

FORM A

SOLID WASTE ALTERNATIVES PROGRAM

~~NO~~
YES
loan

Project Title: Senior Meals Waste Reduction and Education Project		
Applicant Name: Hawkeye Valley Area Agency on Aging		
Street Address: 2101 Kimball Ave., Suite 320		
City/State/Zip: Waterloo, Iowa 50702-5057		
Mailing Address (if different):		
P.O. Box:		
City/State/Zip:		
County: Black Hawk, Butler, Tama		
Contact Person: Ginny Paulson, Support Services Coordinator		
Telephone Number: (319) 272-2244		
E-mail Address: hvaaa@sbt.net		
Applicant Type:		
<input type="checkbox"/> Local Government	<input type="checkbox"/> Private For Profit	<input checked="" type="checkbox"/> Private Not For Profit
Primary Project Type:		
<input checked="" type="checkbox"/> Best Practices	<input type="checkbox"/> Education	<input type="checkbox"/> Market Development
Amount of Funding Requested: \$ 18,559.75		
Amount of Applicant Match Committed: \$ 82,388.75		
Total Project Cost: \$ 100,948.50		
Facility Location: Waterloo, Greene, Toledo		
Project Service Area Description: Waterloo, Greene & surrounding, Toledo & surrounding		
Signature: Donna K. Harvey		
Title: Executive Director		
Date: 9-28-99		

**FORM B:
PROJECT NARRATIVE**

1. Project Description

Hawkeye Valley Area Agency on Aging provides nutritious meals to people aged 60 and older across 10 counties. Meals are offered in our senior dining sites and also through home delivery. In conjunction with the Butler County Council on Aging, Jesse Cosby Neighborhood Center and Tama County Council on Aging, we are requesting funds to purchase and install commercial dishwashers in three of our meal sites. Our goal is to maintain our current practice of serving meals on re-usable trays, keep up with high volume days (holidays, Grandparent's day, Birthdays, for example) at our congregate meal sites, and finally, to keep up with future program growth. Because of this growth in our target population and the inevitability of lost or damaged trays (our current annual loss rate is 5%), we plan to purchase additional re-usable trays.

In 1995 and 1996, we received funding through the solid waste alternatives program to purchase FDA approved re-usable trays for our home delivered meals (HDM) program. Because of this grant, we were able to replace our use of disposable, polystyrene (styrofoam) containers with washable trays and divert 11,808 cubic feet of solid waste from landfills over the last four years. Not only did this allow us to reduce waste at the source, but we also increased our client satisfaction and reduced overall operational expenses by 41,000 annually. In the three counties we are targeting for this grant, we diverted:

- ◆ 3,778 cubic feet in Black Hawk county
- ◆ 1,062 cubic feet in Tama county
- ◆ 886 cubic feet in Butler county

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16 This is \$41,000 a good
cost savings... ~~_____~~

Finally, we plan to conduct an educational outreach program to our home delivered meal recipients and congregate (on-site) meal recipients on waste reduction. We will develop and distribute educational materials to all of our clientele in the three targeted counties. These educational materials would be derived from educational materials already available through our Council of Governments and the Recycle Iowa office and would teach people the *Three Rs* – Reduce, Recycle, Re-use. We also wish to inform people about how to access existing waste reduction and safe disposal programs in their area.

2. Project Need

Brief Description:

We need to purchase and install three dishwashers: an under the counter unit in the Jesse Cosby center and the Greene center, and in the Toledo center, a door type unit with the following accompanying equipment – booster heater, disposer and two dishtables. We also need to purchase a supply of re-usable trays to keep up with both program growth and the 5% annual tray loss. Finally, we need to educate our citizens aged 60 and over about the need for waste reduction and what they, as individuals, can do to help.

Project service area: Three of our senior meal sites will be impacted: the city of Greene and the surrounding rural community in Butler county, the city of Toledo and the surrounding rural community in Tama county, and the African American community served by the Jesse Cosby Neighborhood Center in Waterloo, located in Black Hawk county.

