

**Student Government Resolution**  
**A Resolution to Establish a Semi-Annual Battery Recycling Program**  
**Sponsored by Senator Chris Hornsey, Vice President Molly Turner, Senator Wyatt Mansel, and Environmental Affairs Committee Chair Adrian Wheeler**

WHEREAS,

- The Student Government is the official governing body of the Student Association and exists to represent the present and long term best interests of the Student Association in the formulation of the University policy and in the fulfillment of the University mission; and
- Truman State University's Sustainability Pledge states that Truman is committed to a reduction in waste, more responsible interactions with fellow citizens, and stewardship practices that keep future generations in mind<sup>1</sup>; and
- Truman is a member of the Missouri Student Environmental Coalition (MSEC)<sup>2</sup>; and
- Truman is a member of the Association for the Advancement of Sustainability in Higher Education (AASHE)<sup>3</sup>; and

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<sup>1</sup>For more information about the Sustainability Pledge at Truman State University, visit the Truman Sustainability, "Education and Research" section of the University's website. Only Truman faculty, staff, administration and students can take the Sustainability Pledge by using their TruView login information. As of the May 9, 2013 eight hundred sixty people have taken the Sustainability Pledge. To visit the webpage directly, please, see <http://sustainability.truman.edu/education-and-research/>.

<sup>2</sup>The Missouri Student Environmental Coalition (MSEC) "is a network of Missouri students and organizations dedicated to improving the environmental impact of the state through action, advocacy, and education." The mission of MSEC, as quoted from their website is: "Unify the youth environmental movement of Missouri to turn ideas into action and support students to achieve an ecologically sound, socially just, and economically viable state for the benefit of all life, present and future." For more information, please see the MSEC website at: <https://sites.google.com/site/mostudentenvironmentcoalition/>. More information on MSEC's relationship with Truman State University's Inter-Campus Collaboration on Sustainability can be found at: <http://sustainability.truman.edu/public-engagement/>.

<sup>3</sup>Truman is a member of the Association for the Advancement of Sustainability in Higher Education (AASHE). "AASHE is helping to create a brighter future of opportunity for all by advancing sustainability in higher education. By creating a diverse community engaged in sharing ideas and promising practices, AASHE provides administrators, faculty, staff and students, as well as the business that serve them, with: thought leadership and essential knowledge resources; outstanding opportunities for professional development; and a unique framework for demonstrating the value and competitive edge created by sustainability initiatives." (aashe.org) On the AASHE website, you can find their mission, values, and goals at <http://www.aashe.org/about/aashe-mission-vision-goals>. More information on AASHE's relationship with Truman State University's Inter-Campus Collaboration on Sustainability can be found at <http://sustainability.truman.edu/public-engagement/>. The President's Sustainability Action Committee (PSAC) also mentions AASHE within their 2013-2014 annual report (page six). The report can be found at <http://admissions.truman.edu/web/FlexPaperZine/view.asp?file=SustainabilityAnnualReport2013-2014.pdf>.

- Truman State President's Sustainability Action Committee set a goal of achieving the STARS Silver rating by this year (2015)<sup>4</sup>; and
- Truman is working to reduce waste and towards a more renewable energy friendly campus with five Solar Arrays as of 2014, while Bulldog Biodiesel purchased a BioPro190 automated processor which has been fueling all equipment at the University Farm since 2008<sup>5</sup>; and
- On March 15, 2015, the Student Government unanimously approved a resolution for a \$5 per semester per student Sustainability Fee to be voted on by the student body in the April 2015 Truman State University Student Government Elections; and
- The Kirksville Public Works Department currently operates a Household Hazardous Waste Program, collecting and properly recycling various types of batteries including: nickel-cadmium, alkaline, lead acid, lithium, and button batteries<sup>6</sup>; and
- The current recycling capacities of Truman State University do not allow for the proper collection and disposal of single-use household batteries; and
- Batteries that are not properly disposed have a greater chance of being deposited into landfills; and
- Batteries that are discarded into landfills are more likely to leak hazardous acids<sup>7</sup> and other materials into the ground, contaminating soil and runoff water<sup>8</sup>; and
- Truman State University's Bear Creek has experienced problems in the previous two years with contaminated runoff water which potentially contained unsafe levels of acidity and heavy metals; and
- Water with increased acidity can endanger various organisms, which are susceptible to slight changes in pH levels<sup>9</sup>; and

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<sup>4</sup>Ibidem first link, pages five and six. For information on the AASHE rating scale, see <https://stars.aashe.org/>. For information specific to Truman State University and rating, see <https://stars.aashe.org/institutions/truman-state-university-mo/report/2012-03-14/OP/grounds/OP-T2-21/>.

<sup>5</sup>Ibidem, pages four through six. Solar Panels: "Solar Panels Added to Campus Buildings" on Truman's website at <http://newsletter.truman.edu/article.asp?id=8781>. "Truman Installs Solar Panels" was the title that made the front page of Truman's newsletter. Donna Liss and Karl Schneider, two key members in Truman's sustainability efforts are also interviewed for the article which can be located at <http://index.truman.edu/pdf/2013-2014/august29/page1.pdf>. BioPro190: "BioPro Success Stories - Testimonials from BioPro Owners" <http://www.springboardbiodiesel.com/BioPro-Success-Stories>. "Bulldog Biodiesel: Help Create A More Sustainable Campus." <http://bulldogbiodiesel.truman.edu/process.html>.

<sup>6</sup>Kirksville Public Works, "Household Hazardous Waste Program" informational pamphlet. For specific types of hazardous waste accepted, please see [http://www.kirksvillecity.com/filestorage/72/172/4422/HHW\\_Brochure.pdf](http://www.kirksvillecity.com/filestorage/72/172/4422/HHW_Brochure.pdf).

