

Environmental Sustainability in Our Institutions, Working & Living Spaces



**2011 Arizona Recycling Coalition/
American Public Works Association (AzRC/APWA) Conference
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Catholic Healthcare West – Who We Are

A leading, not-for-profit healthcare organization



- 4th largest not-for-profit system in the U.S.
- Acute Care Facilities: 41
- Acute Care Beds: 8,800
- Skilled Nursing Beds: 900
- Active Physicians: 9,800
- Employees: 54,000
- Community Benefits and Care of the Poor (FY09): \$1.2 billion
- Assets: \$11.1 billion
- Providing care to more than 4 million patients annually



**Catholic Healthcare West
and our Sponsoring Congregations
are committed to furthering the healing
ministry of Jesus. We dedicate our
resources to:**

- **Delivering compassionate, high-quality, affordable health services;**
- **Serving and advocating for our sisters and brothers who are poor and disenfranchised; and**
- **Partnering with others in the Community to improve the quality of life.**

Core Values

Collaboration Dignity Excellence Justice Stewardship

Climate Change and Human Health



Weather Disasters



Infectious Diseases



Allergies



Heat Stress



Red Tides



Asthma

What is sustainability in healthcare?


- **Patient care sustainability:**
How do we ensure the highest quality care?
- **Environmental sustainability:**
How do we do our part to protect the environment?
- **Financial sustainability:** How do we redirect resources from unnecessary expenses to impactful patient care focused initiatives?

