



College of Public Health and Human Sciences
Public Health Extension – Family and Community Health

Generating Rural Options for Weight GROW Healthy Kids & Communities

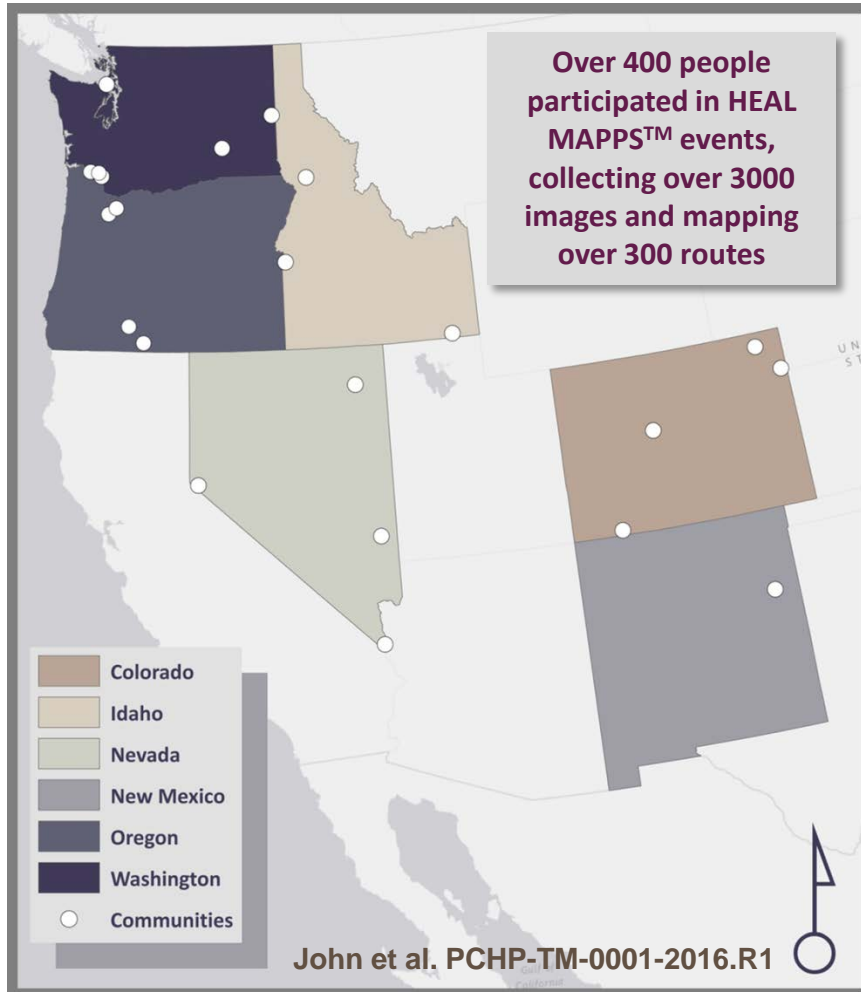
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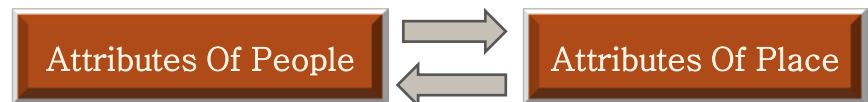


The goal of GROW Healthy Kids and Communities is to change the context to prevent a rise in obesity risk and prevalence in populations of rural children



AIM ONE

Explore and model the rural obesogenic environment in Oregon and five Western states to inform rural obesity prevention research, education, and Extension



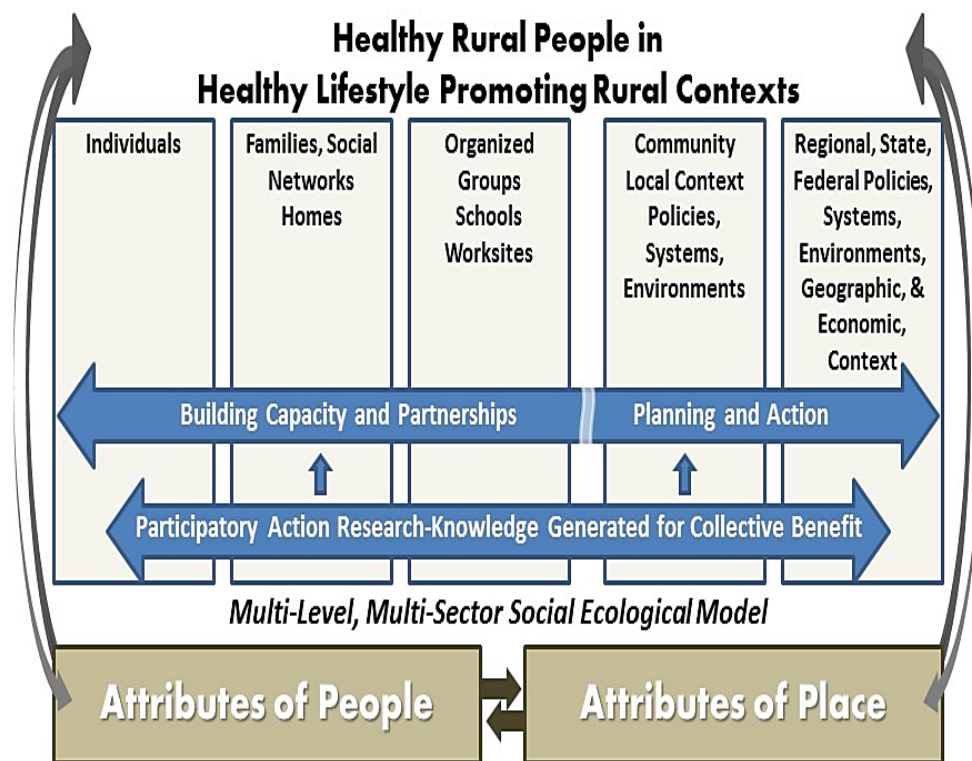
AIM TWO

Intervene in Oregon, via Extension targeting changes in community, school, and family home contexts (PSE) to promote children's daily healthful eating and physical activity behaviors and patterns, and thus prevent a rise in BMI prevalence in elementary school student populations

