

CSUN AS Recycling Feasibility Study



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TERRASOLUTIONS
Environmental Analysis, Advice & Action

Please note that the ideas in this document were generated in a brainstorming-type setting for the CSUN AS Recycling Program. Stay tuned for conclusions and formal recommendations.

Table Of Contents

I.	Executive Summary	3
II.	About the Visioning Sessions	5
III.	Mindmapping Session	6
	Mindmap 1	6
	Mindmap 2	7
IV.	Visioning Session Findings	8
V.	Visioning Session Details	10
	TerraSolutions Session Brainstorm Ideas: TABLE 1	11
	AS Recycling Staff Brainstorm Ideas: TABLE 2	14
VI.	Futuristic Visioning of CSUN	16
	Ideas: TABLE 3	18
VII.	Conclusion	19

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I. Executive Summary

Goals

Associated Students (AS) hired an environmental consulting firm, TerraSolutions Consulting, LLC, to help determine what a proposed California State University Northridge (CSUN) AS Recycling Center should be, specifically “to determine the capacity of a renovated facility to meet growth of programs over the next five (5) years”. This is to include the creation of “models of current and future quantities of recycled materials”.

Logistics

Tracie Bills and Laurence Kuhn of TerraSolutions were asked to produce a Visioning Session on campus, gathering input from a broad spectrum of the CSUN community. This event took place on May 6th, 2009 at the University Student Union’s Flintridge Room, comprised of two sessions; 9am and 2pm. Attendance was approximately 36 members of CSUN (18 per session) representing Associated Students, Faculty, Physical Plant Management, Administration, University Corporation, University Student Union and students, among others.

Process

The sessions began with a History of (AS) Recycling at CSUN, followed by Visioning guidelines and framework. During the next hour attendees contributed their ideas about recycling on campus, captured on 2 “Mind Maps”. Mr. Kuhn managed the Mind Mapping component while Ms Bills recorded comments and offered additional perspectives to further the group’s participation. The final 15 minutes all attendees were encouraged to write a fictitious, visionary article in the year 2015 describing the key factors to what by then would be known as a fantastically successful CSUN environmental and recycling program, renowned nationwide.

Results

Key elements from the Mind Maps include the need for a two-pronged marketing strategy, which was strongly validated in both sessions. First, the awareness level of the AS Recycling endeavors was deemed low. This diminishes the community’s adoption of the various components of the recycling program that may be rolled out, not to mention an overall neglect in promoting good environmental practices at CSUN. Secondly, the lack of consistency in the co-location of collection bins—offering mixed paper, bottles & cans, and trash options to people—made it difficult to attain higher diversion rates to keep landfill waste to a minimum. Participants were in consensus that single purpose containers only invited undesired results.

Related to bin location was the need for clear and consistent signage, identifying the materials to be collected in each container plus any nearby alternatives not covered at that location; e.g., where compostables may go if a classroom set of bins didn't collect them. The concept of a themed approach—specific to CSUN—was raised during the sessions; fodder for a marketing strategy's awareness factor.

Many additional items were addressed beyond the typical mixed paper and beverage containers recycling. Providing education and resources to recycle or otherwise divert these materials was seen as essential to a successful AS Recycling program and strongly desired.

Among the targets was the elimination of disposable or recyclable beverage and food containers, e.g., the waxy coffee cups, plastic lids and stir straws, hot sleeves, etc. in favor of reusable containers.

Electronic Waste (eWaste) collection throughout the year and in places convenient to students.

Food compost capability and capacity, either on-campus or off, rather than throwing leftover food from dining areas, dorms, office, classroom and meeting areas into landfill trash.

Of particular interest were the results from the article-writing component of the Visioning Sessions. Over and over, the participants described their vision of how CSUN led the charge and made benchmark-setting environmental advances. Recurring elements included a very self-sustaining campus with virtually no carbon footprint, significant revenue and/or cost-savings from wise environmental practices that helped offset tuition or provide further essentials on campus, the elimination of plastic water bottles, the use of eBooks to minimize or eliminate hardcopy textbooks, green education and, consistently and an aggressive and comprehensive energy strategy that essentially eliminated reliance on external power for CSUN's campus operations.

Further details of the Visioning Sessions can be found in the full summary that follows.

