EXAMPLES OF INSTRUMENTATION

EVALUATION OF NC COOPERATIVE EXTENSION MAJOR PROGRAMS
WATER CONSERVATION

SURVEY QUESTIONS

1. Did you increase your knowledge and awareness of the need to conserve water?
   ____ Yes  ____ No

2. Did you adopt any best management practices to conserve water?
   ____ Yes  ____ No

   If so, which of the following best management practices did you adopt?
   ____ Located and corrected leakage in toilet and/or faucet
   ____ Installed water saving devices and/or fixtures
   ____ Developed water saving habits when showering, bathing, etc.

If you get a monthly water bill from your town, city, or county, please answer question 3.
If you do not, please go to question 4.

3. Did you reduce your water usage (based on water bill figures)?
   ____ Yes  ____ No

   If so, by how many gallons? ________________

4. Do you believe you reduced your water usage?
   ____ Yes  ____ No

   If so, estimate by what percent you think you reduced your water usage.

   ____ 1-10%
   ____ 11-20%
   ____ 21-30%
   ____ 31-40%
   ____ 41-50%
   ____ more than 50%
WASTE MANAGEMENT (BUSINESSES, INDUSTRIES, GOVERNMENT, AND DEVELOPMENT PROFESSIONALS)

SURVEY QUESTIONS

1. Did you increase knowledge and awareness of waste reduction strategies (source reduction, reuse, recycling, composting)?
   ____ Yes       ____ No

2. Did you adopt waste reduction strategies?
   ____ Yes       ____ No

   If so, which of the following strategies did you adopt?
   ____ Source Reduction (eliminate or reduce waste, reduce toxicity)
   ____ Reuse
   ____ Recycling
   ____ Composting
   ____ Vermicomposting
   ____ On-site composting
   ____ Municipal composting

3. What was the quantity of waste diverted from disposal through waste reduction strategies?

   _______
WASTE MANAGEMENT (RESIDENTIAL)
SURVEY QUESTIONS

1. Did you increase knowledge and awareness of waste reduction strategies (source reduction, reuse, recycling, composting)?
   ____ Yes ______ No

2. Did you adopt waste reduction strategies?
   ____ Yes ______ No
   If so, which of the following strategies did you adopt?
   ____ Source Reduction (eliminate or reduce waste, reduce toxicity)
   ____ Reuse
   ____ Recycling
   ____ Composting
   ____ Vermicomposting
   ____ Backyard composting

3. ____ What was the quantity of waste diverted from disposal through waste reduction strategies?
   ____ Pounds of non-hazardous materials (textiles)
   ____ Pounds of household hazardous or special waste materials
   ______ White goods
   ______ Household batteries
   ______ Home use pesticides
   ______ Other (please specify) ______
   ____ Gallons of household hazardous materials
   ______ Paint, varnishes, stains, solvents
   ______ Home use pesticides
   ______ Motor oil
   ______ Other (please specify) ______
COMMUNITY WATERSHED MANAGEMENT (BUSINESSES, INDUSTRIES, GOVERNMENT, AND DEVELOPMENT PROFESSIONALS)

SURVEY QUESTIONS

1. Did you increase your knowledge and awareness of the need for protecting and improving water quality through watershed management?
   
   _____ Yes  _____ No

2. Did you adopt any best management practices to protect and improve surface and groundwater?
   
   _____ Yes  _____ No

   If so, which of the following best management practices did you adopt?

   [ ] Used innovative sedimentation and erosion control practices (i.e. skimmers)
   [ ] Preserved riparian areas
   [ ] Used irrigation timers
   [ ] Used less fertilizer and pesticides
   [ ] Removed or reduced use of curb and gutters
   [ ] Used alternative pavements when possible
   [ ] Reduced street widths
   [ ] Used bio-retention areas (rain gardens) for stormwater treatment
   [ ] Used stormwater wetlands
   [ ] Used level spreaders to create sheet flow through vegetated buffers
   [ ] Used sand filters and proprietary stormwater products
   [ ] Stream restoration work performed

3. Estimate the number of acres of urban and/or residential watershed that are impacted by your adoption of best management practices ________
COMMUNITY WATERSHED MANAGEMENT (RESIDENTIAL)

SURVEY QUESTIONS

1. Did you increase your knowledge and awareness of the need for protecting and improving water quality through watershed management?
   
   ____ Yes  ____ No

2. Did you adopt any best management practices to protect and improve surface and ground water?
   
   ____ Yes  ____ No

   If so, which of the following best management practices did you adopt?
   