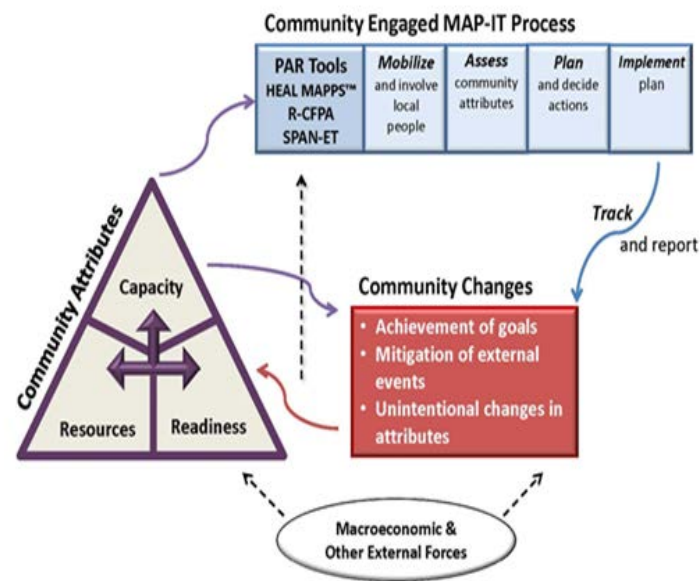
GROW Conceptual Frame and Approach

Our Rural People & Places Ecological Systems frame allows for modeling collective impact enabling activities across multiple levels, and environments

Our Participatory Action Research (PAR) model allows for integrated research, education and extension for studying and catalyzing change



Adapted from Maibach et al, BMC Public Health. 2007;7: 88.

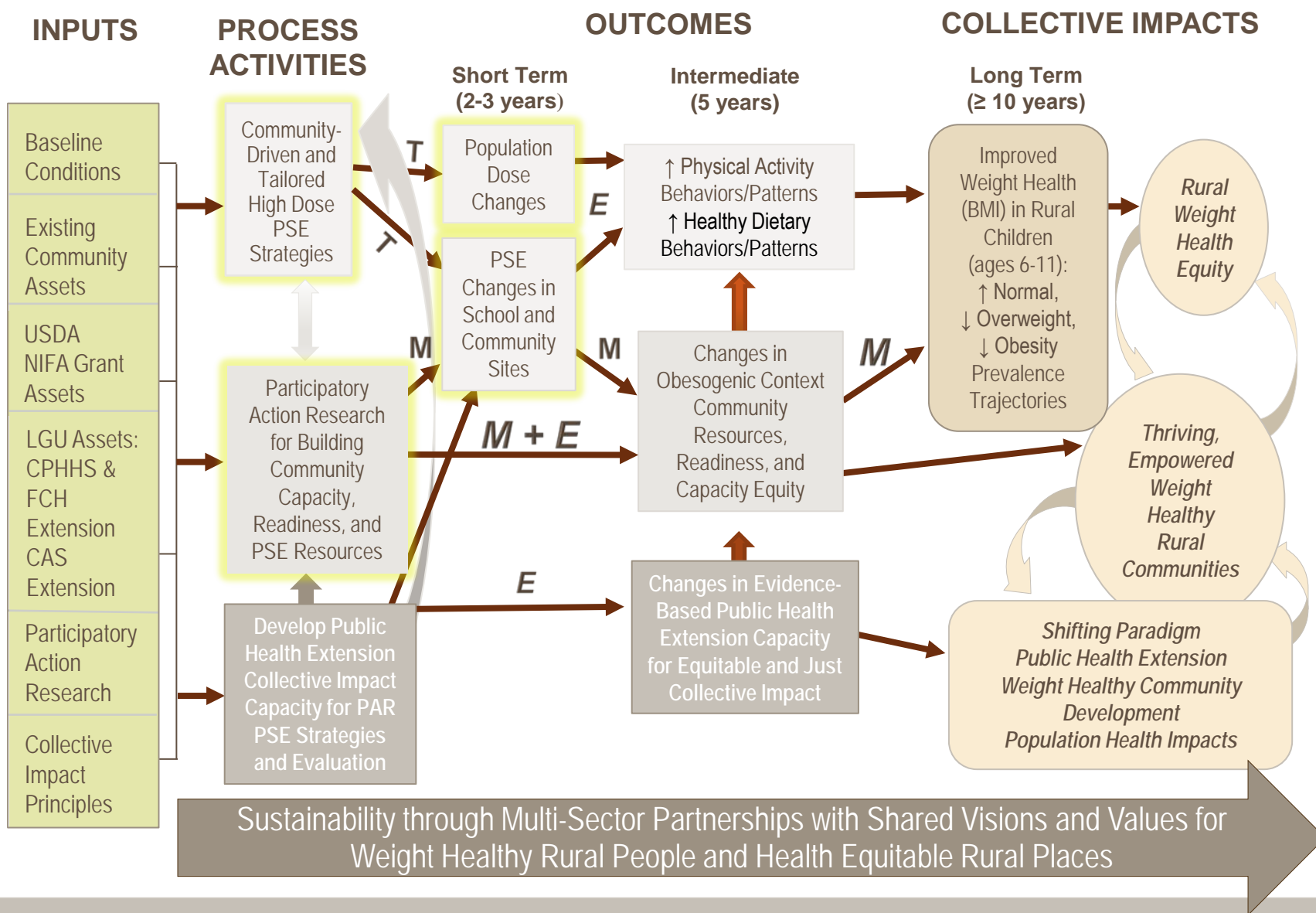


Participatory Research Value



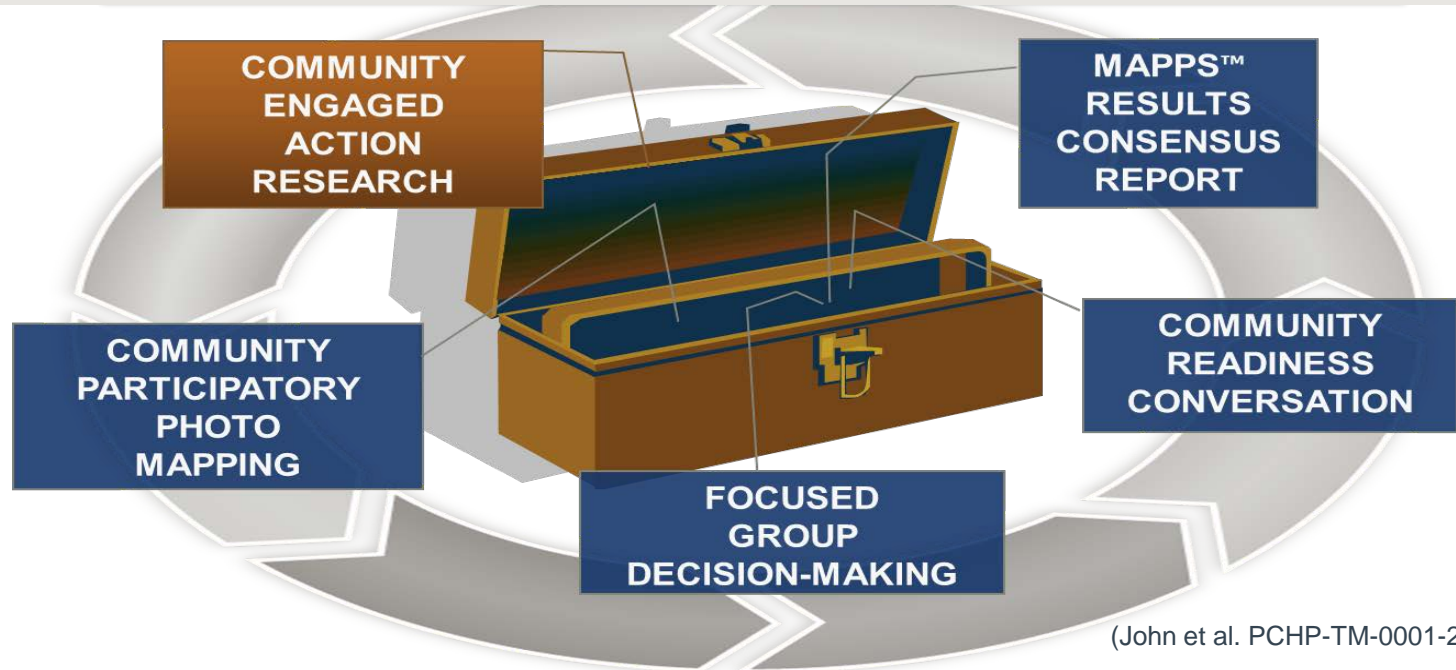
- Assure ***right to access*** – choices that are easily accessible, equitable, self-determined supports for weight-healthy habits
- Develop ***agency, advocacy, and solidarity actions*** for weight health – intentions, skills, and connectivity for change, including utility of information about obesogenic conditions for collective benefit
- Amend ***social and environmental inequities*** – by inclusive capacity building, empowerment and local ownership
- Promote a ***just rural context*** - resource availability, accessibility, and affordability to reduce rural weight health disparities

