



Office of Sustainability
Eva Rocke

Residence Life
Sustainability
Quality Circle

UM Dining Director of
Sustainability
VACANT

Industrial Materials
Coordinator
Derek Kanwischer

Recycling
Coordinator
Jim Lyon

Energy Manager/Facilities
Engineer
Brian Kerns

Garden Manager
Stasia Orkizewski

Climate Change Studies
Peter McDonough

Green Buildings
Jameel Chaudhry

Zero Waste
Advisory
Committee

ASUM
Sustainability
Center
Maddy Jones

Sustainable
Campus
Committee

Campus Diversity
Committee

KRELF
Committee

ASUM
Sustainability
Committee

HOW DO WE MEASURE SUSTAINABILITY?



EDUCATION & RESEARCH



UNIVERSITY OF MONTANA

CAMPUS OPERATIONS



PLANNING ADMINISTRATION ENGAGEMENT



WHAT DOES UM EMIT?

- **Scope 1: Direct Emissions**

Natural gas for heating, gas/diesel from fleet vehicles, fertilizer

- **Scope 2: Indirect Emissions**

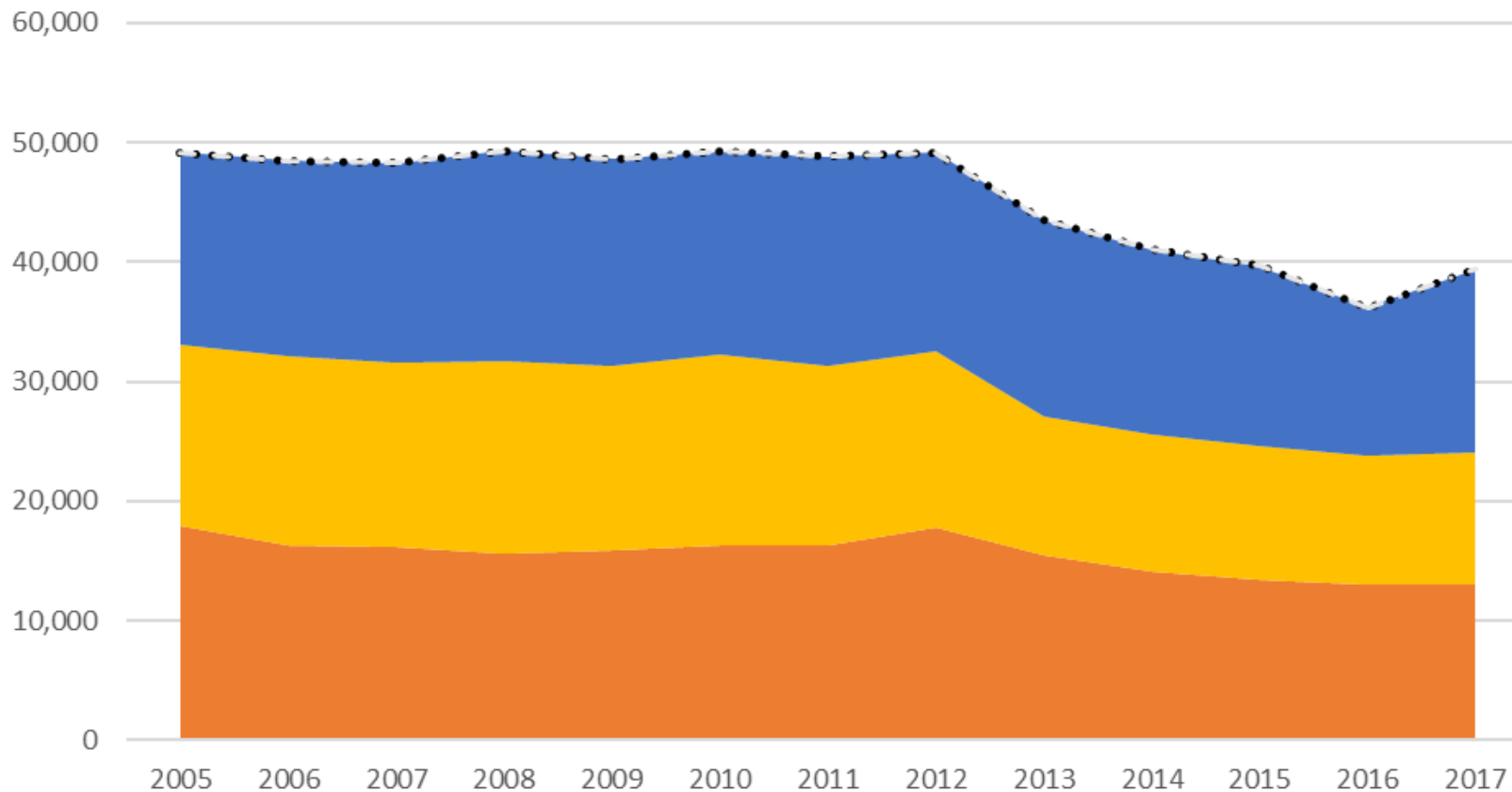
Purchased electricity (kWh from NorthWestern Energy)

- **Scope 3: Other emissions attributed to UM**

Solid waste, directly financed travel, commuting, purchased goods

MTCO₂e

Scope 3 - Other Indirect Emissions Scope 2 - Indirect Energy Emissions
Scope 1 - Direct Emissions Gross Emissions
--- Net Emissions



Scope 1: Direct Emissions.