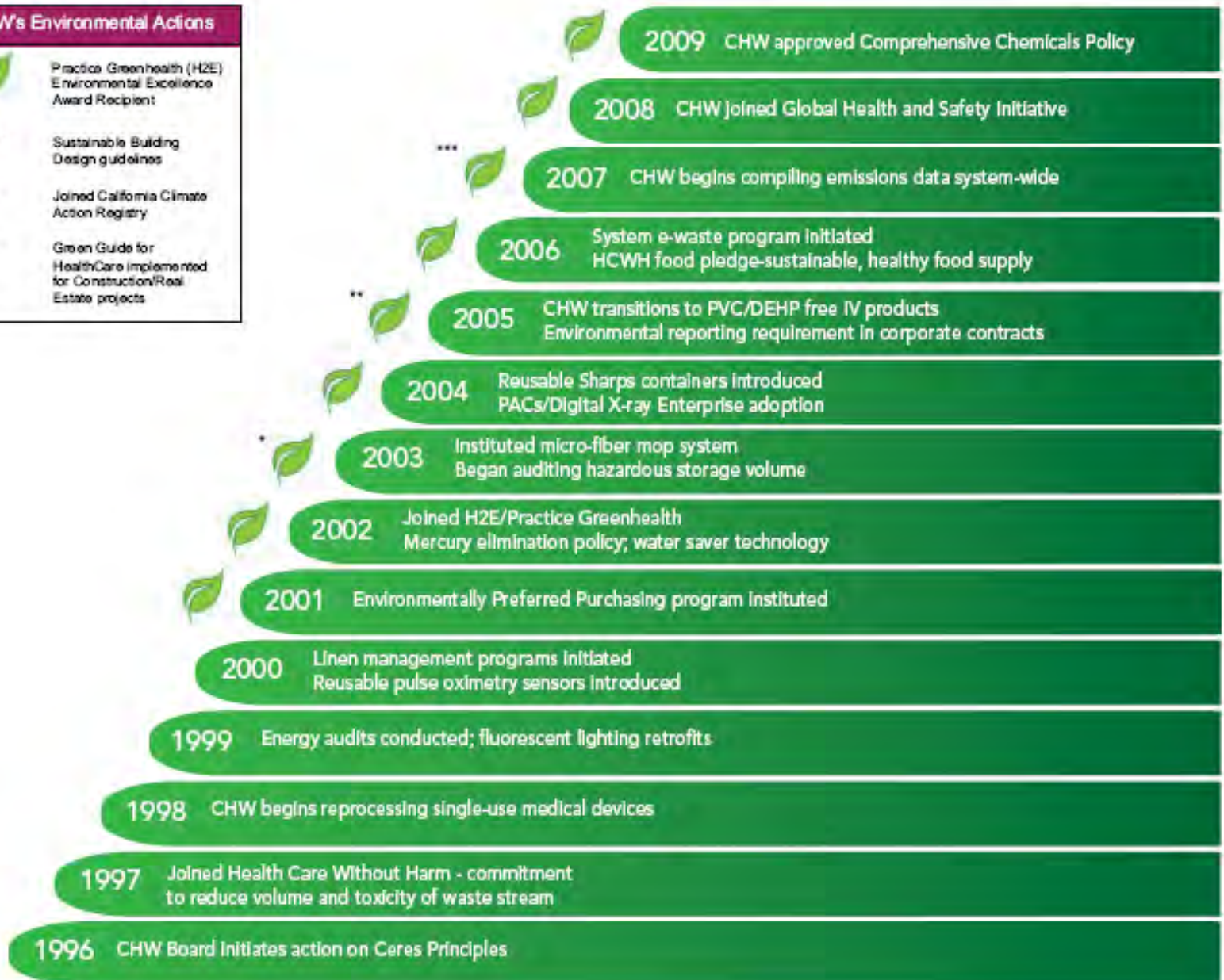


Environmental Sustainability:

- **Activities**
- **Measuring**
- **Reducing Environmental Footprint**
- **Challenges**
- **Benefits**

Our Environmental Actions

CHW's Environmental Actions	
	Practice Greenhealth (H2E) Environmental Excellence Award Recipient
*	Sustainable Building Design guidelines
**	Joined California Climate Action Registry
***	Green Guide for HealthCare implemented for Construction/Real Estate projects



U.S. Food System

- Energy intensive
 - relies on huge amounts of fuel
- Food travels 1500 miles from farm to plate
- Livestock production creates 18% of GHG emissions
- Hospitals make a difference by their food choices





CHW FOOD & NUTRITION SERVICES VISION STATEMENT

CHW recognizes that food production and distribution systems have wide ranging impacts on the quality of ecosystems and their communities, and so;

CHW recognizes that healthy food is defined not only by nutritional quality, but equally by a food system which is economically viable, environmentally sustainable and which supports human dignity and justice, and so;

CHW aspires to develop a healthy food system.

- We will work within our system to develop policies, procedures, supply contracts and education for staff, patients, and suppliers.
- As a healthcare system, we understand our role in health promotion and will effectively communicate, and model healthy food choices and programs in our system and local and national communities.

CHW Food Vision Statement

CHW Food Vision

- Source
 - locally grown produce
 - foods free of unnecessary chemicals and protective of biodiversity
- Purchase rBGH free dairy products
- Use food management program
- Offer Fair Trade Coffee





- Implement composting programs
- **Minimize use of disposables**
- **Reduce/eliminate bottled water**
- Take a stand against GMO's
- Use Green Guide for Healthcare

Trashing the Climate

- Trash contributes to global climate change:
 - Energy
 - Transportation
 - Waste
- 37% of GHG emissions in the U.S. are linked to waste
 - Transporting
 - Disposing in landfills
 - Landfills
 - Incinerating
 - Extracting, processing and transporting virgin resources

Talkin' Trash



Recycling

- Aluminum cans
- Batteries
- Blue wrap*
- Cardboard
- Compost
- Construction and demolition waste
- Cooking oil
- Electronics
- Fluorescent tubes
- Food
- Glass bottles
- Greenwaste
- Home generated sharps
- Ink jet cartridges
- Paper & newspaper
- Metal

Reusing

- Cell phones
- Coffee mugs
- Dishware
- Gowns
- Medical equipment & supplies
- Packing peanuts
- Paper clips
- Plastic totes
- Rubber bands
- Sharps containers
- Toner cartridges
- Wood pallets