GROW Healthy Kids & Communities Logic Model



GROW PAR Tools for Community-Level PSE Action

Healthy Eating Active Living Mapping Attributes using Participatory Photographic Surveys (HEAL MAPPS™)



*In SNAP-Ed Strategies and Interventions: An Obesity Prevention Toolkit for States, 2016

Rural Community Food and Physical Activity (R-CFPA) Environmental Resource Audit

1. Sector partners and influencers scan community PA and HE/food resources using direct observation surveys and GPS cameras
2. Photographed resources are located, attributed, and categorized (as GIS data) on a community map

Extension-Facilitated Community-Engaged PAR to Build Collective Capacity for Effective PSE Impacts



Data Sources

1. Demographics
2. Route Maps, Journals, Surveys, Photographs, Transcripts
3. Indicators of Available PSE Resources
4. Resource Access/Affordability Narratives, Community Readiness Dimensions/ Scores, Community Recommendations for PSE Change

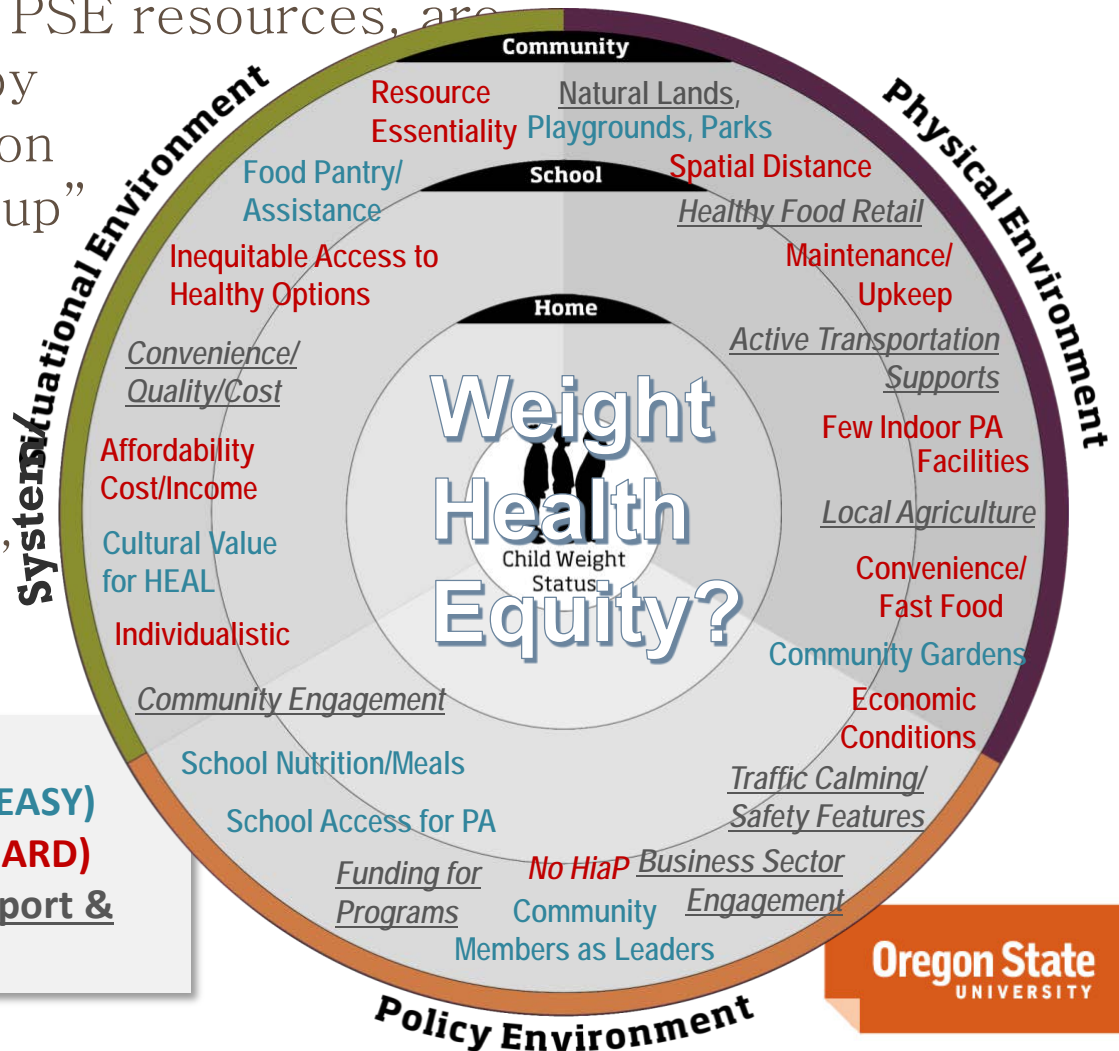
GROW positions Extension as Backbone Organization