End of Executive Summary

II. About the Visioning Sessions

The Sustainability and AS Recycling Center Visioning Sessions were held at two different times on Wednesday, May 7, 2009 for an hour and a half each. These sessions were designed to provide an opportunity for staff and students to brainstorm on what future opportunities there are for sustainability and the recycling program on campus as well as any feedback provided to better enhance the current program. There were approximately 36 people total at these visioning sessions, all of which were somehow related to the Campus Sustainability Committee, AS Recycling Center or a basic interest in campus sustainability.

TerraSolutions Consulting led the visioning meeting with assistance from the AS Recycling Team, with each session consisting of three phases. First, a colorful history of the AS Recycling Program and Center, narrated by Cynthia Signett. Then an introduction to the visionary process and protocol were discussed prior to Phase Two, the brainstorming portion of the meeting. Mind Maps with word prompts were placed on large butcher paper for all attendees to view, allowing thoughts to flow and ideas to emerge. For the wrap-up of each session all attendees were encouraged to participate in authoring a fictitious article on how CSUN helped change sustainability on campus, from a future perspective in the year 2015, looking back at the keys to a wonderfully successful program.

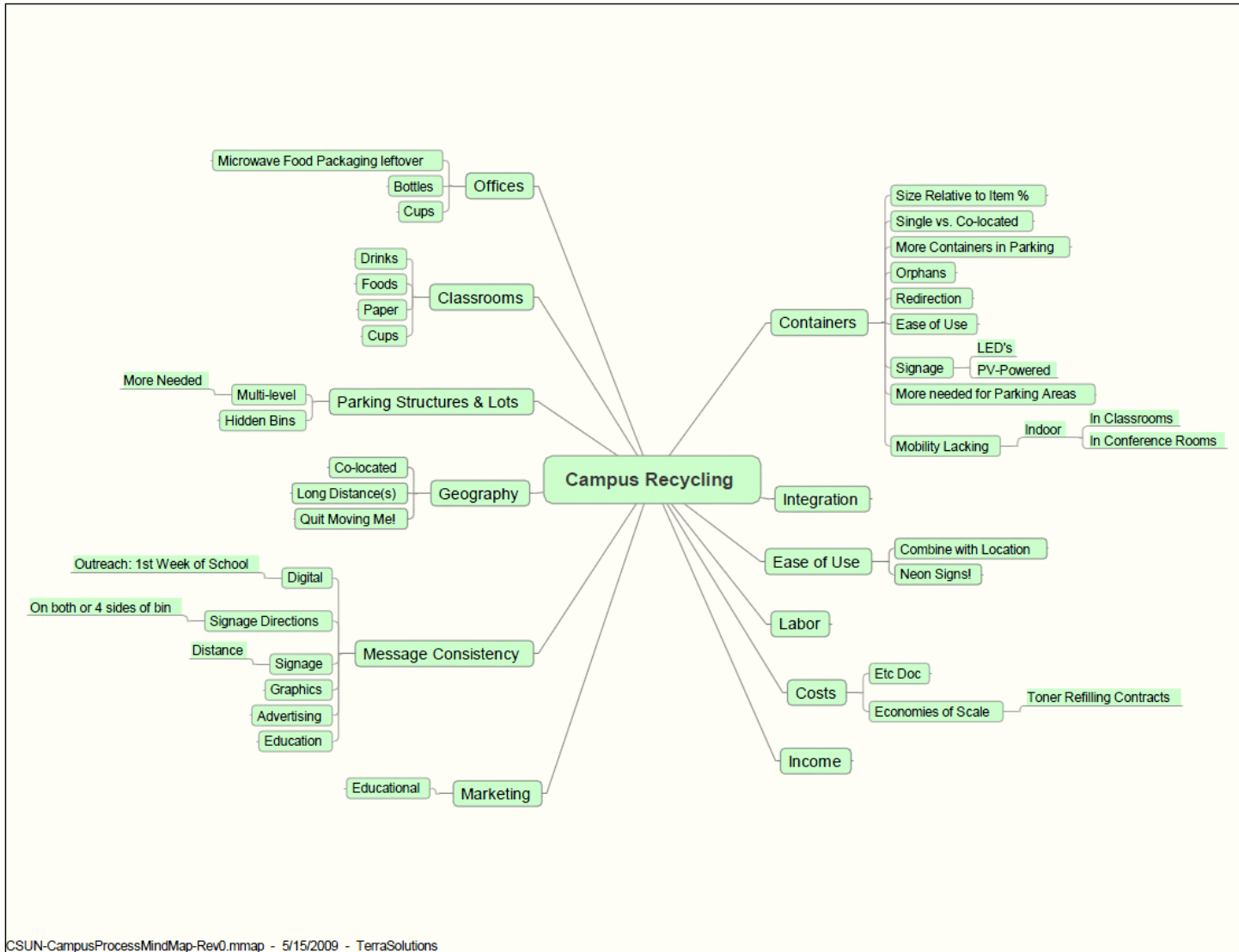


III. The Mind Maps



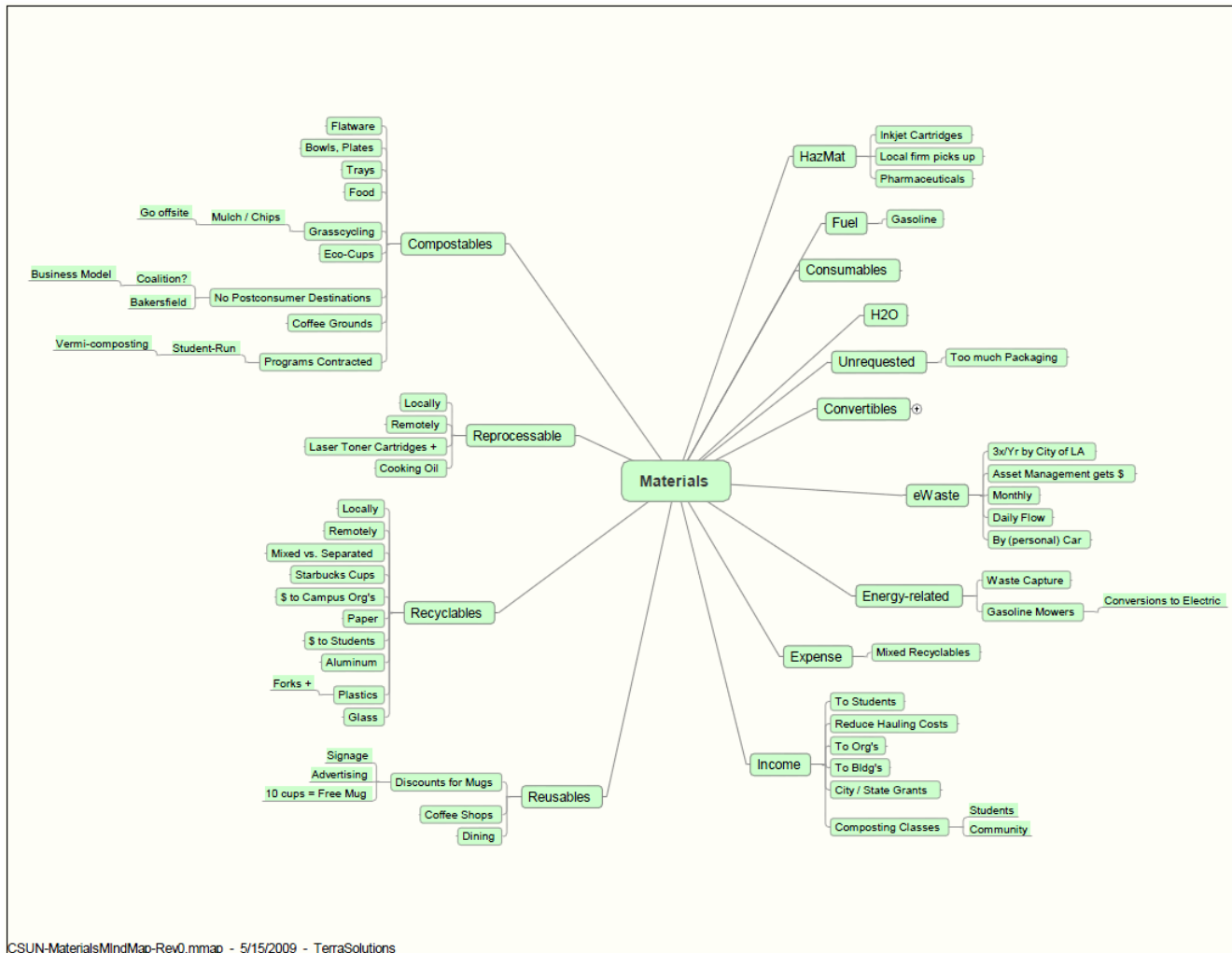
Free-form Mind Maps were used during the visioning sessions to assist with focusing on a specific direction, while providing areas for discussion to expand on. There were two Mind Maps developed, one for Campus Recycling and one for Materials. Each session started with a relevant Mind Map framework to initiate but not constrain all sorts of ideas, perceptions, complaints and "what-if" visions.