Targeted population: Iowa's population of individuals aged 60 and over is 3rd highest in the nation and our population of individuals aged 85 and over is the highest in the nation. According to recent statistics published by Iowa State University, Iowa's population of senior citizens is going to grow dramatically in the next 10 years; in the counties we are targeting for this project, the population of senior citizens is expected to double by the year 2010. Tama county's population is expected to increase 49%, Butler will increase 47%, and Black Hawk county will see an increase of 65%. The homebound recipients of our home delivered meals (HDM) programs will be the primary recipients of service through this project, although on high volume days, the

recipients of congregate (on-site) meals will also be targeted because polystyrene is substituted for washable dishware on those days. Here is the breakdown of the number of current and expected meal recipients targeted at each site:

Site	Current # of HDM recipients	Annual # of meals served on-site on high volume days	Projected annual rate of growth	Projected annual # of meals served on-site on high volume days by the year 2010	Projected # of HDM recipients by the year 2010
Jesse Cosby	76	360	5%	522	108
Greene	30	672	5%	976	44
Toledo	64	1056	5%	1,531	92
Totals:	170	2,088	5%	3,029	244

Type, source and amount of waste targeted: We are targeting solid waste at the source. Without new dishwashers, we will not be able to maintain these outcomes into the future because we will have to revert back to polystyrene trays. Should we have to do this, based on current numbers of participants and projected program growth, we can project the cubic feet of waste that would be added to our landfills in one year, five years and ten years:

Site	Cubic feet – 1 year	Cubic feet – 5 years	Cubic feet -- 10 years
Jesse Cosby	267.8	374.9	478.5
Greene	112.7	157.8	214.1
Toledo	235.4	329.5	447.2
Totals:	615.9	862.2	1,139.8

Current waste management method in terms of targeted population:

Jesse Cosby Neighborhood Center, Black Hawk County – The Jesse Cosby Center has historically provided meals on-site (congregate) only. In April of this year, they began offering home delivered meals to the eligible residents in their neighborhood. They are not, however, equipped to wash the average of 152 HDM trays per day and dishes for an average of 15 congregate meal participants. Not only is their dishwasher designed for home, not commercial, use, it is quite old and takes 3 hours to complete its cycle. The dishwasher must be filled several times to clean the dishes. Obviously, this is taking an exorbitant amount of staff time and polystyrene containers will have to be substituted soon. The commercial dishwasher we wish to purchase takes only 92 seconds to complete one load and can wash up to 600 trays in an hour.

Greene meal site, Butler County – Our dishwasher at this site recently broke down and was beyond repair. In order to keep up with demand, we have been leasing an under-counter dishwasher, but will need to purchase our own soon or revert to using styrofoam trays. We must have a fast dishwasher because our lease limits the number of hours we can occupy the space each day.

Toledo site, Tama County – The dishwasher at this site is very old and can only accommodate 10 plates at a time. The heater has been replaced in the past and is showing signs of wearing out again. Even if we were to fix the heater again, the machine's capacity cannot meet our current demand. Polystyrene trays are already being used in place of washable dishware on high volume days. As with our Greene site, we must have a fast dishwasher in Toledo because our lease limits the number of hours we can occupy the space each day.

Comprehensive Planning Area's integrated solid waste management program:

All of the areas targeted in this proposal are working to meet the State of Iowa's mandate to reduce by fifty percent (50%) the amount of solid waste being placed into landfills by the year 2000. Source reduction and public education are high priorities for the Council of Governments in each of our three targeted counties. In Tama County, served by East Central Iowa Council of Governments (ECICOG), source reduction is the number

one priority and recycling is the number two priority. Our project directly impacts both of these priorities. In Butler county, Jim Meade, the Director of Rural Iowa Waste Management Association, named waste reduction at the source as a primary component of their most recently drafted plan. The Iowa Northland Regional Council of Governments (INRCOG), which serves Black Hawk county, has also emphasized continued source reduction in their solid waste management plan. In fact, Black Hawk County has already experienced a 52.65% reduction in waste since the State of Iowa's mandate. Finally, all three Comprehensive Planning Areas emphasize the need for public education about waste reduction in their solid waste management plans.