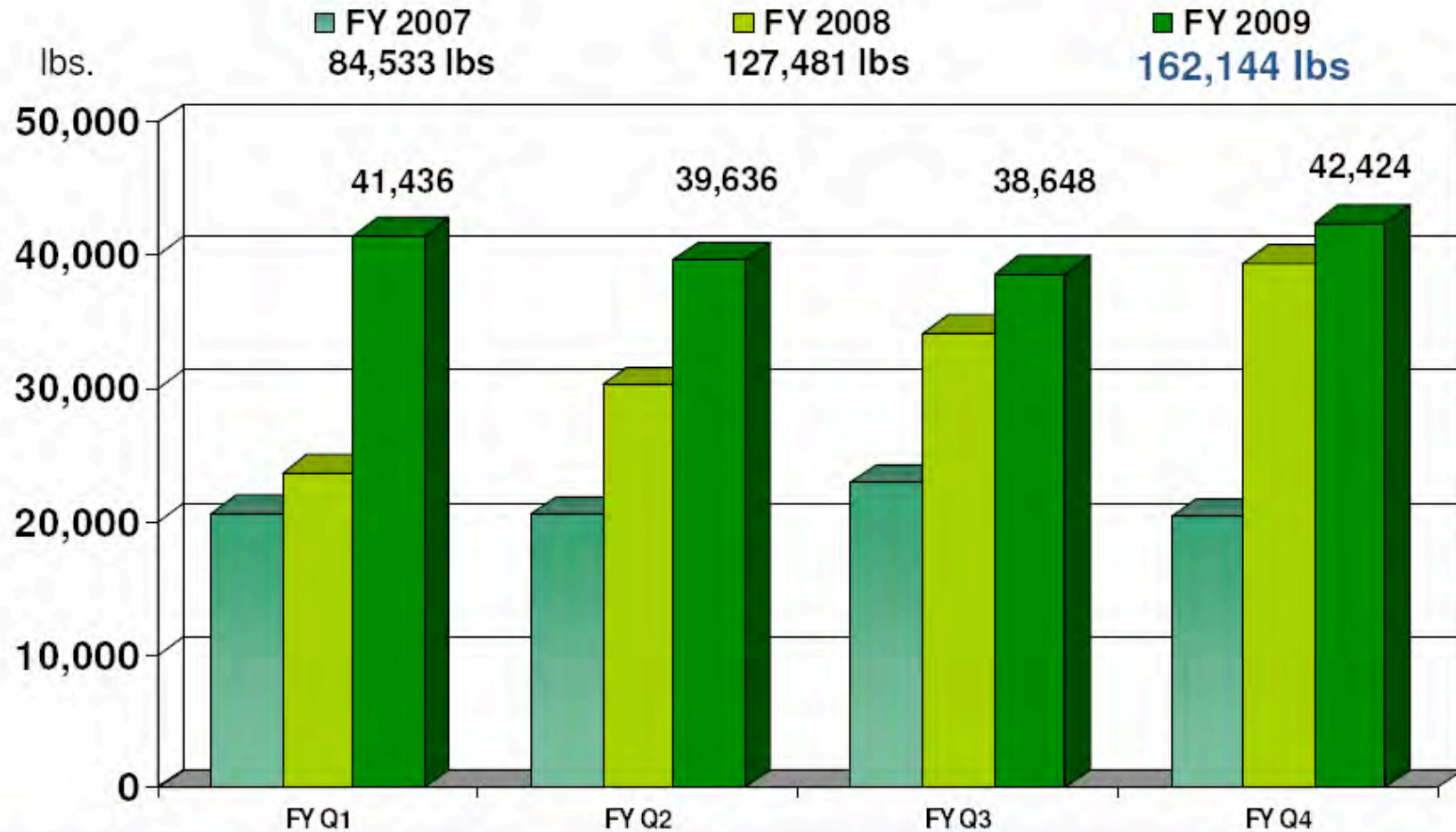
Reducing

- Landfill waste (solid & medical)
- Food Waste
 - Buy in Bulk
- Paper
 - Double sided copying*
- Energy
 - Ride Share
 - Bikes
 - Energy Star Appliances
 - Co-gen: Methane gas
- Water
 - X-ray film processor
 - Kitchen rinse equipment
 - Chiller systems
 - Drought resistant plants
- Chemicals
 - Microfiber mops
 - PVC-DEHP free IV bags