   ____ Removed debris
   ____ Used landscaping and lawn maintenance controls
   ____ Adopted land use management practices such as buffers, easements, setback
   ____ Used proper car washing techniques
   ____ Used proper pet waste disposal techniques
   ____ Used proper automotive maintenance (no leaking oil, etc.)
   ____ Reduced amount of lawn area/ increased natural area
   ____ Used native or water conserving plant materials
   ____ Used soil test to direct lawn and landscape management

3. Estimate the number of acres of urban and/or residential watershed that are impacted by your adoption of best management practices _______
WASTEWATER MANAGEMENT

SURVEY QUESTIONS

1. Did you increase your knowledge and awareness of the type of wastewater treatment system you use and its location?

   ____ Yes   ____ No

2. Did you increase your knowledge and awareness of proper maintenance of the wastewater system you use?

   ____ Yes   ____ No

3. Did you adopt any best wastewater management practices?

   ____ Yes   ____ No

   If so, which of the following management practices did you adopt?

   ____ Limit disposal to sewage (no trash, grease, or hazardous chemicals)
   ____ Conserve water use
   ____ Protect the system from physical damage
   ____ Gray water disposed in regular home wastewater system
   ____ Landscaping to promote surface drainage
   ____ No commercial additives applied to septic system

4. Did you keep periodic checks on septic system operation and/or have you had your septic tank pumped by a licensed professional?

   ____ Yes   ____ No
DRINKING WATER QUALITY
SURVEY QUESTIONS

1. Did you increase your knowledge and awareness of the type and location of your drinking water supply?

   ___ Yes  ___ No

2. Did you improve your existing well?

   ___ Yes  ___ No

   If so, in which of the following ways did you improve your existing well?

   ___ Well casing of steel, concrete, or PVC (where allowed) replaces rocks or broken concrete lining well
   ___ Casing extends 12” above ground level
   ___ Casing is grouted on the outside to seal it in well hole
   ___ Well is cased to bedrock, or at least 20 feet down, as required
   ___ Well is more than 70 feet deep

3. Did you adopt practices around the well to minimize the chance of contamination?

   ___ Yes  ___ No

   If so, which of the following practices did you adopt?

   ___ No chemicals (pesticides, fertilizers, paint, motor oil, etc.) are stored in well house
   ___ No animals are housed in well house
   ___ Agricultural chemicals are mixed and loaded a safe distance from well
   ___ Mixing tanks are rinsed a safe distance from well
   ___ Well is separated by at least 100 ft. from septic system and/or sources of animal poultry manure

4. Did you have your water tested and/ or treated appropriately?

   ___ Yes  ___ No

   If so, in which of the following ways did you have your water tested and/ or treated?

   ___ Water is tested by health department or state-certified private laboratory
   ___ Well is shock-chlorinated to kill bacteria
   ___ Treatment systems, if necessary, are chosen based on results of certified water test
5. Did you have any benefits resulting from adoption of the water quality best management practices you checked in questions 2 – 4 above?

  _____ Yes    _____ No

If so, which of the following benefits have you noticed?

  _____ Recovery from known water-borne illness
  _____ Negative test for coliform bacteria (based on improved water test results)
  _____ Reduced nitrate concentration (based on improved water test results)
  _____ Reduced concentration of other problem contaminants, such as ammonium (based on improved water test results)
  _____ Better taste
  _____ Improved color or water
  _____ Improved color of laundry
  _____ Less or no odor

6. Did you replace an old or hand-dug well with a modern well or hookup to a municipal supply?

  _____ Yes    _____ No

7. Did you close an unused well?

  _____ Yes    _____ No
What Have You Learned?

Date: ___________________  Birthdate: ___________________

Circle the best answer to each of the questions.

1. Which of the following dietary choices would best reduce risk for heart disease/heart attack?
   a. less cholesterol
   b. less total fat
   c. fewer animal products
   d. I do not know

2. A person who has a blood cholesterol level of 250 milligrams/deciliter (mg/dl) is at what risk for heart disease?
   a. none
   b. moderate
   c. high
   d. I do not know

3. Americans should reduce their intake of cholesterol to no more than:
   a. 100 mg/day
   b. 200 mg/day
   c. 300 mg/day
   d. I do not know

4. Which one of these food groups contains cholesterol?
   a. chicken
   b. margarine
   c. peanut butter
   d. I do not know

5. When substituted in equal amounts, all of the following will reduce fat content in a recipe EXCEPT:
   a. margarine for butter
   b. cottage cheese for cream cheese
   c. skim milk for 2% milk
   d. I do not know
6. Name three ways to cut down on sodium intake.
   a. 
   b. 
   c. 

