

**Summary Minutes  
Solid Waste Management Advisory Council (SWAC)  
May 21, 2009  
Lazarus Government Center  
50 W. Town Street  
Columbus, OH 43215**

**The Following Members Announced Their Attendance at Roll Call:**

Eilert Ofstead, Environmental Advocacy Organizations  
Erv Ball, Health Departments  
Jack Jensen, Municipalities  
Jean Byrd, Public  
Dan Harris, Ohio EPA  
Terrie TerMeer, ODNR  
Chuck Keiper, Counties  
Thomas Ferrell, Counties  
Joseph Denen, Municipalities  
Larry Johns, Townships  
Belle Everett, Townships

**Review of the February 19, 2009 meeting minutes**

Larry Johns MOVED to accept the February 19,2009 meeting minutes presented today.  
Thomas Ferrell SECONDED the motion and the minutes were approved on voice vote.

**Welcome and Introductions**

Mr. Harris started by welcoming Chuck Keiper, a Portage County Commissioner, as a new counties representative on SWAC. Mr. Keiper has been actively involved with his county's solid waste management district (SWMD) for many years. Also welcomed at the meeting was David Hanselmann, the new Chief of ODNR's Division of Recycling and Litter Prevention (DRLP). Mr. Hanselmann briefly explained the new alignment within ODNR and that he will remain as Chief of the Division of Soil and Water Conservation and the Division of Water in addition to his new role as DRLP's Chief. It was clarified that Terri TerMeer will remain as ODNR Director Logan's designee to SWAC.

**Update on Legislative/DSIWM Issues- Dan Harris, DSIWM**

Mr. Harris related that DSIWM is continuing work on a number of rule packages. Interested party comments are being incorporated into Construction and Demolition Debris (C&DD) rules and the Industrial Beneficial Use rules. Both rule packages may be available for review late summer. The Industrial Beneficial Use rules will incorporate a new concept for Ohio's solid waste program, the general permit. The general permit

approach would allow the new program to better address specific waste streams and uses. A major focus of the Industrial Beneficial Use rules is to address uses of wastes associated with coal-fired power plants (fly ash, bottom ash, FGD sludge) and foundry sands.

There are several draft rules in development for future interested party comment. The draft composting rules are anticipated for interested party comment this summer. DSIWM also intends to seek interested party comment on changes to the applicability of solid waste energy recovery facility rules to facilitate use of organic wastes for anaerobic digestion and energy recovery. The intent is to avoid regulatory duplication by the solid waste regulations if the operation is already regulated under an Ohio EPA Division of Surface Water or Ohio Department of Agriculture farm operations permit. Finally, DSIWM is also developing draft rules for interested party comment for use of bioreactor landfill technology.

### **Regarding the State Plan Update - (Director Chris Korleski, Ohio EPA)**

Director Korleski addressed SWAC to talk on several points related to solid waste management and SWAC's leadership in developing the new State Plan revision. He first related to the changes that will be occurring related to greenhouse gases and climate change. He indicated that it is not a question of "if these changes will happen" but a question of "how?" Climate change legislation can be expected by the end of the year. Landfills emit significant amounts of methane, and methane is one of the most powerful greenhouse gases. There is a push to harness the methane from these facilities and use it to create energy. Carbon dioxide is created during the energy conversion process, but it is a much less harmful gas than methane. There is a need for innovative technologies, openness for pilot projects and doing new things. The ramifications (economics, infrastructure needs, etc) of climate change legislation cannot be completely understood at this point.

He also talked on the topic of recycling. Is Ohio doing enough for recycling? Relating to experiences while working for Honda, he noted that "waste", when conceptually defined, is something that requires expenditure of resources and/or money and then cannot be used. Traditional disposal methods (landfilling) can be quite a mess from a social standpoint. Odors and general nuisance issues are often associated with these facilities, not to mention the potential for groundwater contamination. The question of "is there a different way we can be doing things" is one that should always be asked. This is not saying that there will not be a need for landfills in the foreseeable future. It is important to avoid the phrase "we have always done it that way."

Ms. Everett inquired about the aluminum dross disposed of in Countywide Landfill. Director Korleski related his amazement at the amount of work that has occurred there. The landfill is essentially a superfund site, which would normally take five years just to get the gears in motion. Working with the federal EPA has been a huge success. He suspects the reagents in the landfill will work themselves out. The goal was to isolate

and neutralize the area where aluminum dross was disposed as much as possible. This was accomplished by installation of a barrier between the area of concern and the active portion of the facility and by limiting the amounts of liquid that the dross could be exposed to. There is a need at all solid waste facilities to reduce any odors to manageable levels, keeping in mind that it is garbage and there will always be an amount of odor associated with it. The people living near Countywide have been subjected to nuisances for far too long.