PAR Phases for Collective PSE Impact			
Component for Success	PHASE I Initiate and Assess for Action	PHASE II Organize and Strategize for Impact	PHASE III Sustain Action & Impact
Governance & Infrastructure	<ul style="list-style-type: none"> Identify champions Form cross-sector groups 	<ul style="list-style-type: none"> Create infrastructure Outline processes – roles, communications, efforts, activities 	<ul style="list-style-type: none"> Facilitate process Refine processes and transfer/reassign roles
Strategic Planning and Prioritization	<ul style="list-style-type: none"> Map the landscape Use data to make case 	<ul style="list-style-type: none"> Create common agenda Outline goals & strategies 	<ul style="list-style-type: none"> Support priority PSE strategy implementation Fidelity check for alignment to goals
Inclusive Community Involvement	<ul style="list-style-type: none"> Facilitate inclusion Activate community outreach 	<ul style="list-style-type: none"> Engage community Build agency intentions - public will 	<ul style="list-style-type: none"> Continuous engagement Develop advocacy skills and advocates
Ongoing Evaluation & Improvement	<ul style="list-style-type: none"> Analyze baseline data Identify and report key issues and gaps 	<ul style="list-style-type: none"> Establish shared metrics (measurement tools, measurements, approach, & indicators) 	<ul style="list-style-type: none"> Collect, track, & report progress; repeat PAR Study process to learn and improve

Reference: Ravinder & Greenawalt (2015). Collective Impact Literature Review. Available at: <https://www.livingcities.org/resources/304-collective-impact-literature-review>.









Community Resources through a Weight Health Equity Lens

♪ We found attributes of *Rural Place*, accessibility and affordability of available PSE resources, are *experienced differently* by *Rural People* depending on socially determined “group” attributes, including income, location, race and/or ethnicity, family size & type, job/work, cultural norms, beliefs, and values



- KEY**
- **Support (Makes EASY)**
 - **Barrier (Makes HARD)**
 - **Either/Both (Support & Barrier)**

Rural Families (25% Food Insecure) Further Explained Household/Home Contexts in Focus Groups (n=9)

Theme		Nutrition		Physical Activity	
		Support	Barrier	Support	Barrier
Seasonal Variation	♪		X		X
Features of Home	♪		X		
Distance to Resources	♪		X		X
Eating Habits Promotion					
Screen Access Limits	♪				X
Financial Constraints	♪		X		
Schedule Constraints	♪		X		
Outdoor Safety	♪				X



Themes for Nutrition

- ❖ Family Eating Habits
- ❖ Food Procurement



Themes for Physical Activity

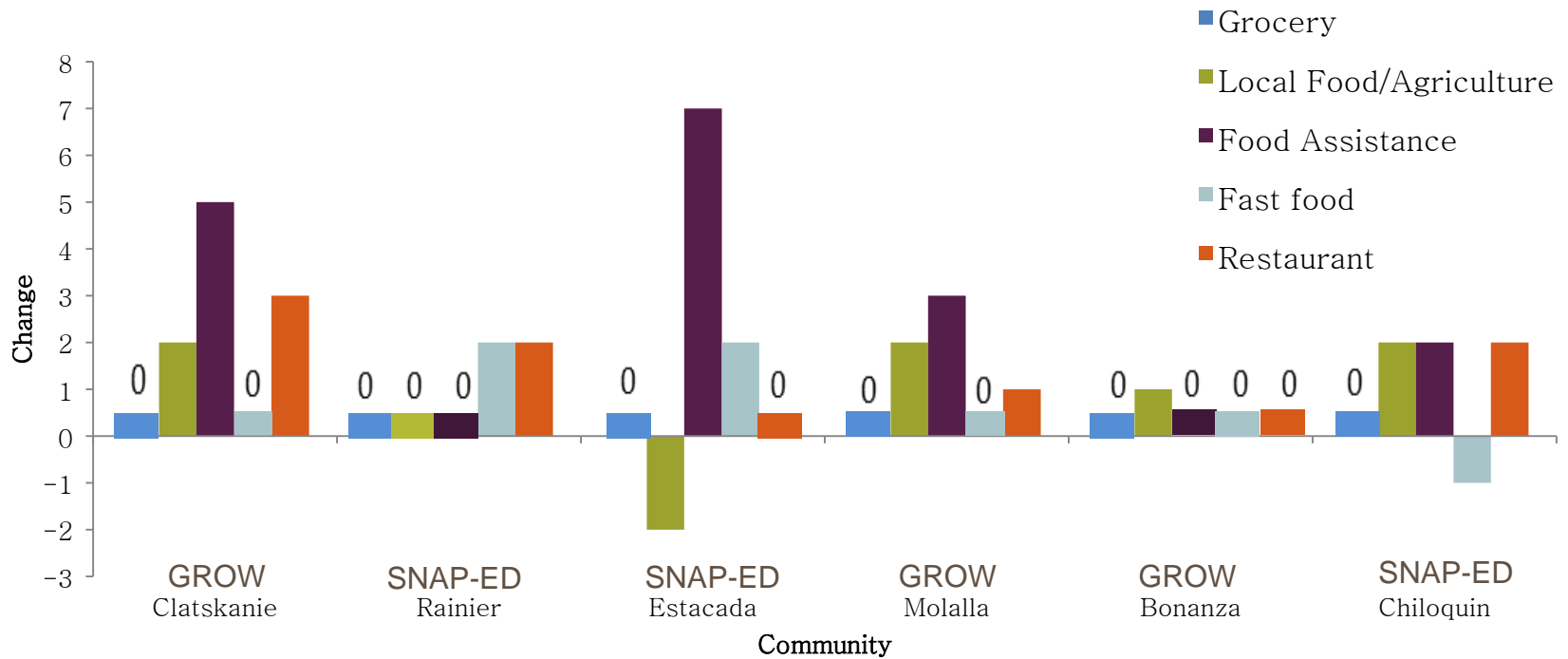
- ❖ Family Physical Activity
- ❖ Screen/Sedentary Recreation