7. From the following 2 labels (A & B), choose which one is more healthy:
   a. _____
   c. _____ I do not know
   e. _____

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition Facts</td>
<td>Nutrition Facts</td>
<td></td>
</tr>
<tr>
<td>Total Fat</td>
<td>1g</td>
<td>5g</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>0g</td>
<td>2g</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>15mg</td>
<td>10mg</td>
</tr>
<tr>
<td>Sodium</td>
<td>1150mg</td>
<td>1160mg</td>
</tr>
<tr>
<td>Total Carbohydrates</td>
<td>41g</td>
<td>41g</td>
</tr>
<tr>
<td>Calories</td>
<td>210</td>
<td>250</td>
</tr>
<tr>
<td>Fat Calories</td>
<td>10</td>
<td>45</td>
</tr>
</tbody>
</table>

8. Of the foods below, the best source of fiber is:
   a. cream of wheat cereal
   b. lettuce
   c. kidney beans
   d. I do not know

9. Hydrogenation makes unsaturated fats:
   a. more saturated
   b. more liquid
   c. safer to eat
   d. I do not know

10. Saturated Fats are found in:
    a. all animal products, except nonfat ones
    b. all vegetable oils
    c. both a and b
    d. I do not know
11. Please describe what you do for heart-healthy exercise.
   a. What exercise do you do? __________________________
   b. How often do you exercise? __________________________
   c. For how long do you exercise each time? _______________

12. Circle ALL the choices that are generally high in sodium.
   a. olives
   b. potato chips
   c. hot dogs
   d. I do not know

13. Mono- and poly-unsaturated fats are described by all of the following EXCEPT:
   a. helpful in lowering cholesterol
   b. lower in calories that saturated fats
   f. contained in animal fats
   g. liquid at room temperature
   h. I do not know

14. One serving of cooked cereal, rice or pasta is:
   a. 1/3 cup
   b. 1/2 cup
   c. 3/4 cups
   d. 1 cup

15. One serving of fresh fruit is:
   a. 1/3 cup
   b. 1/2 cups
   c. 3/4 cup
   d. 1 cup

16. Circle ALL of the following that represent risk factors for heart disease and stroke:
   a. too much exercise
   d. family history of heart disease before age 55
   b. high HDL cholesterol level
   e. where fat is located on your body
   c. having diabetes
   f. high total cholesterol
17. List three danger signals of exercise being too strenuous.
   a. 
   b. 
   c. 

18. List three ways to trim the fat from your diet.
   a. 
   b. 
   c. 

19. When eating out, to limit fat intake, the best choice shown is:
    a. a salad with oil and vinegar dressing
    b. pasta with marinara sauce
    c. creamed broccoli soup
    d. I do not know

20. How much fat and high-fat food do you eat each day?
    a. very little; I always try to avoid fat and high-fat food
    b. some; I try to avoid fat and high-fat foods sometimes
    c. the same as most people; I don't really try to avoid fat and high-fat foods
    d. probably too much; I like the flavor that fat adds to my foods

21. How long have you been eating this amount of fat and high-fat food?
    a. less than 1 month
    b. 1 to 3 months
    c. 4 to 6 months
    d. longer than 6 months
    e. I don't know
22. Are you seriously thinking about avoiding fat and high-fat food sometime in the next month?
   a. yes
   b. no
   c. I don’t know

23. Are you seriously thinking about avoiding fat and high-fat food sometime in the next 6 months?
   a. yes
   b. no
   c. I don’t know

24. How much salt and salty food do you eat each day?
   a. Very little; I always try to avoid salt and salty food.
   b. Some, I try to avoid salt and salty food sometimes.
   c. The same as most people; I don’t really try to avoid salt and salty food.
   d. Probably too much, I don’t like food that tastes “flat”.

25. How long have you been eating this amount of salty food?
   a. less than 1 month
   b. 1 to 3 months
   c. 4 to 6 months
   d. longer than 6 months
   c. I do not know

26. Are you seriously thinking about avoiding salt and salty food sometime in the next month?
   a. yes
   b. no
   c. I do not know

27. Are you seriously thinking about avoiding salt and salty food sometimes in the next 6 months?
   a. yes
   b. no
   c. I do not know
Please tell us your opinions about heart disease. Choose "yes" or "no" for each of the following:

28. Yes No One cannot do anything to reduce their risk of heart disease
29. Yes No If a person has heart disease, it is his or her own fault.
30. Yes No Most people with heart disease can enjoy life.
31. Yes No People who do not take care of themselves may have a heart attack.
What Do You Do?