The first Mind Map reflects areas of importance of Campus Recycling, which includes geography, message consistency, costs, income, containers, integration, ease of use and labor.



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The second Mind Map reflects areas of importance around the Materials generated at campus which include expense, income, reprocessable, recyclables, energy-related, convertibles, consumables, reusables and unrequested. For the purpose of this summary, the "Materials" and "Campus Recycling" Mind Maps from each of the two sessions have been combined into single electronic Mind Maps, as shown here. While different issues arose, reflecting the concerns and goals of each session's demographic, overall they correlated well and painted some good pictures.



CSUN-MaterialsMindMap-Rev0.mmap - 5/15/2009 - TerraSolutions

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IV. Visioning Session Findings

TerraSolutions reviewed all the information discussed during the visioning sessions--and the data that was accumulated from students, staff and faculty after the sessions--to compile a comprehensive list of ideas and comments regarding sustainability on campus, the recycling center design and the programs. From this review, there was a consistent message that was evident. The aspirations of those involved during this process consist of:

- Market the recycling program so that it is more visible
- Educate students about the recycling program and the location of the recycling containers
- Provide a more consistent message as well as signage on the recycling and trash containers
- Label trash and recycling so students can clearly identify the containers
- Set out more eco-stations
- Place recycling containers inside the buildings
- AS Recycling should start its own eWaste program
- Recycle cold beverage cups (#1 plastic), food scraps, plastic bags, clothes and shoe reuse
- Develop better procurement and design a purchasing policy for each department
- Use more solar or other technologies to make the campus non-reliant on the power grid
- Reduce CSUN's carbon footprint
- Add an on-site compost facility
- Attain zero waste
- Incorporate sustainability into the University's curriculum

These findings, including more detailed thoughts and ideas are expressed in the following sections:

➤ Marketing

- **Recycling Program** – It was very interesting to watch as the topic of marketing rose up, from both the student perspective as well as the AS Recycling Program's. Students want awareness of not only what to do with their recyclables but of the whole program, specifically the higher level functionality and connectivity with the community and environment. Sure there were bins around

to collect many recyclables, but where did it all go, how much and how successful was the diversion, and who is behind and connected to the program? It was seen as fragmented by some, in its less-than-adequate ease-of-collection in some areas, e.g., parking lots, and as almost non-existent by others, as experienced in the dormitories (paper, for example). A unified and strong AS Recycling Program identity PR component was seen as vital to get the message clearly to the student body. Providing this as student orientation entering CSUN and prior to events, were brought up as an optimal times to share that positive information.

- **Recycling Process** – From bin-to-eye-to-hand, the message of “What” and “Why” is missing, at least with consistency. Much of the “Why” would be addressed by the above-mentioned marketing campaign. Creating a catchy theme was deemed as a great way to help attract attention and connect student and staff recyclers to the robust program’s intentions and goals. The “What to Recycle and Where” message needs to be simple and consistent. Too often bins are labeled differently for the same target recyclable. In many other instances they are “orphans”, with single landfill trash bins standing alone, or even eco-stations which co-locate say, bottles & cans and paper yet do not have a trash receptacle within tossing distance. The use of technology for communication through signage was proposed as well; LED’s, PV-powered signage, even the electronic scrolling banner’s use for a broader range of message conveyance.

➤ Sustainability

- The second inspiring eye-opener became more apparent as we went back through the dozens of ideas, opinions and even somewhat eco-political comments that were invited during our sessions. Validated in the Phase 3 Exercise (below), it is clear that students are very interested in *eliminating* wasteful practices versus just diminishing them. While many factors and parties would be considered and involved in undertaking such thorough measures, this intention came up again and again. Examples were given of how we might serve food and beverages on campus with reusable cups, fully compostable serveware, etc., simply being the standard, with disposables—and even recyclables—banned, not allowed. Certainly, then, it would be easier to control and divert virtually all items on campus that would indeed be appropriate candidates for recycling.

- With this ambition as a foundation principle underlying an optimal AS Recycling program, it appears the program's newer strategies will dovetail in well with the overall campus Sustainability planning.