Natural gas, diesel/gas from UM fleet, fertilizer

Scope 2: Indirect Emissions.

Purchased electricity from NWE

Scope 3: Other UM Emissions.

Solid waste, directly financed air travel, commuting, purchased goods.

- UM has **invested significantly in energy conservation** efforts, resulting in \$\$ savings and lower emissions
- 2012-2016 = 2-3% emissions **reduction** each year. 2017/2018 = **increased** emissions. Need for ZERO NET GROWTH policy?
 - Student engagement in sustainability should be #1
- Large-scale clean energy + Conservation + Offsets = Neutrality

Kless Revolving Energy Loan Fund (KRELF)

- \$6 student sustainability fee
- <https://www.umt.edu/greeningum/KRELF/>



Green Office Program



Open to all departments & offices at UM
Checklist of actions and strategies to
improve workplace sustainability

Want to get involved?

- Submit a KRELf Proposal
- Apply to be a Student at Large on an ASUM Committee:
asum.vicepres@mso.umt.edu
- Attend an upcoming event!
 - Upcoming Events:
 - Tunnel of Oppression March: 9-11
 - UM Sustainability Awards: April, TBD
 - Public Health and Climate Change event series: April 6th-10th
 - Various Earth Day events!
 - Campus Thrift: May 6th



Recycling and E-Recycling

University of Montana



University of Montana

Missoula, MT: 75,000 people

Enrollment: 10,500 students – Liberal Arts

156 acre campus: 65 buildings



Brief History

- 1990: 1 year pilot program (U-Recycle)
- 1991: Recycling fee adopted
- 1994: 3-person recycling crew: Beer, Bras, and Body Parts don't belong in bins. Old Yeller truck. 2 tons of recycling diverted/week
- 1994: MontPIRG wants to raise fee but does not pass
 - Funding is through 10 cent surplus on campus vending machines
- 1997: Recycling fee passes (\$1 ASUM recycling fee)
- 2005: \$4 per semester recycling fee
- 200?: Recycling fee become \$6 per semester
- 2020: Adequate program funding?!

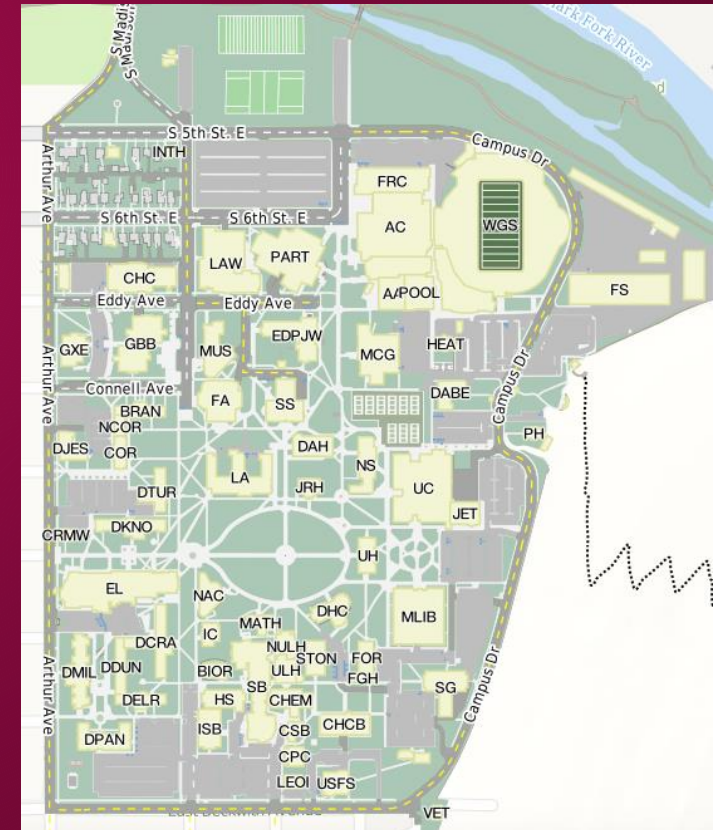
Recycling

- Jim Lyon
- UM's Sustainability Coordinator
 - Sean and Emma



Recycling

- Paper
 - Office, newspaper, magazines, colored paper, others.
- Plastics
 - Generally Plastics 1-7
- Cardboard
 - 25 buildings / day
 - 126 recycling locations