- Reusable Sharps Container
- Sharps Take Back Program
- DEHP-free PVC-free IV bags

Environmental Value Delivered to CHW Facilities





Medshare

Since 1998, MedShare has donated over \$50 million worth of medical supplies and equipment to hospitals and clinics in 74 countries around the world

In 2007, MedShare shipped a 78 forty-foot containers and provisioned 173 medical teams working abroad



E-Waste

- Know where it goes!
- Redemtech
- No waste overseas
- Reuse/recycle
- Destroy data
- Secure data destruction



Recycle & Reuse Diversions

Recycle		Reuse			
E-Waste Recycling		Merchandise Sale		Redeployment	
Units	Weight	Units	Weight	Units	Weight
1,384	22,032	1,008	19,306	--	--

Environmental, Landfill Natural Resource Reductions

Less CO₂	520.84	Tons
Air contamination prevented	12,472	Tons
Landfill diversion	41,338	Pounds
Virgin Materials	39,566	Pounds
Water pollution prevented	100,008	Gallons



Green Benefits of Recycle & Reuse

Energy Savings



Electricity to power 500 houses/yr

Greenhouse Gas Reduction



Removing 146.72 cars from road/yr

Hazardous Waste Reduction



Weight of 286 bricks

*Includes computers, monitors and cell phones only

E-Waste Soluble Recycling

Toxic Metals

0.0010	Mercury	LBS
6.6672	Antimony	LBS
-	Arsenic	LBS
2.1796	Barium	LBS
-	Beryllium	LBS
0.0057	Cadmium	LBS
0.0709	Chromium	LBS
0.0764	Cobalt	LBS
438.57	Copper	LBS
6.67	Lead	LBS
-	Molybdenum	LBS
0.1796	Nickel	LBS
-	Selenium	LBS
0.3012	Silver	OZ
-	Thallium	LBS
-	Vanadium	LBS
7.55	Zinc	LBS
-	Tin	LBS
-	Gold	OZ
-	Platinum	OZ
119.83	Aluminum	LBS
-	Palladium	OZ
-	Iron	
582.11	Total	

E-Waste Units

Bulk Item	1
Desktop	349
Handheld	1
Hard Disk	423
Laptop	17
Miscellaneous	191
Monitor	209
Part	1
Printer	90
Server	6
Tower	96
	1,384

E-Waste Toxic Components and their Damage to Human Health

Toxic Materials	Birth Defects	Brain Damage	Heart, Liver, Lung & Spleen Damage	Kidney Damage	Nervous/ Reproductive System Damage	Skeletal System Damage
Barium		X	X			
Cadmium	X		X	X	X	X
Lead	X	X		X	X	
Lithium	X	X	X	X	X	
Mercury	X	X	X			
Nickel	X		X	X	X	
Palladium	X	X	X			
Rhodium			X			
Silver	X	X	X	X	X	

Without safe recycling, most of these toxic components will end up in land fill — poisoning the soil and water.

Energy Efficiency

- Lighting
- Building
- Recommissioning
- HVAC
- Co-gen Plants
- PV systems



Lighting

- Install occupancy sensors
- Turn off lights & computers
- Install compact fluorescent light bulbs
- Replace T-12 fluorescent lamps with “super” T-8 lamps
- Upgrade to LED’S

Building

- Cover single “pain” windows with reflective coating
- Install automatic doors
- Install reflective roofing
- Recommissioning
- HVAC (heating, cooling, ventilation)



What's Your Water Footprint?

