

Food Composition Information for Ethnic Populations in the U.S.

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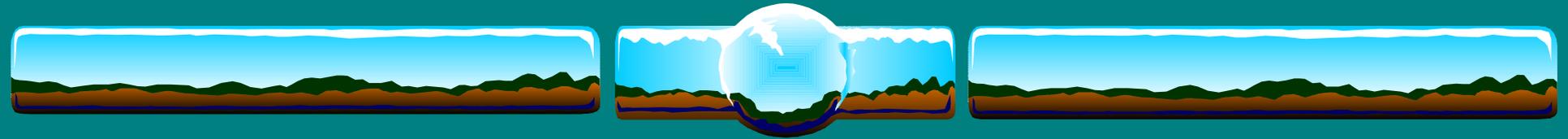
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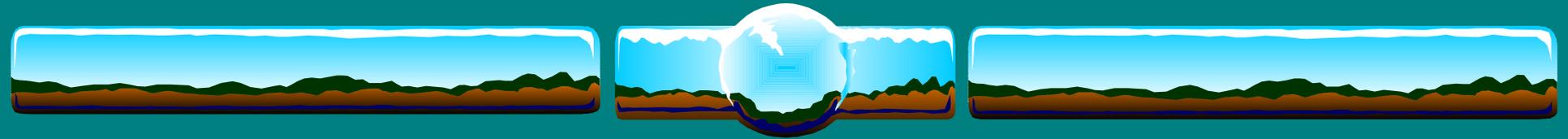


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Composition of Ethnic Foods

- American Indian/Alaska Native (AI/AN)
- Latino
- African American
- Future – Asian American/Pacific Islander?



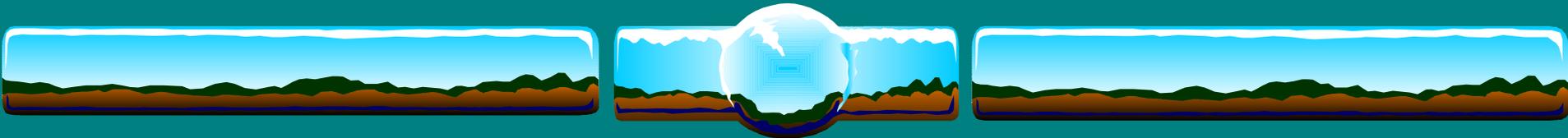
Nutrient Profiles: Ethnic Foods

❖ Used for:

- Dietary Assessment
- Clinical evaluations
- Health education

❖ Types of information

- Main stream foods (NFNAP)
- USDA Commodity Foods (NFNAP)
- Hunted and foraged foods (AI/AN)
- Traditional recipes (all)



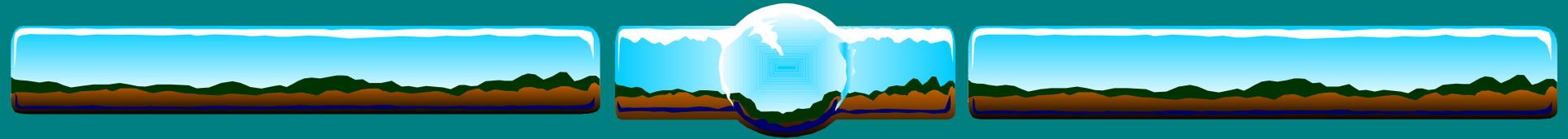
Information on Dietary Intake of Ethnic Groups

- ❖ Published research
- ❖ Other projects (e.g., Strong Heart and Pathways)
- ❖ Informal surveys and interviews
- ❖ Collaborations (e.g., food frequency questionnaire data from other studies)
- ❖ Focus groups (Latino)
- ❖ Regional studies (NIRI-Delta)



American Indians/Alaska Natives

- ❖ 2.5+ million (2000 US Census)
- ❖ 562 federally recognized tribes
- ❖ Health problems above national average
 - Obesity
 - Diabetes
 - Alcoholism
 - Cancer
 - Cardiovascular disease and strokes
 - Liver and gallbladder disease
 - Hypertension
 - Vitamin/mineral deficiencies for young children



Why Promote Native Foods?

