

## ELECTRONICS RECYCLING &amp; WASTE DIVERSION

# Sustainability Impact Report

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In partnership with: ECyclers of Idaho

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## EXECUTIVE SUMMARY

Idaho State University has undertaken a sustained effort to divert end-of-life electronics and related equipment from landfills through organized pickup and recycling events. This report summarizes 9 documented pickup events and provides a quantitative overview of devices collected, total material weight, and device type breakdown.

|                           |                                          |                                          |
|---------------------------|------------------------------------------|------------------------------------------|
| <b>9</b><br>Pickup Events | <b>67,051.4</b><br>Total Pounds Diverted | <b>33.5</b><br>Tons of E-Waste Recovered |
|---------------------------|------------------------------------------|------------------------------------------|

## BACKGROUND & PURPOSE

Electronic waste (e-waste) is one of the fastest-growing waste streams globally. Improper disposal of electronics can release hazardous materials, including lead, mercury, cadmium, and brominated flame retardants, into soil and groundwater. In response, Idaho State University has partnered with eCyclers of Idaho, an electronics recycling vendor, to facilitate responsible collection and recycling of surplus and end-of-life electronics from campus departments.

This report was prepared at the request of the ISU Sustainability Office to document the environmental benefits of these collection efforts and to support ongoing sustainability reporting and institutional goals.

## PICKUP EVENT SUMMARY

A total of 9 pickup events have been documented. The table below summarizes the weight of material recovered per event. Where available, the vendor-reported total weight is shown alongside the line-item computed total.

| Pickup   | Reported Wt. (lbs) | Computed Wt. (lbs) | Variance (lbs) |
|----------|--------------------|--------------------|----------------|
| Pickup 1 | 30,109             | 30,109             | 0              |
| Pickup 2 | —                  | 6,650              | —              |
| Pickup 3 | —                  | 6,572              | —              |
| Pickup 4 | —                  | 4,077              | —              |
| Pickup 5 | 2,488              | 3,738              | -1,250         |
| Pickup 6 | 3,028              | 3,028              | 0              |
| Pickup 7 | 4,673              | 4,679              | -6             |
| Pickup 8 | 5,190              | 5,211              | -21            |
| Pickup 9 | 4,264              | 4,223              | 41             |

|       |              |  |  |
|-------|--------------|--|--|
| TOTAL | 67,051.4 lbs |  |  |
|-------|--------------|--|--|

*Note: Variances between reported and computed weights may reflect tare weight adjustments, items not individually itemized, or rounding on the vendor manifest.*

## DEVICE TYPES & MATERIAL CATEGORIES

The following table provides a consolidated breakdown of device types and material categories collected across all pickup events. Items have been grouped into common categories to facilitate sustainability reporting. All weights are approximate.

| Device / Material Category            | Approx. Weight (lbs) |
|---------------------------------------|----------------------|
| Other Electronics                     | 40,054               |
| Desktop Computers                     | 7,340                |
| Servers                               | 3,852                |
| Janitorial / Lab Equipment            | 3,373                |
| Monitors                              | 2,916                |
| Printers                              | 2,346                |
| CRT TVs / Monitors                    | 1,343                |
| All-in-One Computers                  | 1,081                |
| Laptops                               | 962                  |
| Appliances / Scrap Metal              | 768                  |
| Keyboards / Mice                      | 755                  |
| Wire / Cable                          | 527                  |
| UPS (Uninterruptible Power Supply)    | 522                  |
| Network Equipment (Switches, Routers) | 501                  |
| Hard Drives (pulled)                  | 499                  |
| Batteries (Li-Ion & Lead Acid)        | 213                  |
| <b>TOTAL</b>                          | <b>67,051.4</b>      |

## SUSTAINABILITY IMPACT

### Landfill Diversion

Over the course of 9 pickups, ISU has diverted approximately 67,051.4 pounds (33.5 tons) of electronic waste from landfills. This is significant given that e-waste represents roughly 2% of America's trash in landfills but equates to 70% of overall toxic waste.

### Hazardous Material Containment

Among the materials collected were items containing hazardous substances that would otherwise risk environmental contamination if landfilled:

- Batteries (Lithium-Ion & Sealed Lead Acid): approximately 735 lbs collected across all pickups, containing lead, sulfuric acid, and lithium compounds.

- CRT Monitors & Televisions: significant quantities collected; each CRT unit can contain 4–8 lbs of lead.
- Toner cartridges: collected across multiple events, containing fine particulate carbon black and polymer compounds.
- Mixed circuit boards, PCBs, and hard drives: containing beryllium, cadmium, and other heavy metals.

## Resource Recovery

Electronics recycling enables the recovery of valuable raw materials including copper, aluminum, gold, silver, palladium, and rare earth elements. By recycling this equipment rather than discarding it, ISU contributes to reducing the demand for virgin resource extraction, a key principle of circular economy thinking.

1. Track CO<sub>2</sub> equivalency: Partner with the recycling vendor to obtain environmental equivalency metrics (e.g., CO<sub>2</sub> saved, energy recovered) to strengthen sustainability reporting.
2. Data-driven scheduling: Analyze pickup weights over time to optimize pickup frequency and scheduling for maximum efficiency.

## CONCLUSION

Idaho State University's electronics pickup program has successfully diverted 67,051.4 pounds of e-waste, equivalent to 33.5 tons, from landfills across 9 documented pickup events. This effort reflects a meaningful commitment to environmental stewardship and responsible resource management. Continued expansion and tracking of this program will further strengthen ISU's sustainability profile and contribute to broader institutional goals for waste reduction and circular economy practices.