- Water saving technology
 - Digital x-rays
 - Waterless urinals
 - Retrofit equipment
 - Xeriscaping
 - Drip irrigation
 - Measure, measure, measure



Track and Report

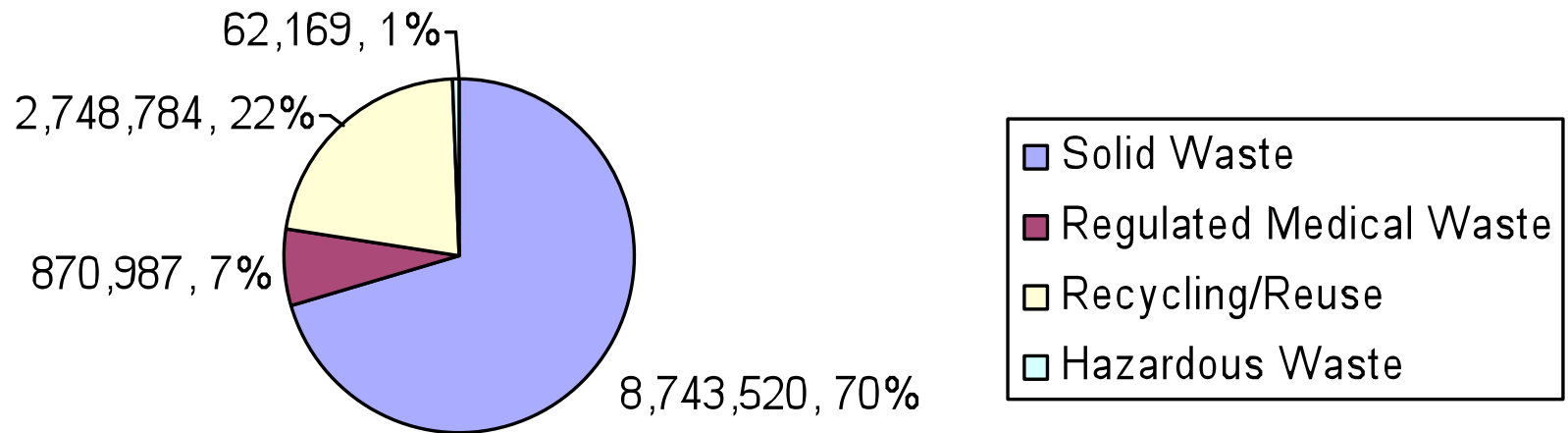
- Quarterly Reporting Tool
- Green Health Tracker
- Annual Mission Report
- Social Responsibility Report