- ❖ Traditional foods are nutrient dense (protein, MUFA, PUFA, omega-3 FA, vitamins A, C, D, E, iron and zinc)
- ❖ Can replace fast/convenience foods
- ❖ Hunting/foraging/gardening - increased physical activity
- ❖ Strengthening of bonds among generations



Development of AI/AN Database

❖ Stages

- ❖ Identify Key Foods in AI/AN diet (preexisting data?)
- ❖ Identify/prioritize foods for sampling and analysis
- ❖ Design/implement sampling plan for 200 foods
- ❖ Sample analysis
- ❖ Data compilation and dissemination

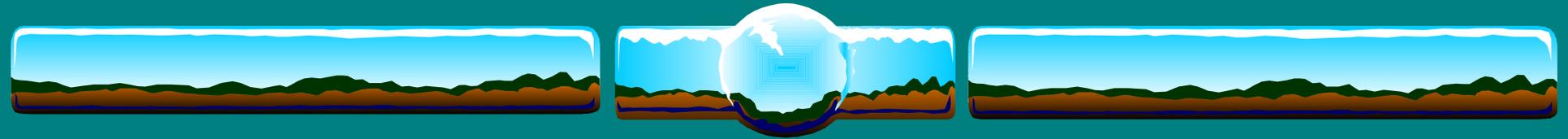
❖ Support (funding or information)

- ❖ Indian Health Service
- ❖ Natl Ctr on Minority Health and Health Disparities, NIH
- ❖ Bureau of Indian Affairs
- ❖ DHHS Administration on Aging, Ofc for American Indian, Alaska Native, and Native Hawaiian Programs



Foraged and Hunted Foods

- ❖ Plant materials and preparation
 - Common (berries), regional (corn), ceremonial dishes
- ❖ Sampling efforts
 - Food value to tribe, seasonality and perishability
 - Perishability of plants
- ❖ Animals and preparation
 - Common (deer), regional (mutton), ceremonial dishes
- ❖ Exemptions to hunt endangered marine mammals



Sampling

❖ Stages – 48 conterminous states

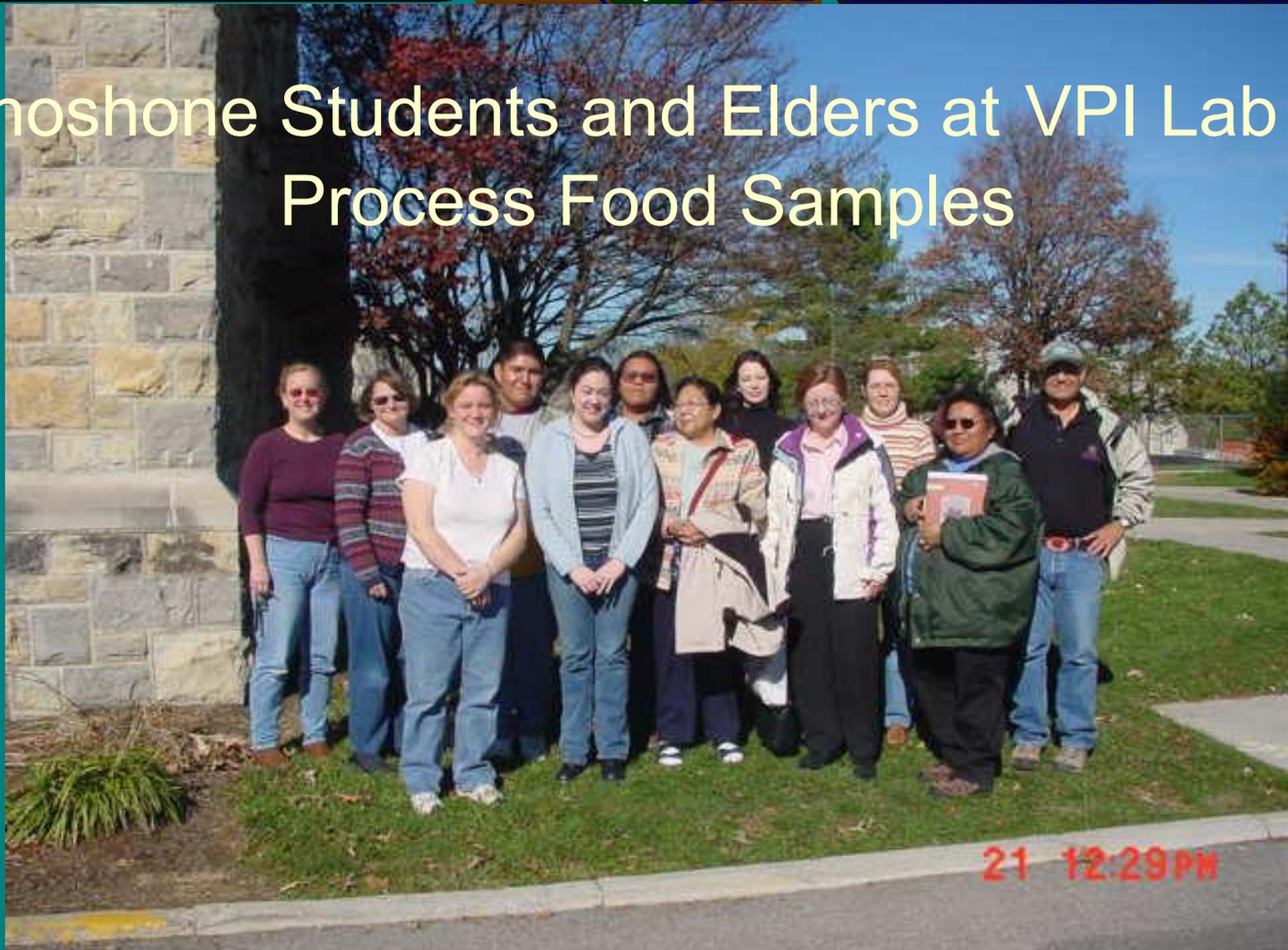
- Stratified regions based on geographical proximity and self-reported tribal enrollment data (BIA)
- AI/AN frame options –
 - 5 group sizes (6, 12, 24, 35, or 48 strata/regions across US)