➤ Adaptability

- Clearly with some of the already-forecast and unforeseen changes in how and what we recycle and how we shift our consumption patterns, the new AS Recycling Program will extend its capabilities much more broadly, beyond what we currently handle. From how we manage items from broken pallets and old furniture to eWaste, the recycling/reprocessing activities may be distributed to other areas of campus. The new facility's scope will need to be insightfully defined yet flexible.

V. Visioning Session Details

During the visioning process many ideas were shared. The Mind Maps express single words and phrases to capture an "at-a-glance" view of these ideas and some of their relationships. It is also important to have detailed information to transform those words into a complete vision. In Table 1 you will find these completed thoughts which were discussed during the visioning session. These details are placed into five different categories: Outreach and Signage, Recycling Containers, Recyclable Materials, Procurement and Recycling Center. These categories group the thoughts that transpired and provide an easier way to interpret the information.

AS Recycling Staff Brainstorm Ideas

The AS Recycling Staff met after the two visioning meetings to further brainstorm on specific ideas related to the Recycling Center. These ideas will assist in completing the vision for the design of the building, materials that may be serviced, different ways those materials could be serviced and the potential marketing and outreach that should be accomplished. The findings and direction as seen through the eyes of the AS Recycling staff from their various ideas, experiences and understanding of the program as a whole are included at the end of this table.

TerraSolutions Visioning Meeting Outcome

TABLE 1A

Outreach and Signage

Need to educate students about the recycling program and location of containers at the beginning of each school year. Using banners at the entrance of the schools or in a digital way.

LED sign or arrow over bins at night time to light them up, maybe even have them solar powered.

Better and more consistent signage needs to happen, as well as outreach, both are extremely important.

Important to coach people into making the right decisions. Provide details regarding the recycling program to each department. Best to do this a building at a time. Knowing how much CSUN recycles, track the trend and provide this information to the students and staff so they can see.

Campus recycling has been here for so long behind the scenes, it is not getting all the notoriety it deserves. Need to come up with a plan to market the program and provide outreach. Advertising!

Provide a consistent message with signage and container placement. Need to market this effort far greater than we are now.

Label trash containers so that students and staff can clearly identify what they are used for.

Explain what the implications are of not recycling, which will help those ignorant and not recycling.

TABLE 1B

Recycling Containers

If we can't have recycling at each trash location, have information that will redirect where the nearest recycling is located.

Best case scenario is to have a recycling container matched with a trash can. Being able to recycle all material at the same location is key. CSUN is not like Disneyland where they have containers everywhere. There are times you go by 3 trash cans without a recycling container.

Consistency in identification of recycling and trash stations is huge and a must.

Recycling containers need to be placed inside buildings, conference centers and classrooms. There is currently nothing available.

Currently staff puts recycling from their small container into the larger carts which are serviced by the janitor. (How would adding new recycling items to the program affect the janitors?)

Ease of use is important and something that should be looked at. The easier it is to recycle, the more it will happen.

Change all inside containers used by employees so that CSUN uses a small saddleback for trash and a bigger recycling container.

The message regarding recycling is not clear on campus. Recycling receptacles are different from one location to the next.

Additionally, so many people put items in the trash can and if facing a different way, can't see it. Containers need to be connected and information placed together having them all inclusive.

Janitors currently don't pick up other recycling other than the cardboard and the bigger blue bin. Maybe consider having janitors pick up or provide a cart for some of the mixed recyclables.