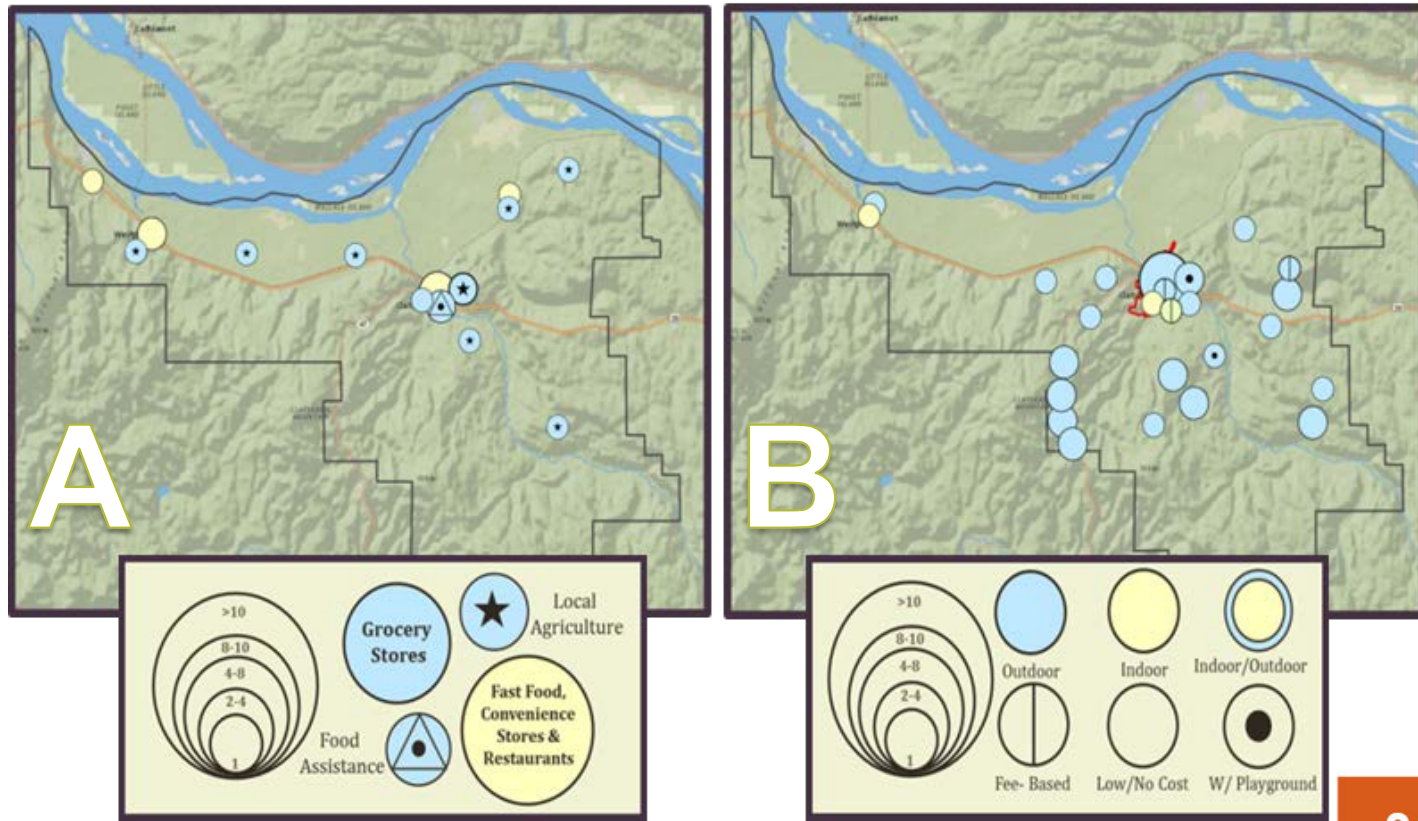


Oregon GPS “Ground-truthed” Environmental Scan of HE/Food Resources (R-CFPA)

Pre (t_0) to Post (t_3) Change in Change in Food Resources



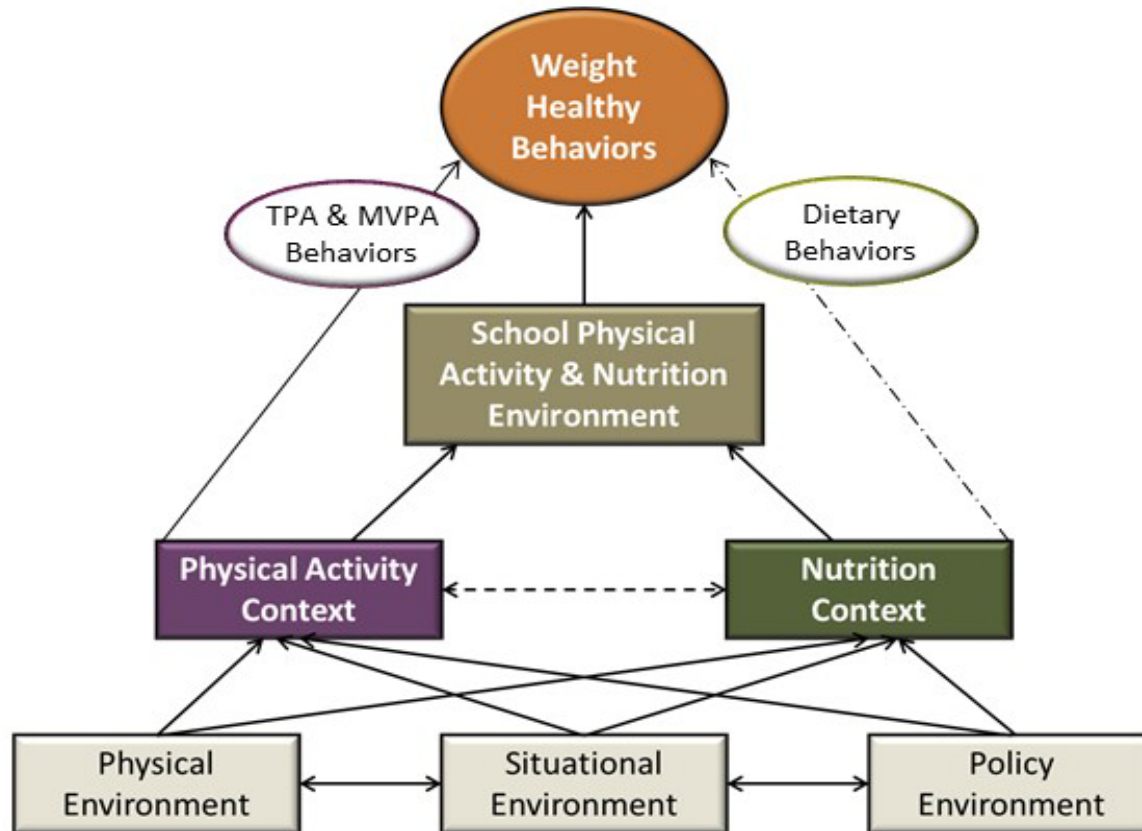
Community Food (A) and Physical Activity (B) Resource Maps Visualize Availability and Support Analysis of “Easy” Access (1/2 mile or 5 minutes drive) for Estimated Proportion (x% of total population) of Rural Households with Children



Rural Obesogenic Index = % priority population with easy access x strength of resources for supporting HE or PA (1=minimal/poor to 4=high/best) x seasonal weight (# usable months/12)