❖ Sources of Foods

- Festivals or markets
- Tribal members: hunting, gathering, home preparation
- Senior Centers – food parties
- Schools – science classes



Shoshone Students and Elders at VPI Lab to Process Food Samples



American Indian/Alaska Native Foods

Geographic Stratification of Indian Tribes in Lower 48 States for 12 Strata

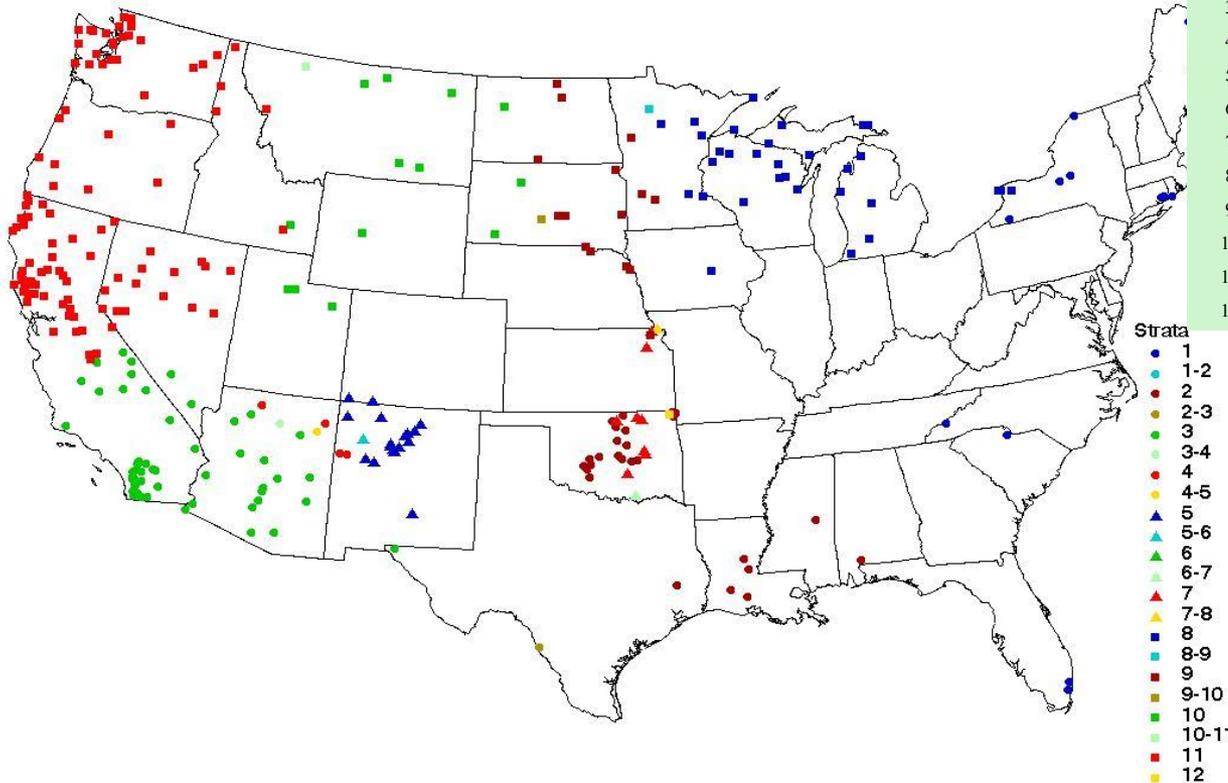
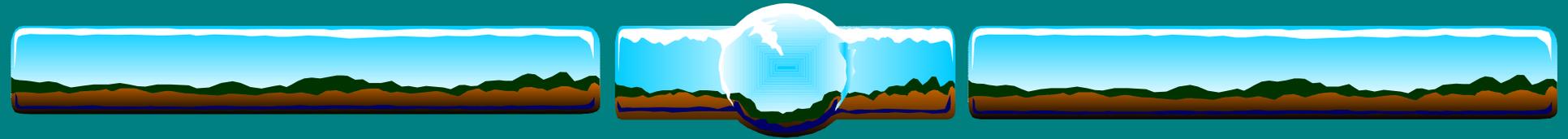


