:**

- Hatchery NPDES permits
- Nutrient, minerals and metals analysis
- Minnesota lakes and streams surveys
- Pond studies
- Incident response situations
- Chemical spills and fish kills

## Contributes to a Healthy Agricultural Economy:

- Label verification of ingredients for seed, feed and food
- Analysis in support of Phytosanitary Certificates for Export
- Plant pathogen detection



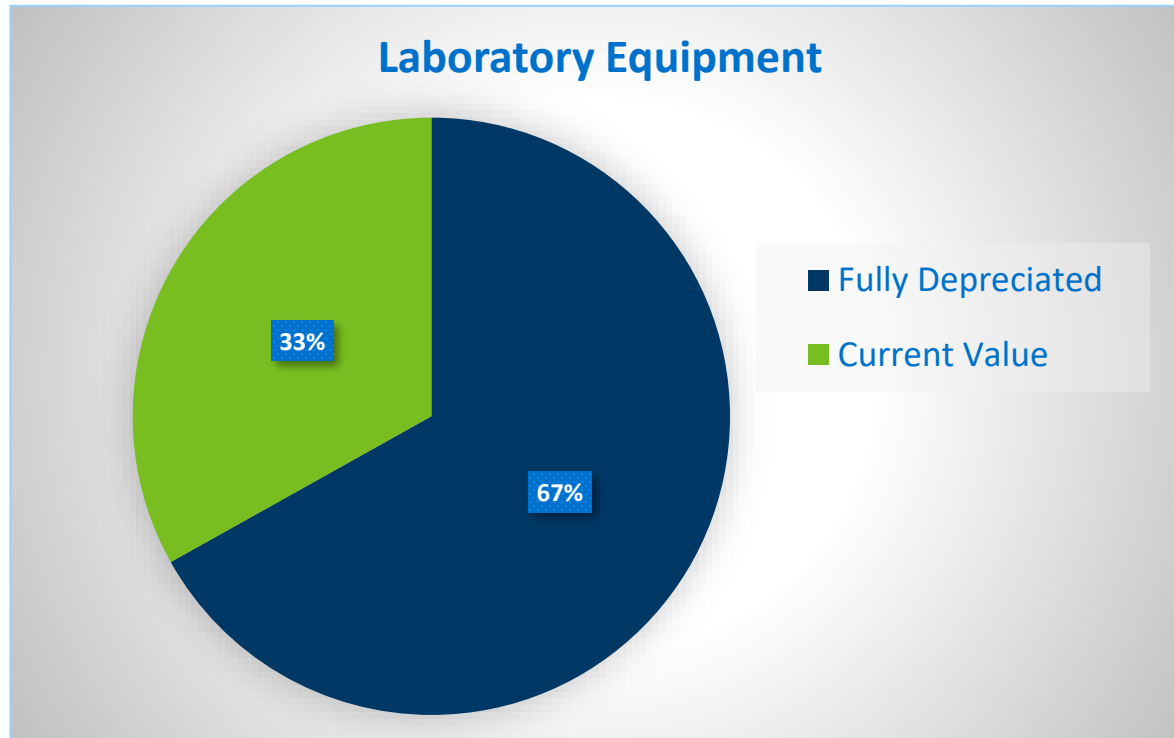
# Governor's Budget Recommendation

## Increase Capital Equipment Funding

- Increase current capital equipment appropriation by \$66,000.
- Allows the Lab to replace fully depreciated equipment in our Microbiology, Chemistry Toxicology, and Plant/Seed Analysis Units.
- Increase allows the lab to purchase the following:
  - 2 Autoclaves – Critical piece of equipment used to sterilize media, reagents, and supplies. It also decontaminates laboratory waste.
  - Bax Q7 Cyclor - Used for testing meat samples for pathogenic *E. coli*.
  - Vidas Analyzer 60 – Used for testing food, meat, dairy, and environmental samples for Listeria and Salmonella.
  - 2 Agilent ICM-MS7700s - Used to analyze heavy metals (such as Arsenic, Cadmium, Copper, Lead, Mercury, Selenium) in our state's animal feed and human food samples.