Recycling



Recycling

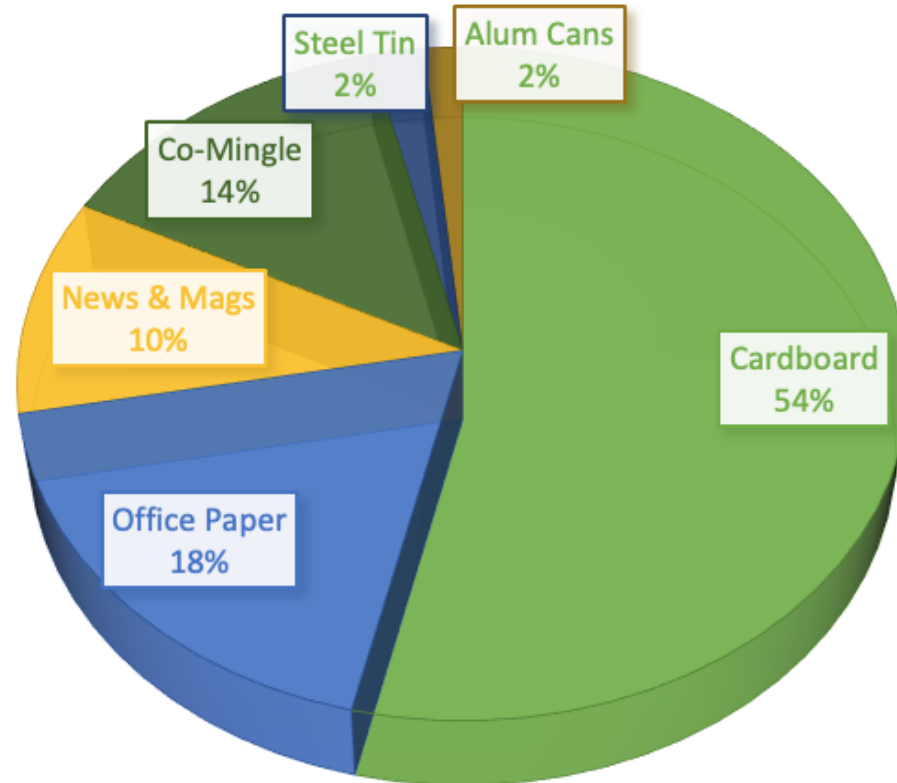


Recycling



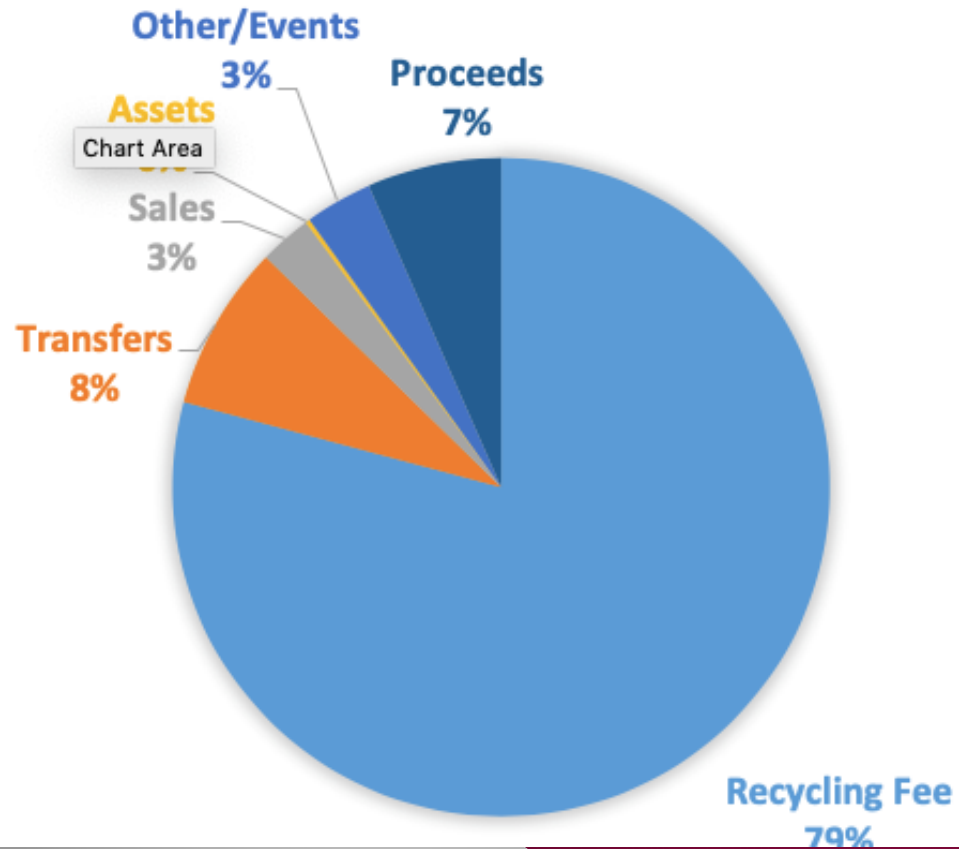
Recycling

2018 RECYCLING BY WEIGHT

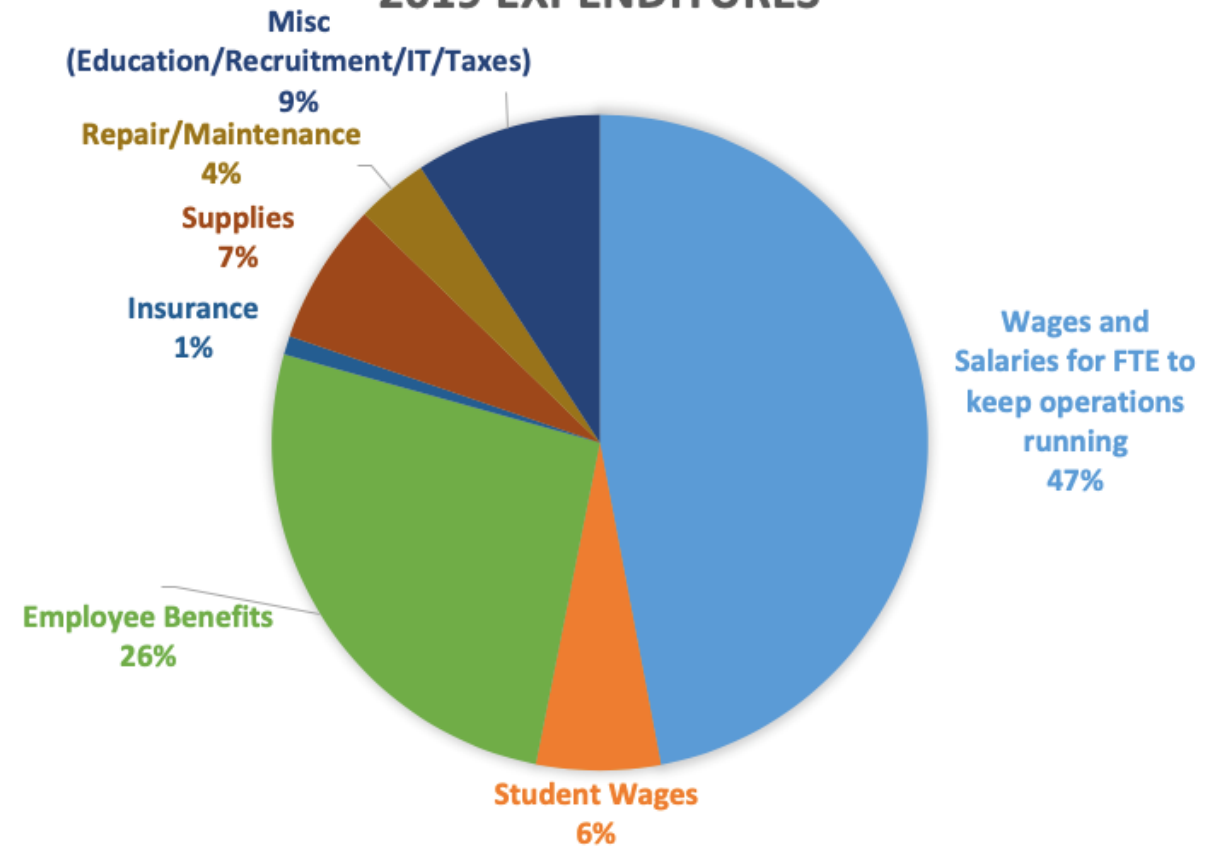


Recycling

2019 REVENUE



2019 EXPENDITURES



Recycling



Recycling



Recycling

Newspaper and Magazines



- Brown paper belongs with cardboard
- Colored paper belongs in co-mingle
- Shredded paper must be bagged separately

UM Recycling does not accept ANY books, textbooks, binders, or mixed media items such as spiral notebooks.
Books accepted at the UM Bookstore.

Co-Mingle

Plastics, Colored Paper, Aluminum and Steel



Aluminum accepted at this co-mingle bin
Follow signs and separate for higher quality recyclables

White Paper



- Brown paper belongs with cardboard
- Color paper belongs in co-mingle
- Shredded paper must be bagged separately

UM Recycling does not accept ANY books, textbooks, binders, or mixed media items such as spiral notebooks.
Books accepted at the UM Bookstore.



Ready for the future.



Designed to achieve your goals

CREATE EFFICIENCIES, REDUCE CONTAMINATION

clear messaging and restrictive openings

DESIGN WITH TOMORROW IN MIND

Replaceable graphics that can adapt to your program

STANDARDIZED COMMUNICATION SYSTEM

educates what you collect and increases participation

(2) Oxford Top Loads

- 52 Gal Streams
- Val Top

Make a statement.