Table 1. Sample of Tribes by Stratum (12 Strata)

STRATUM	TRIBE NAME	ENROLLMENT
1	Cherokee Nation	200628
2	Caddo Tribe (OK)	3307
3	San Carlos Apache Tribe	10834
4	Western Navajo	40921
5	Fort Defiance Navajo	15326
6	Eastern Navajo	44435
7	Muskogee (Creek) Nation	44775
8	Sault Ste. Marie Tribe of Chippewa	27855
9	Standing Rock Sioux Tribe	12723
10	Cheyenne River Sioux Tribe	12703
11	Karuk Tribe (CA)	3835
12	Cherokee Nation	Second Sampling



New AI/AN Data in SR Database

- ❖ Alaska Native foods (~50)
 - Fish, marine mammals, caribou, berries
- ❖ Navajo foods (~30)
 - Mutton stews, tortillas, corn/cornmeal dishes
- ❖ Apache foods (5)
 - Fry bread, tennis bread, acorn stew
- ❖ Shoshone-Bannock foods (5)
 - Buffalo, elk, Steelhead trout, berries
- ❖ Published data on multiple tribes

Alaskan Subsistence Foods





Applications of AI/AN Data

- ❖ USDA AI/AN Foods Database
- ❖ Food cards for nutrition counseling (Navajo)
- ❖ Meal-planning programs for Native diabetics (several Southwest tribes)
- ❖ Opportunities for development of nutrition education program for young children (ShoBans)
- ❖ Data sharing with participating tribes



Latino Foods Database

- NCI collaboration
- Focus groups
 - Washington DC Metro
 - EL Salvador
 - Peru
 - Honduras
 - New York
 - Ecuador
 - Dominican Republic
 - Miami
 - Cuba (2)
 - Columbia
 - Los Angeles
 - El Salvador
 - Guatemala
 - Nicaragua

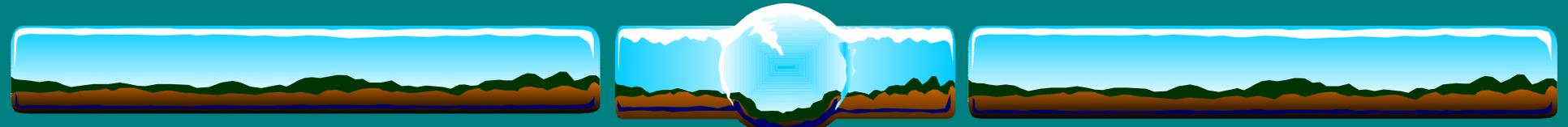


Latino Foods: Mexican Americans

Most commonly consumed beverages and foods¹

- Cola and fruit flavored soft drinks
- Beer (regular and lite)
- Milk
- Coffee
- Tortillas, corn and wheat
- Orange juice, citrus drinks and thirst quenchers
- Beans, common, cooked and refried
- Fruits and vegetables (bananas, apples, tomatoes)
- Soups, mainstream
- Beef steak, broiled or baked

¹NHANES 2001-02, 18-70 y, interviews conducted in Spanish



Latino Foods: Non-Mexican Americans

Most commonly consumed beverages and foods¹

- Tea
- Cola and fruit flavored soft drinks
- Milk
- Coffee
- Rice
- Juices, apple and orange
- Beer
- Potatoes
- Fruits and vegetables (apples, lettuce, tomatoes)
- Tacos and tostadas with beef and cheese
- Beef and vegetables mixtures