SWAC members were provided copies of the U.S. EPA report "Solid Waste Management and Greenhouse Gases: A Life Cycle Assessment of Emissions and Sinks."

### **State Plan Update (Andrew Booker and Ernie Stall, Ohio EPA)**

Mr. Booker started by reviewing Ohio EPA's recommendations for the State Plan Access Goal (Goal #1). He recapped the credits associated with demonstrating that ninety percent of the population in each county has access to recycling opportunities and related to other State Plan requirements that support the recommendations. Those supporting requirements include the education goal, commercial sector requirements, and the target recycling rate.

SWMDs have expressed some dissatisfaction with lack of flexibility in "default credits." SWMDs have the ability to demonstrate greater participation and access rates, but the demonstration requirements were complicated and often not useful. Ohio EPA completed a study of drop-off recycling programs in 2004 that allowed for better quantification of drop-off usage and the results from that study have been utilized to improve the Access Goal.

The general concept behind the Access Goal when it was developed was to allow SWMDs to first concentrate on needed infrastructure rather than recycling rates. This allowed them to focus on what they can directly control and reduced the resources expended on data collection. The Access Goal has in some ways become an "end" unto itself, rather than the intended "means to an end."

Prior to the economic downturn, Ohio EPA was prepared to recommend a number of significant changes to the Access Goal. Utilizing the data from the drop-off study, more flexible options for drop-off credits were to be provided, as well as modifications to the default credits. The options included a tonnage model as well as providing survey methodology, which could be used to demonstrate greater participation rates. The default credits would have changed for part-time sites and a number of general drop-off program requirements would be added, including a minimum size requirement.

The tonnage model would have allowed SWMDs to calculate participation rates rather than use default credits, and was based on data from the drop-off study. A drop-off's credit was determined by dividing the annual amount collected in pounds by the

appropriate factor depending on the type of drop-off site. The formula to be used was {Pounds/Year} / {DO-Type}. "DO-type" values are as follows: FT-Urban = 185, PT Urban = 141, FT Rural = 162, PT Rural = 154. The following table illustrates the credit associated with different tonnages collected:

Pounds/Year	FT-Urban	PT-Urban	FT-Rural	PT-Rural
3,000,000	16,216	21,277	18,519	19,481
2,000,000	10,811	14,184	12,346	12,987
1,500,000	8,108	10,638	9,259	9,740
1,000,000	5,405	7,092	6,173	6,494
750,000	4,054	5,319	4,630	4,870
500,000	2,703	3,546	3,086	3,247
400,000	2,162	2,837	2,469	2,597

The modifications to the default credits would have included two classes of part-time drop-offs. Class I part-time sites were defined as available at least forty hours each month and Class II part-time sites were available more than three hours and less than forty hours a month. The following table summarizes the modified default credits:

Program	Current Access Credit	Drop-Off Study Data	Proposed New Access Credit
Full-Time Urban	5000	4000	5000
Full-Time Rural	2500	2000	2500
Class I Part-Time	2500	750	1500
Class II Part-Time	2500	450	1000

The proposed minimum size requirements were six cubic yards (CY) for rural sites and ten CY for urban drop-offs. Currently the average is about thirty CY for rural sites and forty CY for urban sites. SWMDs were given the ability to demonstrate that a smaller size drop-off is adequately serviced.

The proposed general drop-off requirements included:

- The site should be easily located and accessible to the public.
- The site should be visible or have adequate signage indicating location.
- The site should be clearly marked with signage indicating the materials accepted.

- If the site is **not** a full-time site available 24 hours/day x 7 days/week, then the site should have signage indicating days and hours of operation.
- The District can demonstrate that it has made a reasonable attempt to meet the demand of the population for use of the drop-off site.

Due to the effect the economic downturn has had on recycling markets and many SWMDs' budgets, Ohio EPA is not recommending all of the changes presented. The flexible options for drop-off credits are recommended, including the tonnage model and the survey methodology. The minimum size and general requirements for the drop-offs will also be included. The majority of drop-off recycling programs currently meet these requirements and the associated costs if upgrades are needed are comparably small. The default credits for drop-offs will NOT be changed. Those changes are tabled for now, but will be incorporated into the next State Plan revision.

There are three other recommended additions to the Access Goal. One adds more flexibility for multi-county SWMDs and the others add additional incentives to establish more effective programs.