Designed to achieve your goals

EDUCATE AND ACTIVATE

connect your goals to students with clear and consistent messaging

COMMUNICATE YOUR COMMITMENT

promote other sustainable efforts and strategic partnerships/sponsors

SUPPORT UNIVERSITY ATHLETICS

replaceable full panel graphics highlight big games during the season

Albany Top Loads

- 52 Gal Streams
- Val Top
- Headerboard
- Full Panel Graphics

E-Recycling



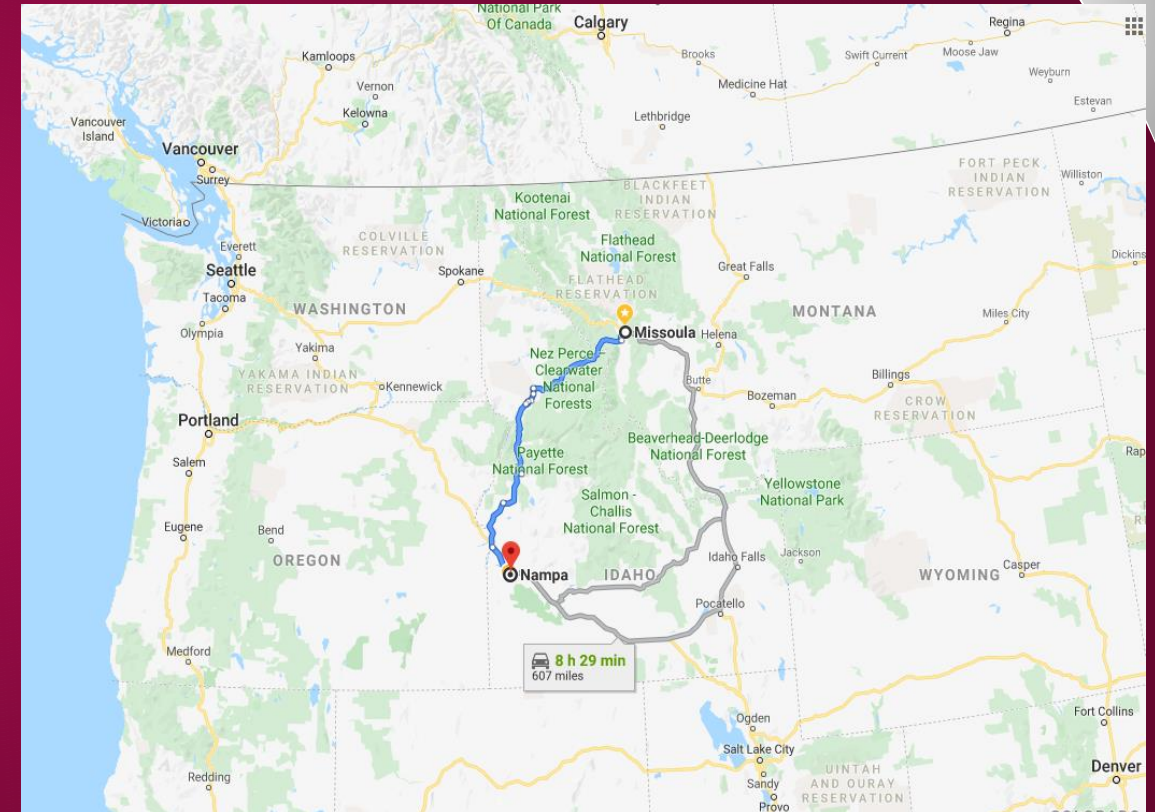
E-Recycling



E-Recycling



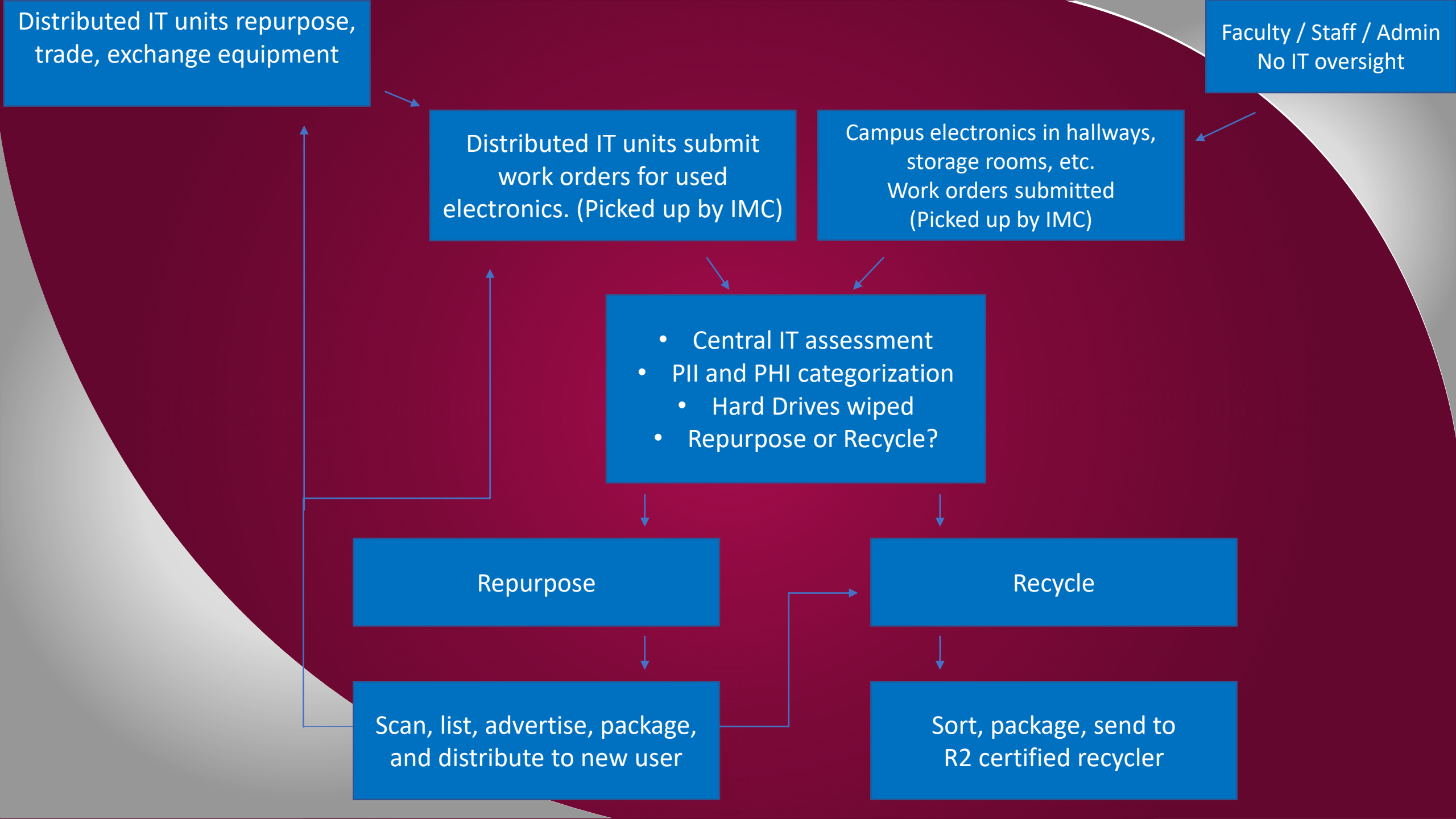
E-Recycling



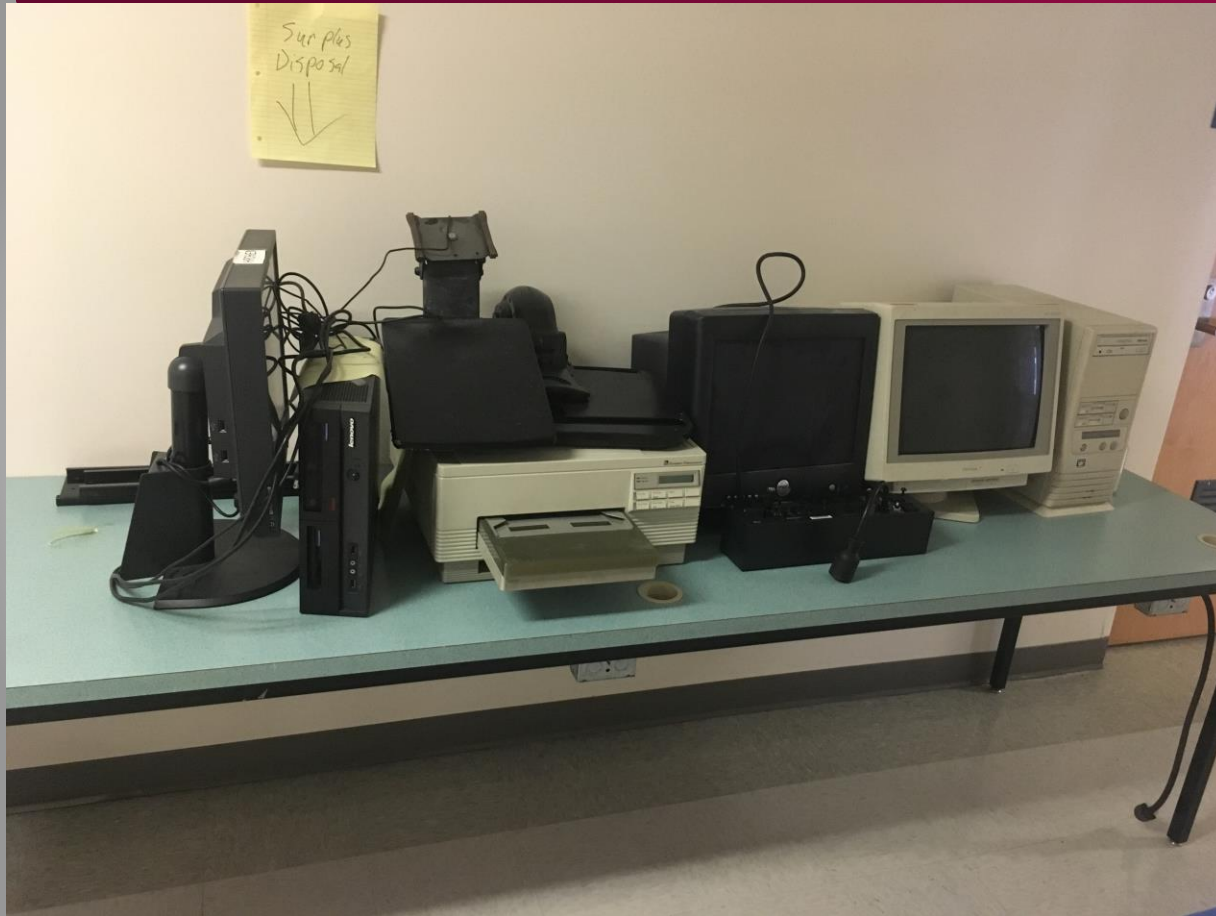
Why is e-waste managed by sustainability?