3. Project Objectives and Participation

Describe project objective (overall project accomplishment): Our primary aim is to avoid the use of disposable polystyrene trays for home delivered meals. We wish to maintain and improve the current waste reduction plan being implemented by our agency. This will reduce the long-term costs of waste management and keep waste out of the landfills. We also seek to educate our clientele about ways to reduce human impact on the environment.

Describe project goals and how each will be obtained, measured, sustained and justified:

- A. *Maintain and improve the current waste reduction plan being implemented by our agency.* This will be **obtained** by: 1) purchasing commercial dishwashers that are the correct size for our kitchens and are capable of handling both the congregate meal and home delivered meal work load, and 2) purchasing enough re-usable trays to account for 10 years' worth of program growth and tray loss/damage. This will be **measured** by tracking the number of home-delivered meals that are served on re-usable trays vs. polystyrene and by recording the reduction in staff time invested in dishwashing. The commercial dishwashers will last 20 – 25 years and can wash 20 trays in 90 seconds (or up to 600 trays in an hour). Through the use of fast, long-lasting dishwashing equipment and re-usable containers, our ability to keep up with the demands of washing and re-using meal containers will be **sustained**. This goal is **justified** because it is compatible with the Iowa Department of Natural Resources' own goal of long-term pollution prevention, waste reduction and recycling sustainability. It is also compatible with each of the targeted county's comprehensive planning areas' integrated solid waste management programs.
- B. *Reduce long-term costs of waste management:* To **obtain** this goal, we will avoid the use of polystyrene containers, which cost \$19.52 for a case of 200. By using our current supply of re-usable trays and stocking up to account for loss and program growth (an additional 10% each year), we would save at least \$114,276 over a time span of ten years. Reducing the amount of staff time needed to wash dishes will also reduce costs. To **measure** these goal, two formulas will be used: 1) Tray Cost = # of home delivered meals + # of congregate meals served on high volume days x 2 x \$.0976 (cost of a polystyrene tray) compared to 10% of home delivered meals x \$9.25 (cost of a re-usable tray); and 2) Time Savings = staff time spent washing dishes with old machines (ex: 4 minutes/load in Toledo and 3 hours/load at Cosby) compared to time spent with new machines (60 – 90 seconds to wash a load of 20 trays). In the first year, the amount of staff time needed to wash dishes at our Toledo site will be cut in half at conservative estimates. Staff time spent washing dishes will be one tenth of the current time spent at the Jesse Cosby center. Since the Greene site currently owns no dishwasher, time comparisons are not possible. This goal can be **sustained** because of the durability of our trays and equipment. Our 5% annual replacement rate for trays is very inexpensive compared to the cost of polystyrene. The commercial dishwashers have a life span of 20 – 25 years and will be able to handle the home delivered meal workload at each site in less than an hour, even with the expected growth in participants by the year 2010. This goal is **justified** because money saved in supplies and staff time is put right back into our program, allowing us to serve more people. Also, the latest projection on the status of the reauthorization of the federal Older American's Act, which funds our meal programs, is that we are likely to see a 17% budget cut in the future. Reducing our supply costs will help us to continue serving the same numbers of people in spite of budget cuts.
- C. *Divert waste from our landfills:* This goal will be **obtained** by preventing a projected 175,894 polystyrene containers from entering the waste stream. This translates to a diversion of a projected 1,049.6 cubic feet

from the landfills in Black Hawk, Butler and Tama counties. To **measure** this goal we will use the following formula: # of home delivered meals + the number of congregate meals served on high volume days x 2 = total # of polystyrene trays needed to serve them. That number will be converted to cubic feet: one case of 200 polystyrene trays = 1.33 cubic feet. This resulting figure will be the amount of waste diverted from our landfills. This goal can be **sustained** because of the durability of our trays and commercial dishwashers and the cost effectiveness of this delivery method. This goal is **justified** because it is compatible with the Iowa Department of Natural Resources' own goal of long-term pollution prevention, waste reduction and recycling sustainability. It is also compatible with each of the targeted county's comprehensive planning area's integrated solid waste management programs.