It is recommended that multi-county SWMDs, who currently have to demonstrate 90 percent access in each county, can demonstrate 90 percent overall and no less than 85 percent access or one less drop-off, whichever is greater, in one or more counties. This would likely help some SWMDs get more diversion for their dollars.

The second recommendation provides an incentive to start up curbside programs in large communities. If a county's largest community currently does not have non-subscription (NS) curbside recycling, the flexibility allows the SWMD to temporarily demonstrate 80 percent access for that county if NS curbside recycling is added. The one-time option allows for a three-year window and the SWMD must demonstrate 90 percent access in the fourth year. If NS curbside already exists in the largest community, the option would be available to establish NS curbside in another community that contains 15 percent or more of that county's population. If adding the NS curbside recycling achieves 90 percent access, the SWMD may be able to reduce additional drop-offs as well. The intent is to add an extra incentive to start-up new programs in the larger communities where it makes sense, particularly in these tough economic times. The one-time window allows a SWMD to devote energy and economic resources to start-up the program.

The third recommendation provides further incentives for volume-based programs. If a county's largest community has or is provided with volume-based collection in combination with NS curbside recycling, the SWMD is only required to demonstrate 80 percent access in that particular county. There is no time limit established and the option would apply to SWMDs that already have volume-based collection programs in place. Ohio EPA will evaluate this incentive's effectiveness, including data analysis to document any increased diversion.

Mr. Booker then presented additional conceptual changes and clean-up issues related to this portion of the State Plan revision. There will no longer be a grace period of three years to meet access, which has been in place since 2001. The result has been some endless three-year cycles. It needs to be acknowledged that no SWMDs are “starting from scratch” at this point. If a SWMD is not meeting the Access Goal in the reference year, they must propose aggressive schedule to meet it (typically one year).

The new terminology will use “Infrastructure Goal” instead of “Access Goal”. Also included is a statement that SWMDs must maintain ninety percent access throughout planning period (this has always been assumed, but not stated). A clarification is included for NS curbside programs, indicating that it is a service provided automatically to every resident in the community (the current definition has caused confusion).

The proposed changes also eliminate the ability to get access credit beyond the population of an individual community. Currently, no restriction on population credits for individual communities exists. It is specified that credit for the population of an entire community is allowed, up to and including the entire credit for a drop-off needed to achieve one hundred percent access for that community.