# Governor's Budget Recommendation

## Current Laboratory Equipment Value



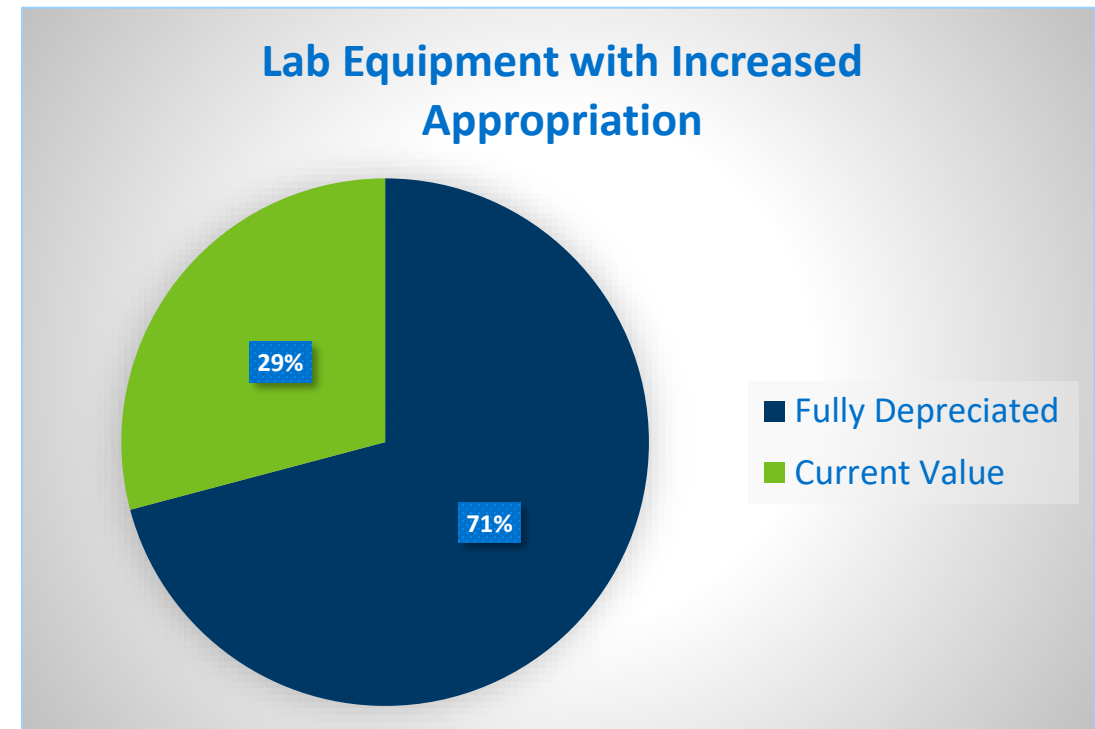
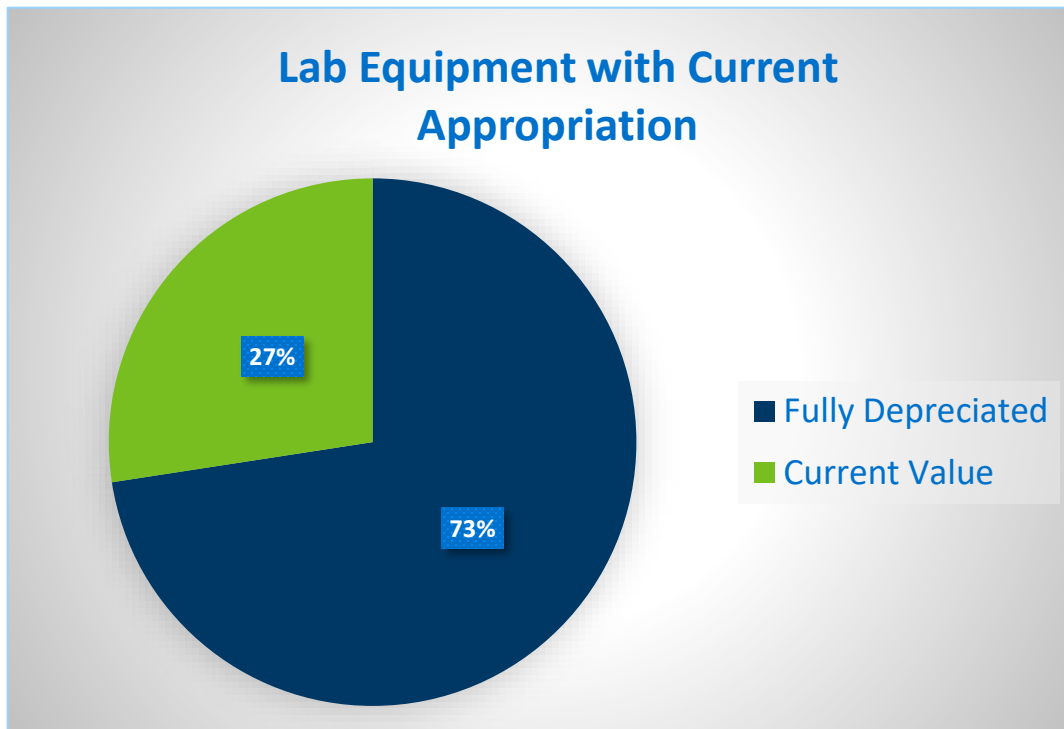
Current Value - \$1,635,696