GROW PAR Tool for School-Level PSE Action

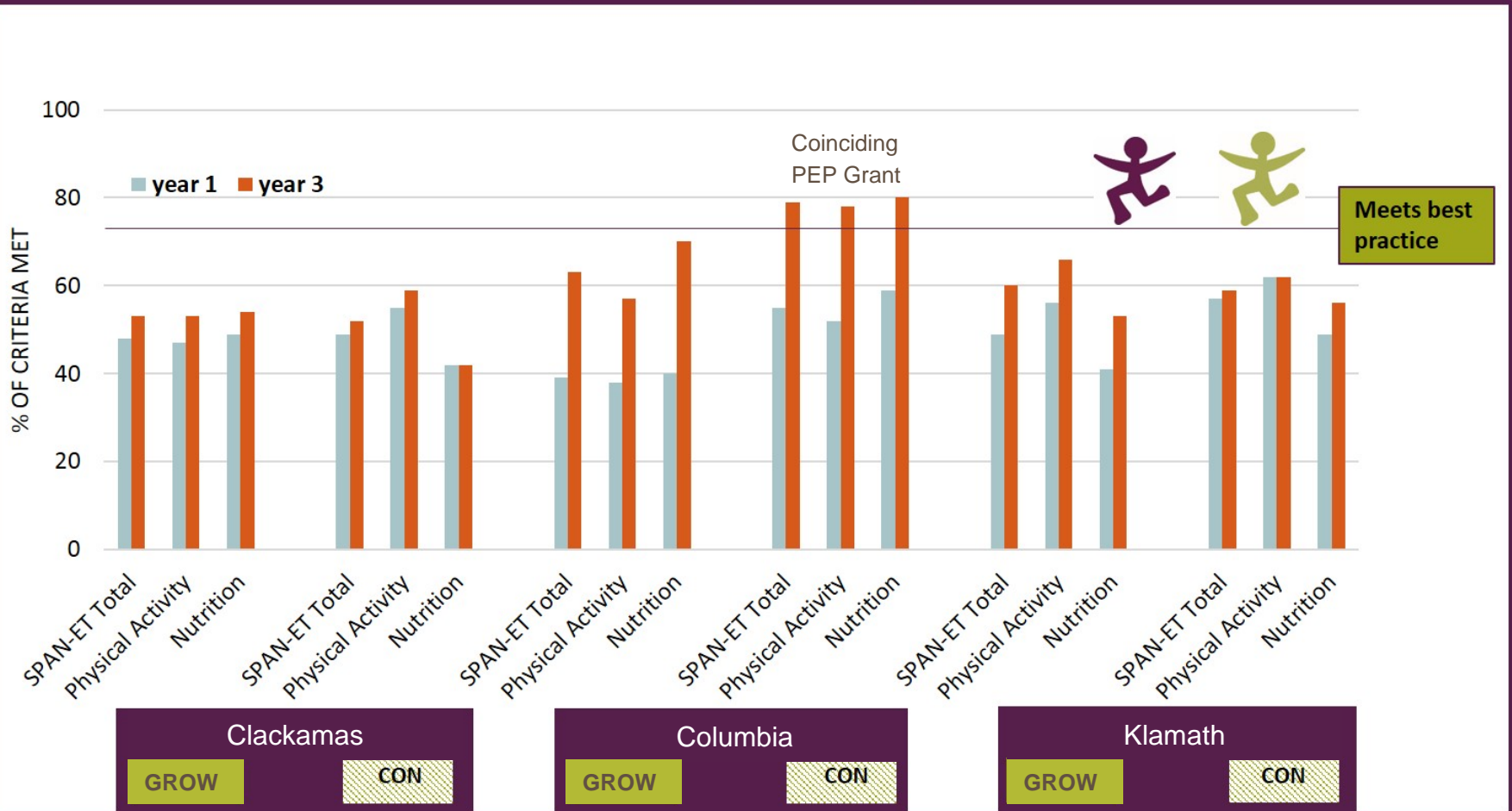
**School Physical Activity and Nutrition Environmental Tool (SPAN-ET™)*



John, Jackson, Gunter, *J of School Health*; 2015

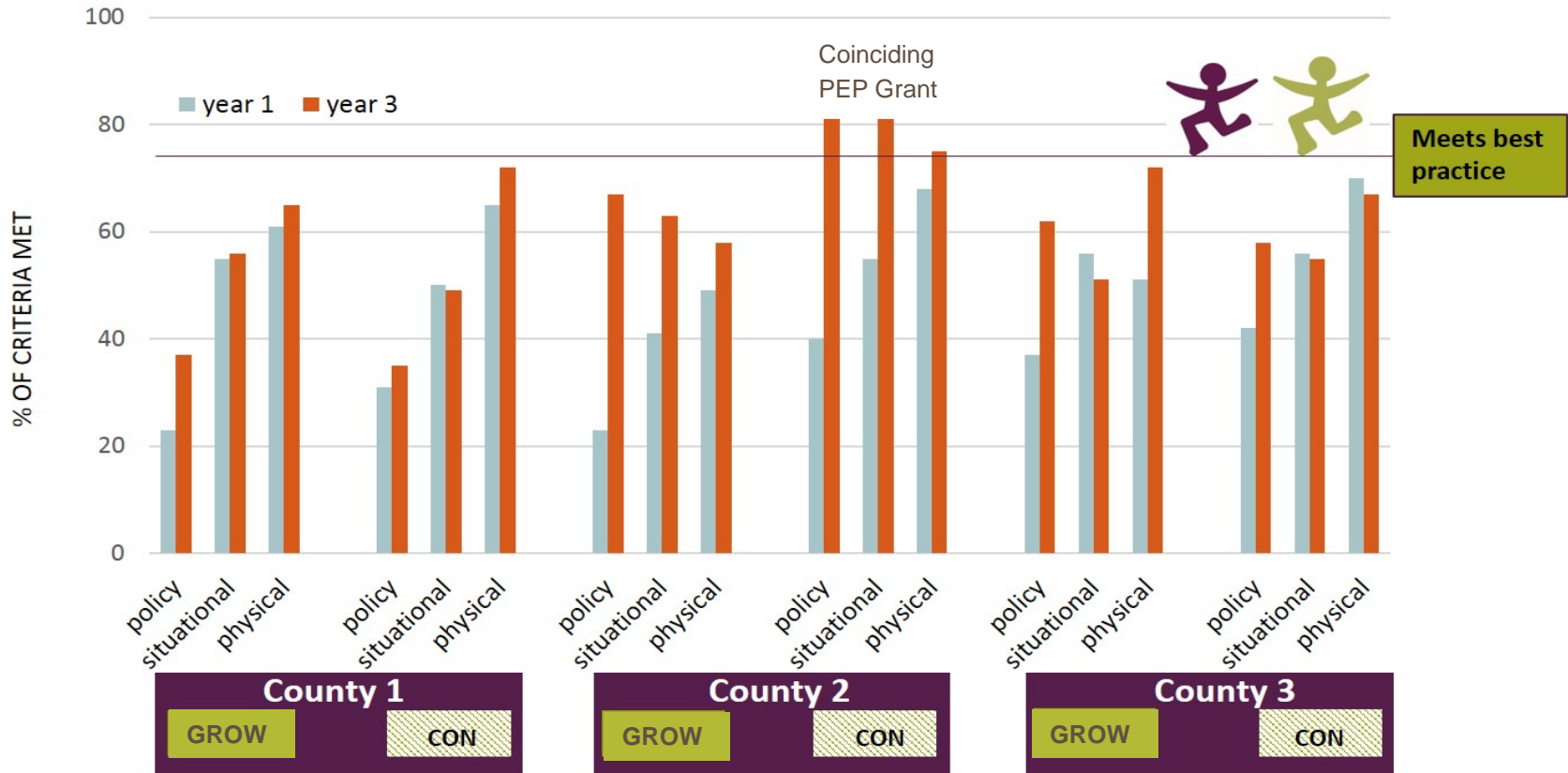
School environmental scans were conducted using our School Physical Activity and Nutrition-Environment Tool (SPAN-ET)