¹NHANES 2001-02, 18-70 y, interviews conducted in Spanish

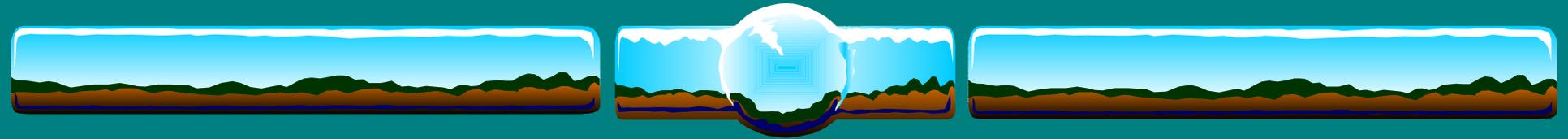


Latino American Foods

Traditional beverages and foods high on the list¹

- Tacos and tostadas (beef, cheese, lettuce, salsa)
- Meat and hominy soup (Pozole)
- Spanish rice (with or without beans)
- Red or Mexican beans (with or without rice)
- Quesadillas
- Fajitas (beef and vegetables)
- Plantains, boiled or fried
- Other soups, Mexican style (beef, chicken, tripe)
- Green tomato-chile sauce (salsa verde)
- Tropical juice drinks (Guava)

¹NHANES 2001-02, 18-70 y, interviews conducted in Spanish



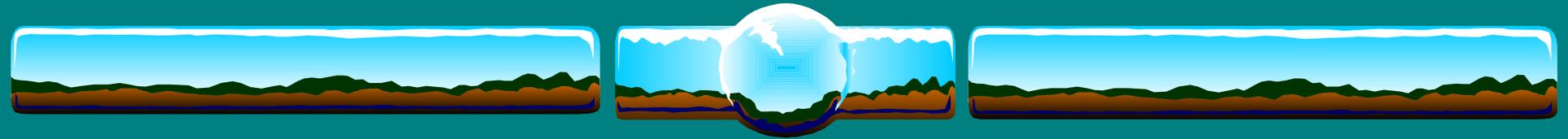
Latino Foods: In Progress

- ❖ Published data
- ❖ Pilot study (local) – ~15 foods
 - Incaparina
 - Harina de maiz
 - Refried red beans
 - Supligen
 - Nestum
 - Qusadilla salvordorena
 - Pan de torta
 - Zemita lida
 - Plantain chips
 - Arroz morelos
 - Corn tostadas
- ❖ Develop recipe ingredients lists



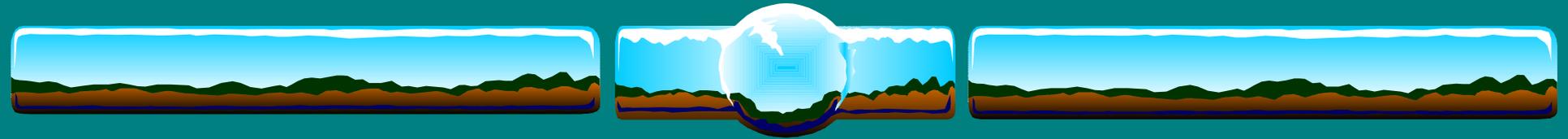
Latino Foods: What's next?

- ❖ Compile focus group data
- ❖ Merge with literature review information
- ❖ Determine Key Foods by group and nutrients
- ❖ Establish sampling protocols for ~ 25 foods
- ❖ Develop sample handling protocols
- ❖ Analysis
- ❖ Data release to SR and to NCI study



African American Foods

- Collaborations: Alabama and Tuskegee Univs (DASH program participants, Jefferson County, AL)
- Exploring other collaborators across US
- Fresh produce (12 foods), local sampling
- Focus on phytonutrients
 - Flavonoids
 - Polyphenols
- Pilot for national sampling



Foods in Pilot Study

- ❖ Okra
- ❖ Sweetpotato greens
- ❖ Purslane
- ❖ Mustard greens
- ❖ Collards
- ❖ Purple hull peas
- ❖ Butter beans
- ❖ Butter peas
- ❖ Eggplant
- ❖ Muscadine grapes
- ❖ Figs



Summary: Ethnic Foods

- ❖ Focus on authenticity
 - ❖ Ingredients and recipes
 - ❖ Preparation methods
- ❖ Sampling flexibility, substitutions
- ❖ Approvals with targeted group, if necessary
- ❖ Sample collection/storage/shipment: remote areas
- ❖ Limited amount of samples
- ❖ Protection of proprietary/cultural information
- ❖ Data sharing
- ❖ **Sampling and analysis will continue (funding critical)**