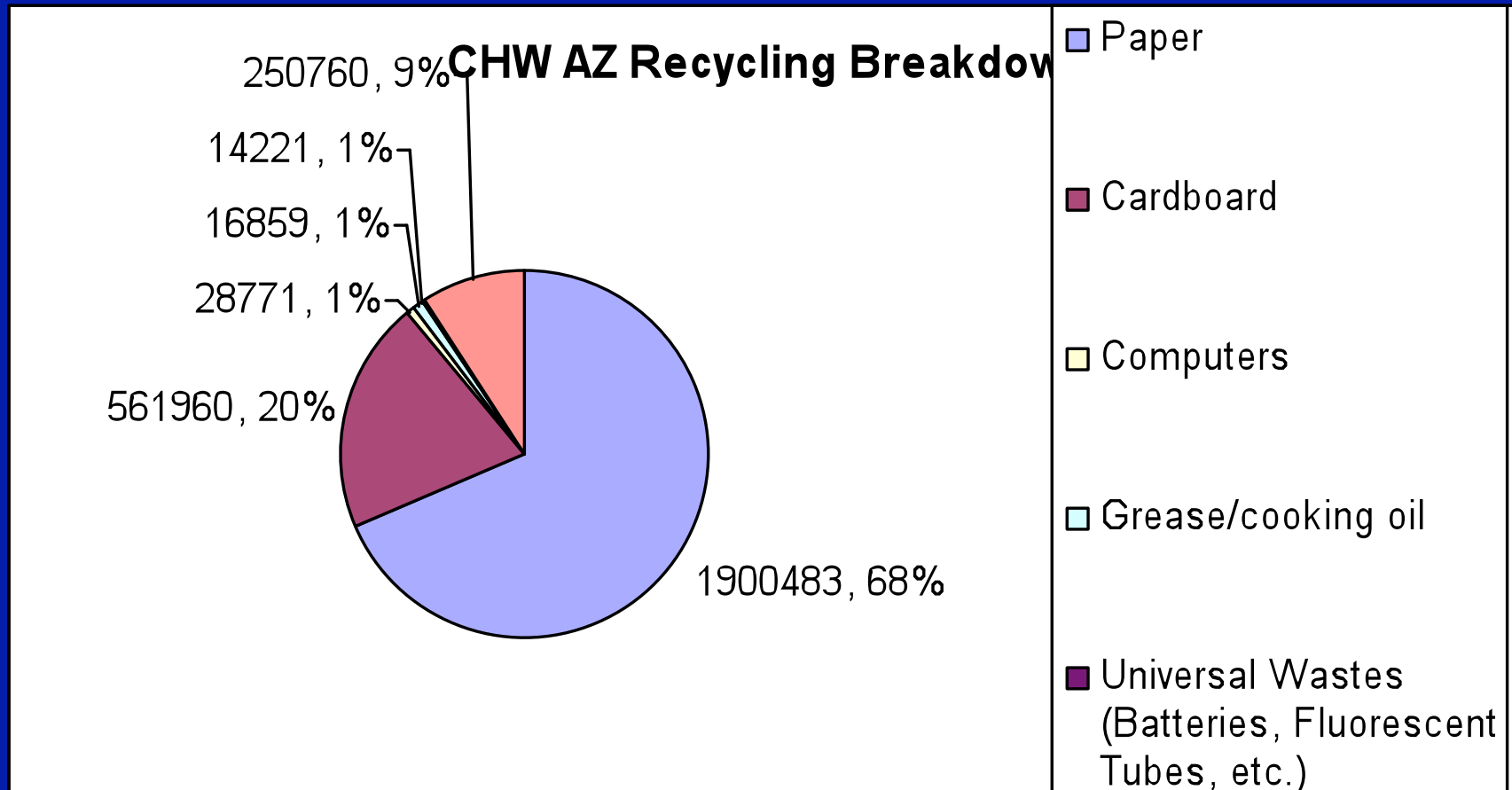
http://www.chwhealth.org/Who_We_Are/Environment/index.htm

CHW – AZ Waste

CHW AZ Waste Breakdown



CHW – AZ Recycling



A photograph of a large tree trunk with several blue protective caps on its bark, surrounded by lush green foliage. The text is overlaid on the left side of the image.

16,154 trees are still growing because of our efforts

- **We saved 6.6 million gallons of water.**
- **We diverted 558 thousand pounds of pollution from entering the air.**
- **We conserved 3.8 million kilowatts of energy.**
- **We prevented 3000 cubic yards of our precious land from becoming landfill.**
- **And...**
- **We have caused 440 thousand gallons of oil to remain in the Middle East**

Collaboration

- Eco Contact
- Green Team
- Supply Chain
- Premier (GPO)
- Other Hospital Systems
- Healthcare Without Harm
- Practice Greenhealth
- Healthy Hospitals Initiatives
- Catholic Health Association

Challenges

- Quality
- Cost
- Change
- Clarify best practices
- Lack of space, time, personnel, haulers
- Educating staff
- Communication
- Keeping up staff enthusiasm
- Data collection



Why do we do what
we do?





**We do not inherit the earth from our ancestors,
we borrow it from our children.**

~Native American Proverb

Questions??

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