Fully Depreciated Value - \$3,303,499



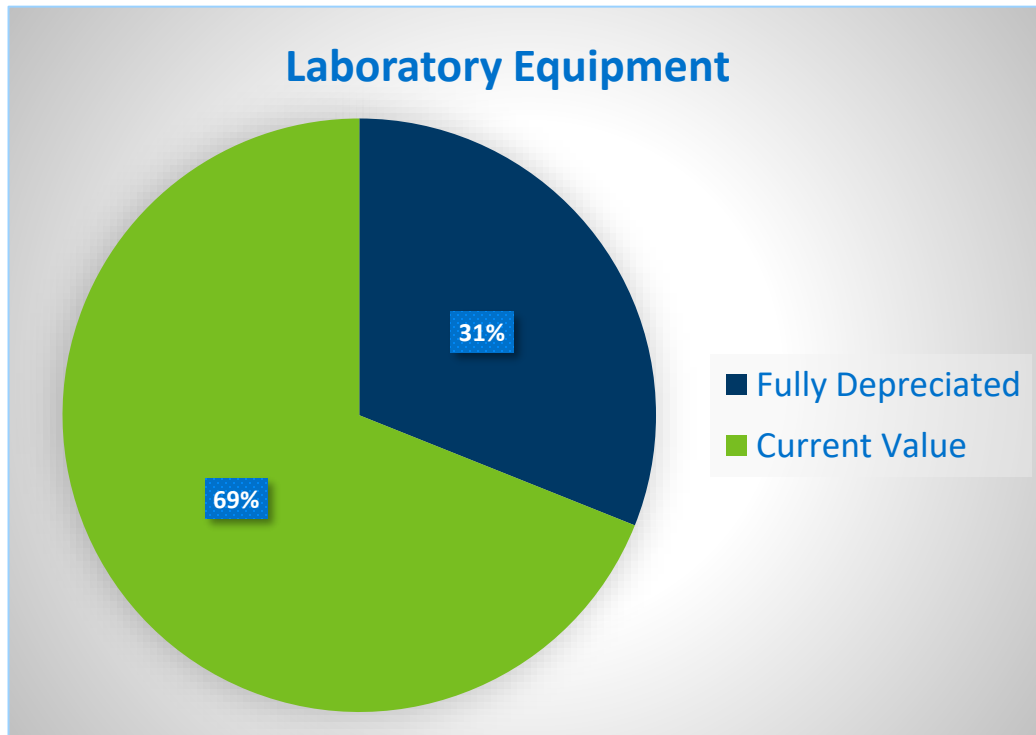
# Governor's Budget Recommendation

## Laboratory Equipment Value as of 7/1/23



# Governor's Budget Recommendation

## Laboratory Equipment Value as of 7/1/25



### Value with Appropriation Increase and Pesticide Fee Increase

Current Value - \$3,428,723

Fully Depreciated Value - \$1,544,266

# Thank you!

**Thom Petersen**

[Thom.petersen@state.mn.us](mailto:Thom.petersen@state.mn.us)

651-201-6219