<sup>7</sup>"Water Pollution." *Thank You Ocean*. California's Thank You Ocean Campaign, n.d. Web. 28 Feb. 2015. Providing important information regarding various types of pollution, including the heavy metals and acid leaked by batteries, this website has valuable practices used in California to help address the current drought situation combined with pollution from humans.

<sup>8</sup> Karnchanawong, Somjai, and Pawena Limpiteeprakan. "Evaluation of Heavy Metal Leaching from Spent Household Batteries Disposed in Municipal Solid Waste." *Waste Management* 29.2 (2009): 550-58. Web. This study shows the high amounts of heavy metals that leak from batteries in landfills and eventually reach waterways from runoff.

<sup>9</sup>Helfrich, Louis A., Richard J. Neves, and James Parkhurst. "Liming Acidified Lakes and Ponds." *Liming Acidified Lakes and Ponds*. Department of Fisheries and Wildlife Sciences, Virginia Polytechnic Institute and State University. 1 May 2009. Web. 28 Feb. 2015. Virginia State University and Virginia Tech combined to create this article about practices on how to help deacidify waterways severely affected by acidification. While not directly pertaining to the issue of battery waste runoff from landfills, it provides a good overview of the effects of acidification on organisms in freshwater ecosystems.

- According to the World Health Organization, water with high acidity may be unsafe for extended contact with human skin as well as contact with other other sensitive areas, such as eyes and can damage man-made water infrastructure<sup>10</sup>; and
- During the Spring 2014 semester, Amanda Frazer, a Truman student under the supervision of Dr. Michael Kelrick, coordinated and implemented a month-long battery recycling program in which she collected over 150 lbs in batteries<sup>11</sup>; and
- In her final report, Frazer expressed the hope that future students, faculty, and/or organizations would seek to establish a permanent program on campus to properly recycle batteries<sup>12</sup>; and
- Schools in Missouri including Harris-Stowe University, Lincoln University, Missouri University of Science and Technology, Saint Louis University, University of Missouri-Kansas City, and University of Missouri-St. Louis have implemented battery recycling programs or inform students, faculty, and community members of opportunities to properly recycle household single-use and rechargeable batteries; and
- A key example of the successes of these programs is the battery recycling program at the University of Missouri-Columbia, which collected almost 2.5 tons of batteries in 2014 alone.<sup>13</sup>

THEREFORE BE IT RESOLVED THAT THE STUDENT GOVERNMENT,

- Continues to show making campus more sustainable by promoting Earth Week activities to increase awareness of environmental issues, supporting efforts to clean up Bear Creek, and allowing students to voice an opinion on a potential sustainability fee in the 2015 Student Government Elections; and
- Strives to assist in working to decrease levels of acidity and heavy metals in waterways and soil, especially threats to Bear Creek; and
- Will organize, promote and execute a single-use household battery recycling drive at least once a semester; and
- Ensures drives should last no less than two weeks to allow for maximum opportunities for community members to gather batteries and recycle them; and
- Coordinates the drive with the Physical Plant and with appropriate authorities for approval of locations for collection bins and information centers around campus; and
- Plans to ensue collection bins that will be constructed from materials that will be able to contain leaks if they were to occur inside the container during the drive; and

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<sup>10</sup>Fawell, J.K., Mr. "PH in Drinking-water." Ed. Marla Sheffer. Comp. J. Cotruvo, M. Giddings, P. Jackson, Y. Magara, E. Ohanian, J. Bartram, C. Vickers, Robert Bos, and Penny Ward. Guidelines for Drinking-water Quality (2007): n. pag. World Health Organization. Web. 24 Mar. 2015. This introduction to a bigger report summarizes the report by stating the dangers of low pH levels in waterways.

<sup>11</sup>As per Amanda Frazer's report, as kindly supplied by Dr. Michael Kelrick, Biology Department Chair and faculty supervisor of the project. Amanda completed the project as her capstone project for her to finish her Environmental Studies Minor.

<sup>12</sup>Ibidem, 11

<sup>13</sup>Information from email received from Student Senator Wyatt Mansel on March 23, 2015 from Alicia LaVaute.

- Establishes information centers next to collection bins containing pamphlets with information about the dangers of battery acid leaks in landfills and how to properly dispose many common household batteries; and
- Transports all acceptable batteries to the Kirksville Public Works for proper disposal; and
- Delivers remaining batteries via volunteers to appropriate recycling facilities at the earliest opportunity; and
- Amends Article I, Section 13 of the Standing Rules to create a Clause 2 stating:

“The Environmental Affairs Chair, in coordination with the Physical Plant and other appropriate authorities, shall organize, promote, and execute a Battery Recycling drive once a semester with the last day corresponding with collection dates of the Household Hazardous Waste Program operated by the Kirksville Public Works Department.”

- Encourages future efforts by students, faculty, staff, and administrators to continue pursuing a better environment and being proactive leaders, aiding a global sustainability transformation.

THE STUDENT GOVERNMENT DIRECTS THAT,

Additional copies of this resolution are disseminated to the University President, Troy Paino; Chief Information Officer, Donna Liss; University Board of Governors; Physical Plant; the President’s Sustainability Action Committee; the Strategic Planning Advisory Committee (SPAC); the Strategic Planning Steering Committee (SPSC); Kirksville Public Works Department; Biology Department Chair, Dr. Michael Kelrick; Truman Alumna Amanda Frazer; the Departments that provide Sustainability-Related Courses; and the Truman Media Network.

**Passed Unanimously on April 6, 2015**