How often do you do the following? (Check the response that best describes your habits.)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Almost Always</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Rarely/Never</th>
<th>Doesn't Apply (Explain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use fat in sauce and gravies.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select smaller portions of high-fat foods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substitute dry beans or peas for meats</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limit foods high in cholesterol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limit foods high in fat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limit egg yolks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Read food labels to select lower fat foods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce the amount of fat called for in a recipe or added at the table.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trim all visible fat from meat (such as beef, chicken, or pork) before cooking or eating.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remove sin from poultry before cooking or eating.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use fat in seasoning vegetables.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bake, broil, steam, or microwave food rather than fry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substitute low-fat or skim milk for whole milk when preparing food.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use non-stick pans or non-stick coatings rather than fat to coat pans.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substitute liquid vegetable oil for solid fat.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fat fried foods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eat meats like sausage, cold cuts, bacon, or hot dogs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limit foods high in salt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add salt at the table</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cut back on salt in food preparation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Healthy Individuals, Families and Communities

Question 1
Did you increase your knowledge about what I can do to stay healthy?

_____ yes _____ no

OR

Prior to the educational program on _____, my knowledge level was
low 1 2 3 4 5 6 7 8 9 10
high

After the educational program on _____, my knowledge level is
low 1 2 3 4 5 6 7 8 9 10
high

Question 2
Did you increase your knowledge of for who and at what age health screenings are recommended?

_____ yes _____ no

OR

Prior to the educational program on _____, my knowledge level was
low 1 2 3 4 5 6 7 8 9 10
high

After the educational program on _____, my knowledge level is
low 1 2 3 4 5 6 7 8 9 10
high

Question 3
Please list the number of times you or your immediate family used the emergency room in the past year: _____

Question 4
As a result of the educational program on ________, did you increase your knowledge of
health care issues, options and financing?
____ yes  ____ no

OR

Prior to the educational program on ________, my knowledge level was
low
1 2 3 4 5 6 7 8 9 10

After the educational program on ________, my knowledge level is
low
1 2 3 4 5 6 7 8 9 10

high
Safe, Healthy Living and Working Environments Survey

**Question 1**
Did you increase your knowledge and awareness of best management practices for creating a safe and healthy living and working environment?

____ yes  ____ no

OR

Prior to the educational program on ______, my knowledge level was
low 1 2 3 4 5 6 7 8 9 high 10

After the educational program on ______, my knowledge level is
low 1 2 3 4 5 6 7 8 9 high 10

**Question 2**
(select the question that best fits your programming focus)

Which of the following best management practices did you adopt to improve the safety and healthiness of your living and working environment?

____ Evaluated home, school, working environment using indoor air quality assessment tool and
    ____ Found that there were no indoor air concerns
    ____ Maintained ventilation and air circulation systems including installing
        and changing air filters according to manufacturers recommendations
    ____ Avoided the use of air cleaners and purifiers that generate ozone
    ____ Investigate one or more of the indoor air concerns below

____ Performed blower door test and
    ____ Found that there were no air leakage concerns
    ____ sealed ducts
    ____ installed weatherstripping
    ____ installed energy efficient windows

____ Conducted radon test and
    ____ Found that there were no radon concerns
    ____ installed pipe and fan radon reduction system
    ____ sealed foundation area to resist radon entry
    ____ installed radon-resistant, new construction techniques

____ Evaluated humidity levels with hygrometer and
___ Found that humidity levels were acceptable (within 40% - 60%)
___ Prevented the build-up of standing water in crawl spaces, basements, air conditioners, and refrigerator drip pans
___ Used dehumidifiers and/or air conditioners to control excess humidity in warm humid seasons
___ Avoided the use of humidifiers unless absolutely necessary

Evaluated sources of combustion by-products and
___ Found no combustion by-product concerns
___ Inspected and maintained HVAC appliances according to manufacturer's recommendations
___ Provided an outside air source for combustion appliances
___ Used spot ventilation (such as kitchen exhaust fan) to remove combustion by-products
___ Did not operate unvented combustion appliances

Conducted test for lead and
___ Found that there were no lead concerns
___ Eliminated lead hazards through encapsulation, enclosure, paint removal, and/or component removal and replacement
___ Controlled lead hazards using short-term or interim controls such as vacuuming with HEPA vacuum, wet-mopping floors and wet-cleaning window sills and wells with cleaner, have children wash hands regularly, and/or controlling how and where children play