TABLE 1C	Recyclable Materials
Would like to see single stream recycling like residential recycling. Have a blue cart to place all recycling in. Because the program is different at CSUN, students and staff are more confused with what to recycle.	
If we do go to single stream and mixed recycling, do we want the Recycling Center to sort this? Or would CSUN hire a hauling company to manage, which costs money instead of receiving income from clean materials. Most staff would like the ease of recycling material in one container.	
Things that are of interest to recycle: plastic Starbucks cups (cold beverages #1), food scraps, plastic bags / shrink wrap, clothes and shoe recycling on campus (there are boxes around the neighborhood but see about bringing GAIA on campus).	
E-waste (computers, cd, dvd's, floppy's) sell them (campus materials has surplus to sell or reuse) LA comes to campus for 2 weeks paid for by the City. What if instead of LA coming here, we had something that was CSUN only. Potentially to provide a storage area for e-waste at the recycling center and/or a monthly pick up. Being able to reach out to our students to have them know where to recycle this material by using lots of outreach. What about paying back students for their electronics? Or just take from the students and University free of charge but keep profits that would assist funding the AS Recycling Program.	
Hazardous Waste, would be great to have a campus policy with a permanent location to bring stuff in. Recycling center could be used for e-waste and hazardous materials. CSUN recycles and residents can use the site as well. Cash benefit is paid back (student, club or AS) to association or student that recycles material. This material is currently handled through Environmental Health and Safety.	
Pharmaceuticals are not being taken by the hazardous waste pick up. Maybe they will be in the future? If so, there would be a good educational component and opportunity to let the students know.	
Would like to add a composting / organics program on campus. According to staff, there is no commercial composting facility in LA County. Kern County and Bakersfield is the closest one up over the grapevine which would not work well due to the carbon footprint. Might be of interest to consider an industrial compost vessel. Will need to find out if regulated by Air Resources Board.	
Consider what it would look like to have an on-site compost manager that would be a full time employee who can manage the program on a daily basis. Organic waste stream is minimal with most buildings other than the dining commons. Look at cost of what it would take to hire a compost person full time plus a few staff people. Then look at the cost of how much food is generated and what it would cost if they did take away in the trash. Does it correlate?	
Look at ideas on how to do this on campus since there are no local options for compost.	
What if CSUN was the source for selling compost that was generated on campus? Could use a grant to start the program and add composting classes to help community come to learn.	
Grass cycle is done on campus, however should consider mulching material.	
Most coffee grounds are recycled into campus flower beds by physical plant management. Should consider all coffee grounds to be used for compost.	
Oil as bio diesel, can we make money off it? Can we convert it?	
See about reprocessing toner cartridges and e-waste. Toner cartridges are picked up every couple of months. Maybe look into refilling cartridges.	

<p>Consider leasing copiers and printers because technology changes so fast. Can get pricing down and place in the agreement to use remanufactured toner cartridges. Then the University can control the greenest technology use. How is the purchasing agreement set up? Can the company come out and refill cartridge instead of purchasing new. Look at the economy of scale.</p>	
TABLE 1D	Procurement
<p>Place a ban on campus to require reusable, compostable products. Not sure about a ban, maybe see about companies to sell only one product to the University which complies with the green vision.</p>	
<p>Need to find out who is doing the purchasing. Place in as a requirement within the contracts and leases to establishing companies that they must recycle.</p>	
<p>Consider increasing the discount when using reusable cups. Currently get a discount of \$0.10. Consider giving the free 10 cups of coffee (presold) when purchasing a travel mug.</p>	
<p>See that the University has some type of purchasing requirement that is the same for each department – goes along with consistency.</p>	
<p> </p>	
TABLE 1E	Recycling Center
<p>Is “Recycling” 2015 the right term for what the center does in the future?</p>	
<p>CSUN’s relationship to surrounding community. Educate the students to educate the community regarding preservation and environment.</p>	
<p>New recycling center place you could go to learn more about the environment.</p>	
<p>Consider using a can crusher / big belly for recycling and have voucher center to get money back for your materials. Clubs and organizations are always asking for money – might be a good way to raise money by going to the center and getting voucher.</p>	
<p>Consider Gray Water and Purple Water</p>	
<p>AQMD (Air Quality Management District) in Southern California has programs to swap out lawn mowers with electric – looking into this for on campus lawn mowers – use a PV for the charging of the lawn mowers.</p>	
<p>A student survey to inform options provided.</p>	
<p> </p>	

AS Recycling Staff – Ideas

TABLE 2A	Building and Yard
Solar “work” roof (patio cover)	
Real Office	
Outside Sink (washing station for hands)	
Green shrubs / rainforest – for absorbing heat	
Produce own power	
Cistern	
Sustainable; set example for CSUN	
Power Washer System	
Gray Water > plants, etc.	
Internal vs. Outside Contractor hauler (Physical Plant Management 90% managing trash) how are we going to this? How to get out of building. System in place pulling trash such as physical plant management	
External Outside Containers (AS) experts	
Student organizations, they all need money, can be a weak link	
Ramp for 40 yard debris box – easier to unload	
Electric Cart(s) with train for moving material around campus	
Bikes / wagons	
Compost bins for Recycling Center – what about campus? Demonstration bins (lunches, leaves, etc)?	
Sorting table and belts	
Buy Back Center? 5 years? 2nd location? (revenue generator for AS Recycling)	
Compactor or Balers	
Eye-washing station	
Accessible to the public and community - should have easy access from street but not visible from	
Skylights and lots of windows to save on energy for lighting, maybe use light tubes	
Windows should be able to open for natural breeze, ceiling fans, plant shade o trees to protect building from sun	
Place porous bricks in the yard which is permeable	
Have the entryway play as a store where students and visitors can purchase items made of recycled content	
Have a resource area with the latest and greatest green books	
Have companies sponsor green supplies: desks, chairs, paint for the walls, carpet, and energy star kitchen appliances, etc. If they do	