- D. *Educate our clientele about ways to reduce human impact on the environment:* To **obtain** this goal, we will distribute educational brochures to all home-delivered meal recipients and offer on-site education through brochures and presentations to our congregate meal recipients. To **measure** the outcomes of our efforts we will track the number of meal recipients who are exposed to our educational materials and presentations. We will also survey these recipients to determine whether or not they changed any behaviors as a result of our efforts. To **sustain** our efforts to increase public awareness and encourage behavioral changes, we will include waste reduction and recycling education into our routine educational efforts at each site. This goal is **justified** because it influences behaviors beyond the direct control of our program's waste reduction practices. Through education, we hope to encourage waste reduction and recycling on an individual basis.

Tangible and non-tangible project deliverables for the project service area and statewide: Tangible deliverables for this project are waste reduction and preventing styrofoam (polystyrene) from entering the waste streams. Non-tangible deliverables will be achieved, in part, by setting an example of re-use for our elderly population. They will also be achieved through our education efforts in which we hope to increase environmental awareness among our home-delivered meal and congregate meal recipients.

Project participants' relevant experience and role in the project: Hawkeye Valley Area Agency on Aging has been administering home delivered and congregate meals for 25 years. We have also been a public education entity for senior citizens for 25 years. We have four years' experience in waste reduction at the source through our re-use of plastic trays for meal delivery. Changing our meal packaging from polystyrene to re-usable plastic in 1996 required adding some new steps to our delivery process, which has been very successful. Staff, meal recipients and volunteers are now well accustomed to the new system: recipients rinse the previous day's trays and return them to the volunteer the next day at meal delivery time. Volunteers return the previous day's trays to Hawkeye Valley kitchen staff for sanitation.

Project Impact

Amount and type of solid waste diverted from Iowa's sanitary landfills: Again, we are diverting styrofoam. The following chart tracks the amount of waste diverted over the next ten years, factoring a conservative 5% annual program growth rate:

Site	Cubic feet – 1 year	Cubic feet – 5 years	Cubic feet -- 10 years
Jesse Cosby	267.8	374.9	388.3
Greene	112.7	157.8	214.1
Toledo	235.4	329.5	447.2
Totals:	615.9	862.2	1,049.6

Cost per ton diverted over one year, five years, and ten years:

The weight of polystyrene materials is minimal, but the volume, as shown in the chart above, is significant. A case of 200 polystyrene, 3 compartment containers measures 1.33 cubic feet and costs \$19.52. Re-usable trays cost \$9.25 each. All of our sites are stocked with trays, though our replacement rate is projected to be 10% each year – 5% for loss/damage and 5% for program growth. The following chart outlines the cost diverted over

time (for home delivered meal waste and high volume day congregate meal waste) as the result of using re-usable trays instead of polystyrene:

Site	Cost diverted in first year	Cost diverted over five years	Cost diverted over ten years
Jesse Cosby	\$3,749	\$20,595	\$46,552
Greene	\$1,536	\$8,730	\$21,104
Toledo	\$3,243	\$19,445	\$46,620
Totals:	\$8,528	\$48,770	\$114,276

project
pays for
itself in just
over 2 yrs.

How target population will be affected: Because of this program, home delivered meal (HDM) recipients will not be adding waste to their local garbage collection systems through disposal of polystyrene trays. We also hope to affect both HDM and congregate meal recipients by influencing them to follow the *Three Rs* (Reduce, Recycle, Re-use). This will be accomplished through our educational materials and presentations. Also, they may be affected indirectly through following the program's example of re-use.