Evaluated other indoor air concerns (VOCs, asbestos, and formaldehyde)
___ List other indoor air concerns and corrective steps taken:

Conducted housing moisture audit and/or inspected my home for moisture problems and
___ Found no moisture concerns in my home
___ Installed a 6 - 8 mil polyethylene vapor barrier in the crawl space
___ Corrected crawl space ventilation
___ Corrected drainage by adding gutters, installing drainage systems, installing flashing, and/or installed a sump pump
___ Insulated HVAC ducts to at least R-6, and/or properly sealed HVAC ducts
___ Corrected other moisture problems such as improper dryer venting, improper combustible appliance venting, and/or plumbing leaks
___ Other

Conducted ergonomics audit and
___ Found that there were no ergonomic concerns
___ Adjusted furnishings or added supplements to reduce stress on muscles, joints and ligaments
___ Adjusted furniture/equipment placement to better accommodate my needs
___ Purchased new chair/desk to better accommodate my needs
___ Adjusted computer monitor placement and/or lighting to reduce screen glare

Performed a safety audit (for older adults) and
___ Found that there were no safety concerns
___ Eliminated potential hazards
___ Completed home modifications, such as ____________________________

Performed a safety audit (for young children) and
___ Found that there were no safety concerns
___ Eliminated possible poison hazards
___ Eliminated choking, suffocation, and/or strangulation hazards
___ Eliminated burn hazards
___ Eliminated electrical shock hazards
___ Eliminated other household hazards ____________________________

Question 3
Do you believe that your health has improved as a result of implementing the best management practices?
___ yes   ___ no

If yes, in what way (check all that apply)
___ Fewer number of colds
___ Fewer asthma attacks and/or less severe asthma attacks
___ Fewer work absences related to illness or injury
___ Fewer headaches
___ Fewer body aches/pains
___ Lower blood lead levels
___ Improved overall health
___ Improved overall safety
___ Lowered my potential for lung cancer due to lowered radon level and/or ETS level
___ Other ____________________________

Question 4
As a result of implementing best management practices, overall safety has improved in:
___ my school
___ my home
___ my place of business
Agricultural Health and Safety

Question 1
Did you increase your awareness and knowledge of agricultural health and safety issues?
___ yes  ___ no

OR

Prior to the educational program on ________, my knowledge level was
low 1  2  3  4  5  6  7  8  9  10  high

After the educational program on ________, my knowledge level is
low 1  2  3  4  5  6  7  8  9  10  high

Question 2
(select the questions that best fit your programming focus
As a result of attending an educational program on ________________, I intend to or have implemented the following practices:

Practice pesticide safety, including:
___ have Material Safety Data Sheets and other pesticide safety information readily available
___ mix and load pesticides in a spill containment area
___ store chemicals in locked areas away from children
___ mix and store chemicals in original and labeled containers — not in empty food containers
___ dispose of chemicals according to label instructions
___ recycle pesticide containers
___ use personal protective equipment when using pesticides
___ launder and store protective clothing separately

Practice health promotion and disease prevention practices, including:
___ wear wide-brim hat to prevent skin cancer
___ wear long sleeves to prevent skin cancer
___ use sun screen to prevent skin cancer
___ use respiratory protection, if necessary, in animal confinement units
___ use gloves or other protective equipment when animal-to-human disease transmission is possible

Practice farm safety methods, including:
___ adopted and use a farm safety plan
___ have a “no riders” policy
___ have water rescue equipment available at farm pond
___ use safety signs on farmstead
___ use safety equipment and maintain it
___ use tractor with ROPS (rollover protection system) including seat belt use
use safety practices when entering confined spaces
use protective equipment and safe riding practices on ATV's
provide ongoing health and safety training to family
provide ongoing health and safety training to workers
given appropriate farm tasks to youth based on age and ability
use safe animal handling practices
wear helmet when riding horses
modified equipment or practices so that I can continue to work with a disability

Question 3
Do you believe that any of the following have been reduced as a result of implementing agricultural health and safety best management practices?

illness
injury
personal stress

Question 4
Do you believe you have avoided costs associated with agricultural illness and injury due to implementing the best management practices?

yes  no

Question 5
Think back to your last agricultural related emergency situation. As a result of attending a program on agricultural related illness and injury, do you feel like you responded more effectively to that emergency situation?

yes  no

Question 6
As a result of attending an educational program on agricultural related illness and injury, do you feel you have better served your patients or your community?

yes  no