sponsor, place a plaque "This project made possible by..."	
Bring in the Green TV station who might be able to help financially and then document the process	
A multi-functional facility built with sustainability in mind, to house staff as well as be a focal point for the campus community to meet, dream, learn more about what we do, provide a working display of sustainable building, products, etc., by what we do at the center	
Bathrooms have the dual flush toilets, huge water savings	
TABLE 2B	AS Recycling
More recyclables such as electronics, clothing, cups.	
Experts for special events, athletic games, fraternities	
Expand Used Beverage Containers, Old News Paper, other paper	
Building Recycling: not to put in hallways trash-classrooms. Felt people could walk to, exit/entrance, vending machines, no excuses.	
Signage at trash containers	
Green meetings and greening campus events - develop set of campus specific guidelines to assist campus to become more green/sustainable in these areas	
Develop over time bins, how-to-guide, tracking, funding	
Identify funding sources in addition to DOC grants - Pepsi (campus contract through TUC), Campus Quality Fee (in process); MOU's, charge-backs or fees for special services; CIWMB & other public resources, private companies	
Special Event recycling offering services and/or expertise to campus.	
TABLE 2C	Marketing
Signs: colorful orange/yellow (Matador colors?)	
Matador Nights signs	
Glow in the Dark	
Light Up; LED / Solar	
Wallpaper; trees on bins, decorate	
Sign out front - bigger, more colorful	
Sell green items for generating funds and getting AS Recycling name out to campus	
Signs that stand up in back of container which light up with LED lights. Painting on the container with recycling arrows on front	

VI. Futuristic Visioning of CSUN

At the end of each visioning session all attendees were encouraged to write an article in the Sunday times:

"The article in the Sunday LA Times, April 2015, caught the eyes, ears and hearts of so many people around the world. It brought a new identity to the CSUN campus and community, for the impressive environmental work the students and staff have done. Now that global warming was clearly into reversal, it became evident how CSUN's goals and actions were part of that driving force that made a difference nationally and world-wide."

We received 27 "articles" many of which were recommendations of what they would like to see in the future. Five articles were selected that encompassed the creative spirit and so are highlighted below.

(1) It's All About the Expectation

"It all began not with a policy or program or system, but simply with a change in expectations", according to CSUN president Michelle Messiha. "Less is more" was our first outreach motto, she added. We came to believe as a community that what was driving our financial and environmental ruin, were simple expectations. Expectations and habits that it turned out were easier to change than we had thought. We started with freshman orientation: AS gave every incoming student a mug and sports bottle and a reusable shopping bag. We started selling filtered water for \$0.05 in the convenience stores and jacked up the prices of bottled beverage containers to offset the educational campaign."

(2) CSUN introduces its new green educational building

"CSUN introduces its new green educational building that is completely energy efficient, has a green roof for students to hang out at, has an outdoor area for classes, uses natural sunlight and uses a cradle to cradle system. This building reuses construction material from CSUN demolition projects. More importantly the building is open to any major and houses classes that are interdisciplinary. The building helps facilitate zero waste."

(3) Carbon Neutral Campus

"CSUN President commits to Carbon Neutral Campus. Faculty Senate requires all graduating students to have completed core classes on Green House Gas Literacy. CSUN Staff achieve lowest level of carbon footprint for transportation to and from campus of any institution in the US."

(4) Cal State Northridge Leadership

"Cal State Northridge leveraged its leadership in energy efficiency to become the regional leader in resource management. The University's practices have proven to be carbon negative through reduction in materials used, recycling, local suppliers and innovative transportation programs. Kudos goes to the students, faculty and staff with the vision to create change and accept no excuses!"