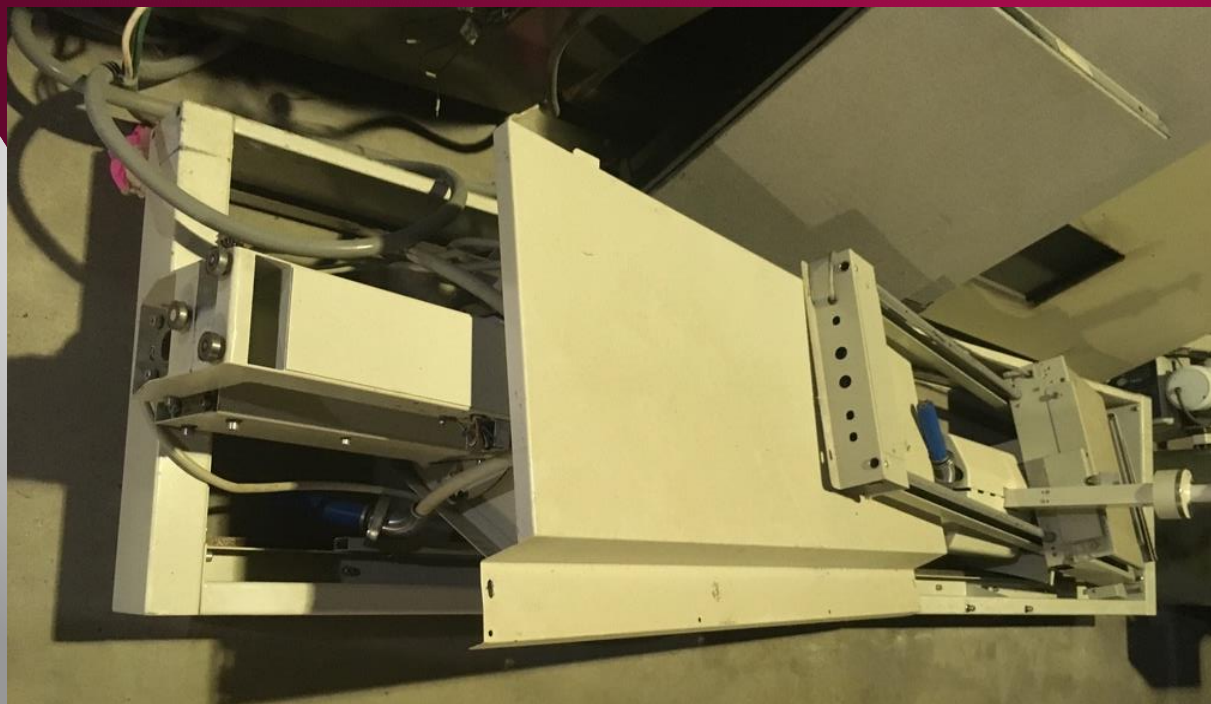
- Opportunity to create a better solution
 - The problem is interdisciplinary
- 3 considerations for your program
 - Size, location, age of program
 - Stakeholder coordination
 - Leverage for risk management and data security