Toxicity reduction: **Our project would prevent 1,139.8 cubic feet of chlorfluorocarbon containing polystyrene containers from reaching the waste stream by the year 2010.** Chlorfluorocarbons are highly volatile compounds, contributing to air pollution. They rise slowly, taking six to eight years to reach the highest layer of the earth's atmosphere, where they can reside for more than 100 years. Chlorofluorocarbons are implicated in contributing to the greenhouse effect (warming the atmosphere by trapping heat, which is radiated back through the atmosphere). Chlorofluorocarbons are 10,000 times more "effective" than carbon dioxide in trapping this radiated heat. Chlorofluorocarbons also deplete the ozone layer, permitting greater amounts of ultraviolet radiation to reach the earth. This increase in ultraviolet radiation affects human health by increasing the likelihood of developing skin cancer and cataracts and may depress the immune system. Increased ultraviolet radiation also reduces crop yields, damages construction materials and increases smog. The EPA and FDA recognize the threat chlorofluorocarbons present to the environment and have banned their use in the production of aerosol cans. In 1987, the United States was one of 35 countries to sign the Montreal Protocol on Substances that Deplete the Ozone Layer, urging a 50% reduction of production levels by 1998. Thirty percent of all chlorofluorocarbons released into the atmosphere originate from styrofoam. In addition to the threat to our atmosphere and ozone layer due to chlorofluorocarbon damage, polystyrene (styrofoam) containers do not decompose. We may be stuck with their vapors for 100 years or more, but their bulk will purportedly never disappear.

Market effects and/or new markets developed: The only new market for our project will be the individuals newly exposed to *Three R* (Reduce, Recycle, Re-use) education. Because of the isolation experienced by most of our clientele, they can be otherwise difficult to reach through public education campaigns.

Project replicability: This project is straightforward and easy to replicate and is currently replicated in all of our meal sites. We will certainly share all educational materials developed through this grant across all 10 of the counties in our service area and will cross-train our site coordinators to be able to give *Three R* presentations in their centers.

Project sustainability: The purchase of dishwashers will allow us to continue a program that has already shown itself to be sustainable over a four-year time span. Our success with re-useable containers depends on adequate dishwashers -- the commercial dishwashers we hope to purchase have the speed and life span to accommodate our growth for at least the next 10 years and probably the next 20 to 25. Also, the educational component of this project can easily be repeated over time with minimal costs. Hawkeye Valley Area Agency on Aging is committed to continuing our ecologically friendly practices into the 21st century. As the statistics show, it's not only good for the environment, it saves money that can be better spent helping people.

FORM C

PROJECT TIMETABLE

SOLID WASTE ALTERNATIVES PROGRAM

Applicant Name: Hawkeye Valley Area Agency on Aging

Project Beginning Date: Jan. 3, 2000

Project Ending Date: June 30, 2000

This timetable should account for planning and if applicable, construction phases of the project as well as the first year of project implementation.

Task or Activity	Beginning Date For Each Task	Ending Date For Each Task	Group/Person Responsible
Preproposal Submitted		10/1/99	H.V.A.A.A.
Evaluation	10/1/99	1/3/2000 (approx.)	W.M.A.D.
Contract	1/3/2000 (approx.)	2/1/2000 (approx.)	H.V.A.A.A. and W.M.A.D.
Dishwashers and accompanying equipment ordered	2/1/2000	3/1/2000	H.V.A.A.A.
Trays ordered	2/1/2000	3/1/2000	H.V.A.A.A.
Dishwashers installed	3/1/2000	4/1/2000	H.V.A.A.A.
Trays received	3/1/2000	4/1/2000	H.V.A.A.A.
Brochures and educational materials developed	2/1/2000	4/1/2000	H.V.A.A.A.
Brochures/educational materials distributed	4/1/2000	5/1/2000 (and on-going)	H.V.A.A.A.
On-site presentations	5/1/2000	6/30/2000	H.V.A.A.A.
Reporting	as requested by W.M.A.D.		H.V.A.A.A.