(5) CSUN Raises the Bar

"With the sun heating down its external heat through our earth's atmosphere it has never been more beautiful to be alive. As you may or may not realize, the earth and human life were at stake a decade ago. However, now that we are in the so called "future", we are in a global position where natural resources and fuel are used in the most dynamic, diverse and efficient ways possible. Also, with more than 80% of the nation driving hybrid vehicles, consumers have found new directions and money saving efforts in regards to fuel and economy issues. The most prestigious University (CSUN) located in the San Fernando Valley, California has raised the bar to rule out the norm and help save the world by helping its students and staff invest in hybrid cars and recycle everything from bottles and cans, paper, to e-waste and clothing. CSUN is known for its powerful structure, beautiful parking lots and over 400 beverage containers for recycling. Now people and organizations around the world have followed the trail that CSUN has created. Thanks to the movement in 2009 where students and staff alike got together to envision a bright future. We are in 2015 with smiles and miles ahead of us to keep striving and making a blue planet green."

(6) Email input from an Urban Studies and Planning major unable to attend the sessions:

"Students throw away sooo much paper, old notes, study guides, etc... so there needs to be more paper recycling boxes/cans on campus.

Also, I think we should have a compost can/box near all eating facilities."

There were many more ideas and visions collected during this exercise. Many of the students envisioned similar strategies and some students were very unique and original with their thoughts. Through our review of the articles and notes written we've compiled a list of the ideas that are not mentioned above, all of which are extremely valuable for the future vision of the CSUN campus.

TABLE 3: Futuristic Ideas for CSUN
CSUN recycling campus has incorporated new technology to segregate, reuse and reduce carbon foot print on campus.
Technology includes generating power on campus by solar panels, wind turbines and composting.
A new facility that includes machinery and human labor, in which recyclables are segregated.
Have compostable facilities on campus that are close.
Conservation, efficiency, source reduction: Reduce throughput growth.
Through education CSUN was able to reduce their waste to zero. Additionally, they were able to reduce their consumables by 25%.
No emissions and no impact on the environment by the support of students, staff, faculty, community and decision makers.
CSUN has increased recycling by 100%
Bottles and glass are not allowed on campus, students must use reusable containers.
All staff and students have minimum print options which cut down on the paper usage.
No more cups / plastic bottles at events or on campus. You have to bring your own bottle as we have moved to fountain service only.
Every student receives an e-book, no more books.
Water stations only, no more selling of bottled water.
CSUN becomes the first University to become zero waste, paper free, fully sustainable, energy independent, with zero greenhouse gas emissions in the world.
CSUN's recycling program generates so much excess revenue that tuition and housing is free for all students, faculty and staff.

Bike lanes were created from all over the valley into CSUN while encouraging staff, faculty and students to ride bikes.
CSUN mandated a no plastic zone and encouraged other schools and campus' to do the same.
Genetically engineered glow in the dark flowers, because they glow it lights up the walkways naturally and reduces the amount of energy needed to light the campus' pathways.
Incorporating sustainability more effectively into the curriculum as part of the required core.
Every building on campus should have solar panels. Every electric cart is charged by the solar panel energy.
Have lights that you can leave out at night that light up from the absorbed sun.
Have more recycled art to move students interest.
Literally closed the loop with PV generation powering recycling operation. Community outreach expanded efforts to reuse more material.
Compost returned to community for gardens.
CSUN has managed to produce 100% of its own electricity grid via multi-approach strategies such as solar, windmills, hydro, biofuels, etc) and is funding 50-75% of its instructional, operational and administrative expenses from power sold to businesses.
Eco stations available abundantly around campus.
CSUN has achieved ZeroWaste. Only reusable or compostable beverage containers allowed on campus. All food waste and containers are composted on campus. Campus has become paperless in offices and classrooms. Solar and fuel cell energy provides all electricity needs for campus and surrounding community.
By eliminating the dependence on fossil fuel generated energy campus wide, CSUN has created an environment that encourages re-use of multiple items that would have gone into the waste stream only 5 years ago.

VII. Conclusion

All of the ideas and thoughts which were discussed during the visioning sessions and defined in this report will be used as a basis for the AS Recycling Center Feasibility Study. Understanding the desires of the students, staff and faculty, combined with an understanding of the sustainability goals at CSUN, will further enhance this feasibility study and in turn, the future AS Recycling Center and program. In addition, the direction provided with these ideas establishes a platform for a sustainability plan for the campus, which can assist the University with its own sustainability goals.