SPAN-ET Overall, Physical Activity, and Nutrition Scores: Comparison of year 1 and year 3



GROW school teams used SPAN-ET scores to prioritize areas for improvement and employed SPAN-ET guided evidence-based PSE strategies

SPAN-ET Policy, Situational, and Environment Category Scores: Comparison of year 1 and year 3



SPAN-ET scores allowed schools to target areas for improvement and SPAN-ET resource guide linked measurements with effective PSE strategies

Priority (H, M, L)			24 Before/After School and Summer Extracurricular Programs	Score (AOI 1-27: Percent Met) (Criteria: 1 = Met; 0 = Not Met)		
2012-13	2013-14	2014-15		2012-13	2013-14	2014-15
			SITUATIONAL ENVIRONMENT			
			<i>After school and extracurricular programs can provide a healthy environment that reinforces skills learned in school as well as opportunities for continuing nutrition education.</i>	14%	29%	71%
L	H	H	A Nutrition education is incorporated into extracurricular programs that serve meals or snacks.	0	0	1
			<i>Suggestions for action...</i>			
			→ Follow the 12 lessons supplied by the Children's Hunger Alliance's <i>The Food Folks Nutrition Curriculum</i> .			
			http://www.childrenshungeralliance.org/assets/childrenshungeralliance/files/\$cms\$/100/1639.pdf			
			→ Explore the USDA's <i>Child & Adult Care Food Program</i> website for resources on nutrition, including menus, etc. and nutrition education materials.			
			http://www.fns.usda.gov/cacfp/child-and-adult-care-food-program			
			→ Utilize the recommendations in the <i>Action Guide for School Nutrition and Physical Activity Policies</i> . See the section "Nutrition Education Strategies" (pg. 44).			
			http://www.sde.ct.gov/sde/lib/sde/PDF/DEPS/Student/NutritionEd/Action_Guide.pdf			
L	H	H	B Programs use nutrition resources that are evidence-based or aligned with credible professional groups.	0	0	1
			<i>Suggestions for action...</i>			

Ten Nutrition-Related PSE Strategies from CDC – Rural Applications

(Calancie et al. Prev Chronic Disease, 2015)

GROW	Strategy Description
1	Increase availability of healthier food and beverage choices in public service (school) venues
2	Improve availability of affordable healthier food and beverage choices in public service (school) venues (Farm-to-school)
3	Improve geographic availability of supermarkets/grocery stores in underserved areas
4	Incentivize food retailers to <u>site</u> and/or <u>offer healthier food and beverage choices</u> in underserved areas (farmer markets; locally-sourced produce coolers)
5	Improve availability of mechanisms for purchasing food from farms (online CSA/food share)
6	Provide incentives for the production, distribution, and procurement of foods from local farms
7	Restrict availability of less healthy food and beverages in public service (school) venues
8	Institute smaller portion size options in public service venues
9	Limit advertisements of less healthy foods and beverages (in school/athletic facilities)
10	Discourage consumption of sugar-sweetened beverages/increase access to drinking water

COCOMO strategies:

- Most common in rural locations: #1 and #7;
- Least common #8, #9 and #3 not utilized in rural locations

Rural adaptations included accommodating distance to food sources, tailoring to local food cultures, and building community partnerships.

Twelve Physical Activity–Related PSE Strategies from CDC (Umstadd et al. Prev Chronic Disease, 2016)

GROW	Strategy Description
12	Require physical education (PE) in schools written in district and school policy
13	Increase amount of PA in PE programs to at least 50% of total PE class time in schools written in district and school policy (BEPA Toolkits)
14	Increase opportunities for extracurricula PA (shared use of school/athletic facilities by the public during non-school hours; organized events/clubs)
15	Reduce screen time in public service venues
16	Improve access to outdoor recreational facilities (locating ≥ 1 new public recreational resources within $\frac{1}{2}$ mile of residential population clusters)
17	Enhance infrastructure supporting bicycling (route maps)
18	Enhance infrastructure supporting walking (connectivity; remote school drop off)
19	Locate schools within easy walking distance of residential areas
20	Improve access to public transportation
21	Zone for mixed-use development
22	Enhance personal safety in areas where people are or could be physically active (maintenance)
23	Enhance traffic safety in areas where people are or could be physically active (signage)

COCOMO strategies #12 - #18 were effectively used in rural locations; most common rural strategies: #18 and #14

CLACKAMAS COUNTY

SUMMARY OF STUDY IMPACTS



PHYSICAL ACTIVITY TOOLKITS

Balanced Energy Physical Activity Toolkits (BEPAT) provisioned in partnered elementary schools to increase students' physical activity time during the school day.



RUNNING & WALKING TRAILS

Molalla: Running, walking, and gardening trails funded from Healthy Eating Active Living and General Mills Foundation grants serve the local elementary school and create a safe pathway to the only full-service grocery store in town.



FARM TO SCHOOL

Molalla River School District; Farm to School program, tasting tables, and local foods in the school cafeteria.



FAMILY STORY WALK

Molalla: Implementation of a community StoryWalk promoting families walking together and reading stories about healthy eating and physical activity.



OTHER IMPROVEMENTS

Fuel Up & Play 60, school running and walking program start-up, school garden and microenterprise development, and refrigeration of school garden produce for distribution are just a few of the many advancements the study has helped inspire.

DURING 2014-2015
CLACKAMAS COUNTY
ACHIEVED

4
GRANTS

4
INTER-
VENTIONS

35+
COMMUNITY
ENGAGEMENTS



KLAMATH COUNTY

SUMMARY OF STUDY IMPACTS



PHYSICAL ACTIVITY TOOLKITS

Balanced Energy Physical Activity Toolkits (BEPAT) provisioned in partnered elementary schools to increase students' physical activity time during the school day.