FORM D

BUDGET SUMMARY SHEET

SOLID WASTE ALTERNATIVES PROGRAM

Applicant Name: Hawkeye Valley Area Agency on Aging

ITEM AND QUANTITY	DNR REQUEST	LOCAL SHARE	TOTAL COST
* AM14C-9 Door type Dishwasher and accompanying equipment for Toledo site	<i>16,276</i> \$6,860.50	\$2,289.00	\$9,149.50
* Delivery and hook up (Toledo site)	\$375.00	\$125.00	\$500.00
* Lx30H Undercounter Dishwasher x 2 (one for Jesse Cosby site and one for Greene site)	\$5,530.50	\$1,843.50	\$7,374.00
* Delivery and hook up x 2	\$750.00	\$250.00	\$1,000.00
* Trays: 560 at \$9.25 each	\$3,885.00	\$1,295.00	\$5,180.00
* 3 Reams of recycled paper for brochures/educational materials (\$15.00/ream)	\$33.75	\$11.25	\$45.00
* 1500 copies of brochures/educational materials at \$0.10/copy	\$1,125.00	\$375.00 (in-kind)	\$1,500.00
* Staff time spent operating dishwashers over the next 10 years	<i>Subtract</i> ↑	\$76,200 (in-kind)	\$76,200
GRAND TOTALS:	\$18,559.75	\$82,388.75	\$100,948.50

Note: Follow guidelines closely regarding the maximum amount of funding assistance possible for each expenditure involving program funds. All eligible expenses will be funded at not more than 75%.

When completing Form D, clearly identify existing local match items from local match items where financial assistance will not be requested.

** Items in Local Share column will be covered by existing local match funds, unless otherwise identified as "in-kind"



DEPARTMENT OF NATURAL RESOURCES

THOMAS J. VILSACK, GOVERNOR
SALLY J. PEDERSON, LT. GOVERNOR

PAUL W. JOHNSON, DIRECTOR

November 9, 1999

Ginny Paulson
Hawkeye Valley Area Agency on Aging
2101 Kimball Ave, Suite 320
Waterloo, IA 50702

Dear Ms. Paulson:

The Waste Management Assistance Division and the review committee have completed their review of Solid Waste Alternatives Program pre-proposals submitted during the October 1999 round of funding. We are pleased to announce that your pre-proposal has been selected for funding in the form of a zero interest loan.

The review committee recommended this funding arrangement due to the cost-effective nature of the project. The cost savings gained from the previous grants was stated as \$41,000 over four years in your application.

Please contact me if you accept the zero interest loan by November 29, 1999. If acceptable the Department will prepare a draft contract for your review and approval. Once a final contract has been and signed by project participants along with the Department, Solid Waste Alternatives Program funds will be made available.

If you have any questions, please contact me at 515-281-8672.

Sincerely,

Leslie Leager
Program Planner
Waste Management Assistance Division



DEPARTMENT OF NATURAL RESOURCES

THOMAS J. VILSACK, GOVERNOR
SALLY J. PEDERSON, LT. GOVERNOR

PAUL W. JOHNSON, DIRECTOR

January 3, 2000

Ginny Paulson
Hawkeye Valley Area Agency on Aging
2101 Kimball Ave., Suite 320
Waterloo, IA 50702-5057

RE: Solid Waste Alternatives Program
Contract 00-G550-16

Dear Ms. Paulson:

Enclosed please find a copy of the **draft** Solid Waste Alternatives Program. After you have had the opportunity to review the **draft** contract, please contact me to arrange a meeting to discuss any questions and finalize the contract for signatures.

I have estimated contract dates. These dates are subject to change based upon our meeting. The project milestones can be found on page 3 of the contract. The completion of these tasks will be the basis of the contract. Therefore, please review the milestones for accuracy.

Do **Not** incur any costs in which program funds will be used until a final contract is signed. If you have any questions, I can be reached at 515-281-8672.

Sincerely,

Leslie Leager
Program Planner
Waste Management Assistance Division