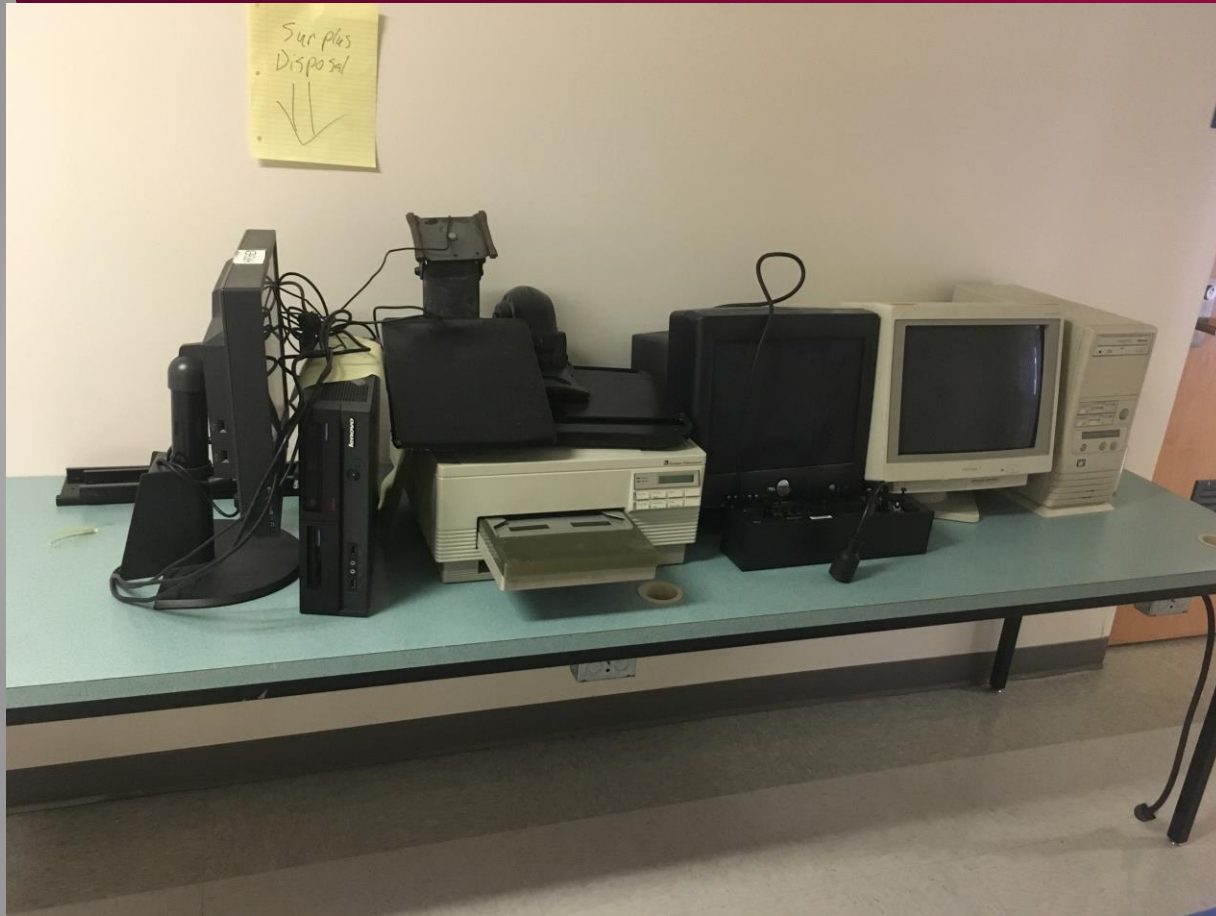


E-Recycling





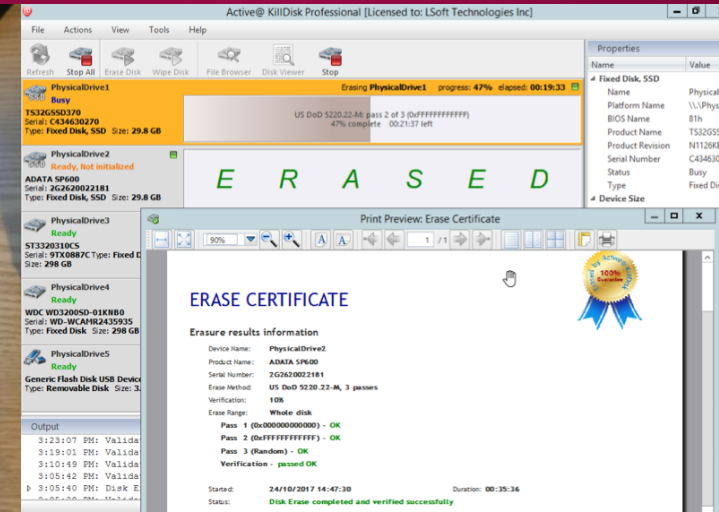
E-Recycling





E-Recycling: Program Goals

1. Data security
2. Repurposing of computers and electronics (when feasible)
3. Responsible downstream recycling



Montana Public Schools

- MT Office of Public Instruction
 - MT's School Computer Equipment Program




Surplus Sales (State of MT)

Public | Surplus®

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UNIVERSITY OF MONTANA

Current Auctions

Categories

- Airport
- Animals and Livestock
- Aviation
- Building
- Clothing
- Collectibles
- Computers**
- Cables
- General**
- Macintosh
- Macintosh Systems
- Monitors
- Networking
- Notebooks
- Parts Macintosh
- Parts Misc.

Current Auctions for The University of Montana

2445508	Lenovo Thinkpad x240 w/ docking station 🏆		MT	6 hours 1 min	\$52.00
2446001	Lenovo ThinkCentre 180gb SSD Desktop		MT	1 day 6 hours	\$25.00
2446005	Lenovo ThinkCentre 500gb HDD Desktop 🏆		MT	1 day 6 hours	\$25.00
2446307	Lenovo Thinkpad x240 w/ docking station		MT	1 day 6 hours	\$50.00

[Hide Images] | [Show Images]

Campus Exchange

- IT resilience
- Defying obsolescence?



Future E-Recycling

- Budget and staffing
 - Advanced Recovery Fee
 - Fee for service / item
 - Monetize E-recycling

62245 + 63106	Total expenditures	0.01	0.02	0.025	0.03	0.04	0.05
2014	2450544	24505.44	49010.88	61263.6	73516.32	98021.76	122527.2
2015	2479039	24790.39	49580.78	61975.98	74371.17	99161.56	123952
2016	1988080	19880.8	39761.6	49702	59642.4	79523.2	99404
2017	1665037	16650.37	33300.74	41625.93	49951.11	66601.48	83251.85
2018	1052499.7	10525	21049.99	26312.49	31574.99	42099.99	52624.99

Sustainable Transportation for the Campus Community



Danny Gundlach
ASUM Office of Transportation

Cost of Renting

- \$9,477/year
- \$784/month
- \$26/day
- \$2.6/functional hour

Cost of Owning a Car

- \$8,469/year
- \$706/month
- \$23.5/day
- \$23.5/functional hour

ASUM Office of Transportation

- Student operated and governed
 - 20-25 part-time student drivers, 3-4 transportation ambassadors.
 - Transportation Board: student senators, student-at-large



Transit Service



Bus besties for life!!



Full-time employees.
12 fixed routes, serving
Missoula and neighboring
communities.
A lot of buses



Part-time student drivers.
4 fixed routes, serving
campus community.
9 buses, some of them well
along in years

**Zero
Fare!**



Red Line	Serves student housing and campus. 12 minute peak frequency.
Purple Line	Serves grocery stores (Food Farm, Good Food Store, and Missoula Food Bank), Corso Apts, 5 th /6 th corridor. 30 minute frequency
Green Line	Serves Missoula College, campus, with E Broadway stops. 15 minute frequency.
Gold Line	Thursday-Saturday nights until 2:30 AM. Serves student housing, downtown and campus. 30 minute frequency

Other ASUM-OT Services

- Bikes:
 - Semester/year bike rentals: \$60/100 for students
 - \$1,000 interest-free bike loans
 - Partnership with Free Cycles
- Transportation Information Center UC105



Challenges

- Budgetary
- Electrical
- Geographical
- Personal



Resources

ASUM-Office of Transportation

Website: UDASH.org

Live-track buses: Ride Systems App or ASUMbus.com

Schedule tracking: website, new Mountain Line maps

Office: UC 105 call: (406)243-4599

Other resources:

Download the Mountain Line App

Google Maps shows stops and ETA

Missoula in Motion: Way to Go!

Missoula program