CLIMBING WALL

Bonanza: Run-a-thon school fundraiser to help provision climbing wall and physical education equipment.



RAISED GARDEN BEDS

Clatskanie; Check-It-Out Program: created a program to supply recreation equipment for families in the community. Surpassed target goals in Year 1.

DURING 2014-2015
KLAMATH COUNTY ACHIEVED

4
GRANTS

1
INTER-
VENTION

25+
COMMUNITY
ENGAGEMENTS

COLUMBIA COUNTY

SUMMARY OF STUDY IMPACTS

FISCAL YEAR 2014



PHYSICAL ACTIVITY TOOLKITS

Balanced Energy Physical Activity Toolkits (BEPAT) provisioned in partnered elementary schools to increase students' physical activity time during the school day.



BRIDGE CONSTRUCTION

Clatskanie; Scout Lake improvement: bridge built to improve access in rainy season.



RECREATION EQUIPMENT

Clatskanie; Check-It-Out Program: created a program to supply recreation equipment for families in the community. Surpassed target goals in Year 1.



WATER BOTTLE FILL STATION

Water bottle fill station installed at a partnered elementary school to increase water consumption.



MARKET SCALE

Clatskanie; Farmers Market improvement: provisioned scale so that all produce can be weighed, ensuring purchase prices are accurate.

DURING 2014-2015
COLUMBIA COUNTY
ACHIEVED

2
GRANTS

1
INTER-
VENTION

25+
COMMUNITY
ENGAGEMENTS





Participatory, *Inclusive* Approach for Catalyzing *Just* PSE Actions

GROW researchers, Extension, and community members undertook collective, reflective inquiry...generating local data and merging scientific evidence to build weight healthy community capacity, readiness and PSE

resources

- Collective, reflective processes were sensitive to the nature of adult learning, and linked diverse experiences with action planning and PSE adoption and implementation.
- Processes were sympathetic of history, culture, local context and embedded in social relationships.
- GROW empowered rural communities and led to greater shared capacity and readiness to change the context: adapt, adopt, and implement PSE strategies that resource weight healthy rural lifestyles and weight health equity.

SCHOOL GARDENS GIVE KIDS THE OPPORTUNITY
TO GROW AND EAT FRESH
VEGGIES AND FRUIT



**Access to local foods, gardens, produce,
agriculture and fresh food assistance...**

*In Molalla, families can
visit and support the school
StoryWalks® and gardens across the district*

**Oregon State
UNIVERSITY**

HEALTHY FAMILIES ENGAGE IN PHYSICAL ACTIVITY EACH DAY.
60 MINUTES FOR KIDS, 30 MINUTES FOR ADULTS.



In Molalla, families can visit the beautiful Molalla River Corridor and hike to stay active, learn, and have fun!



***Access to trails, parks, public lands
for active recreation and learning....***

Oregon State
UNIVERSITY

KIDS NEED 60 MINUTES OF MODERATE TO VIGOROUS PHYSICAL ACTIVITY PER DAY TO LEARN WELL AND BE HEALTHY

ON AVERAGE THEY GET JUST 20 MINUTES PER DAY AT SCHOOL



Balanced Energy Physical Activity Toolkit

Gunter et al. JOE (in review)



Molalla families can use the trail and fitness stations behind Molalla Elementary School to work out together



Access to via shared use, and active play, fitness, and learning resources



IF YOU GET OUT & WALK 30 MINUTES PER DAY,
YOU INCREASE YOUR LIFESPAN BY 2 YEARS



IMAGINE THE
BENEFITS IF YOU
EXERCISE MORE!

In Molalla, families can walk or run the Freedom 5k together!



**Access to programs and partners that
support weight healthy rural lifestyles**

Oregon State
UNIVERSITY



FOR THE FIRST TIME IN HISTORY, TODAY'S KIDS MAY LIVE 5 YEARS
LESS THAN THEIR PARENTS...











What will Molalla do with five more years?

We'll let you know!





Oregon State
UNIVERSITY

CLACKAMAS COUNTY




Funds provided to replace bars on the playground to address safety concerns for older students and for two new fitness and garden stations.    




An indoor bouldering wall was funded to support students with increased options for physical activity and the development of motor skills.     (c)




Supplied one Balanced Energy Physical Activity Toolkit to a housing site that provides programming for children who live there - many are Spanish speaking children   

Portable Play Equipment (racks with baskets to hold equipment, balls, hoops, cones)    







Reinforcements for children and families' training and participation in Annual 4th of July 5K Run   



PA pathway to activity fields   




Tables, doormats, refrigerator, and freezers were funded to allow extra food to be received, stored, and distributed, increasing the outreach of the Molalla Service Center and enhancing the sustainability of the community food basket program and emergency food box programs.    (f)

2-tier grow light system   





KLAMATH COUNTY




Funds were provided to build garden beds, create programming around garden education at schools.       (d)




Funds for a mobile smoothie cart at school.   (e)





Portable play equipment (soccer, basket balls, jump ropes, scarves, Frisbees, beanbags, etc, and a bouldering wall were funded to improve the activity environment at school. Funds were provided to resurface a playground at school.   





COLUMBIA COUNTY


Funds were provided to support, in part, a \$200,000 playground revitalization at the school, including features such as log benches, shade structures, an imaginative play area, and crushed rock.    



Funds were provided for a the Check-It-Out program to offer no cost active recreation equipment and to purchase a banner to better promote the play equipment checkout program. (b)   




The Clatskanie Community Action Group in a collaborated effort to design and install a Heritage Fitness Trail system GROW funds were combined with a \$20,000 grant from Nike to create the trail.   

Funds were provided for portable play equipment (basketballs, jump ropes, footballs, hula hoops, discs)    

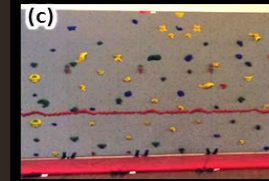
Funds were provided to support, in part, the building of a bridge to increase trail access.     (a)

Funds were provided for healthy eating equipment (vegetable corer and other cutting equipment).  

Water bottle filling station  

Funds provided for produce scale and signage to increase produce affordability and accessibility.   

SIGNIFICANT IMPACTS resulting from these outcomes include leveraging GROW resources to secure \$713,333 in additional funding, applications that were submitted by communities based on new knowledge and data generated through community-engaged actions.



KEY



PHYSICAL ENVIRONMENT



SITUATIONAL ENVIRONMENT



PHYSICAL ACTIVITY RESOURCES (PA)



LOW/NO COST OUTDOOR PA



LOW/NO COST INDOOR PA



FOOD RESOURCES



FOOD ASSISTANCE



LOCAL FOOD