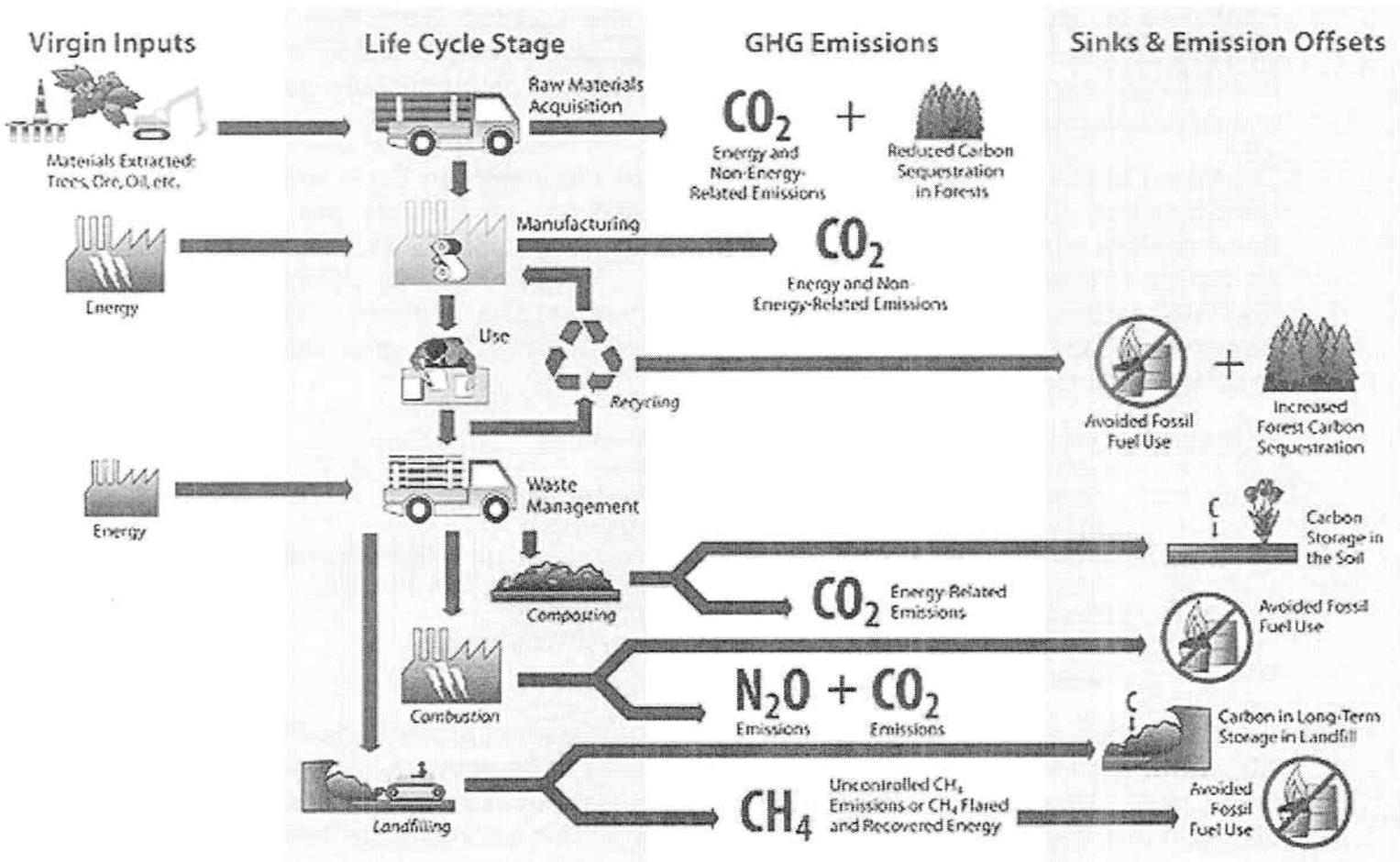
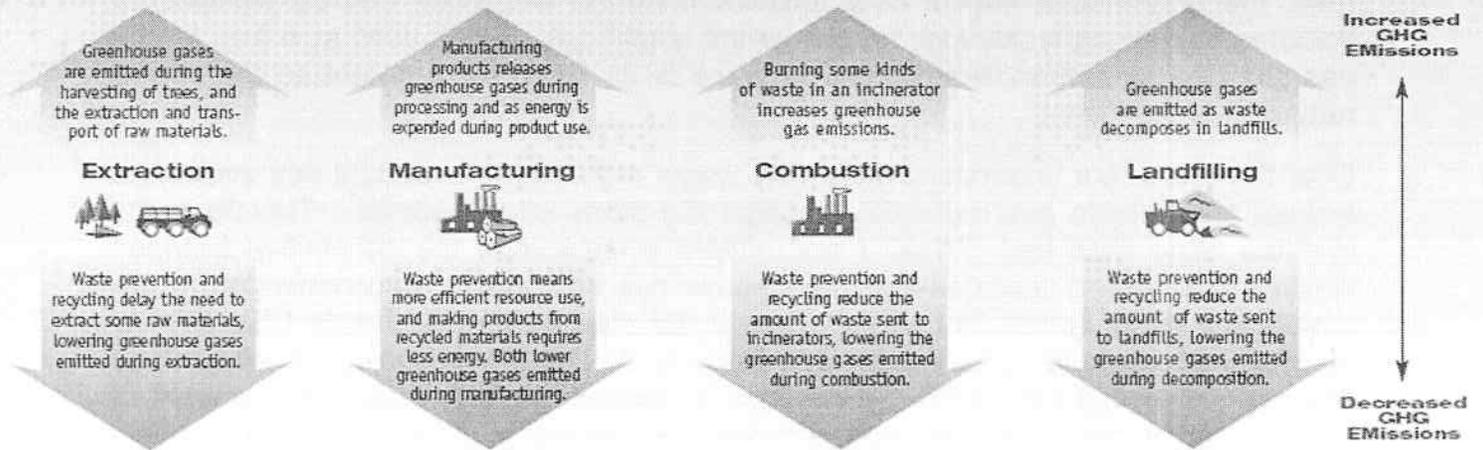
Mr. Booker then related to Goal #2 of the State Plan, which requires a SWMD to demonstrate a residential/commercial recycling rate of at least 25 percent and an industrial recycling rate of 66 percent. No changes have been made to the rates required for the Goal. The “target rate” concept was eliminated, but SWMDs are required to show continued improvement in their diversion rate. The U.S. EPA 35 percent recycling goal is acknowledged and a clear statement is included clarifying that this State Plan update is a “bridge” between the infrastructure concept and a focus on diversion and effectiveness. Also included is a provision that would allow a SWMD to subtract a portion of their industrial waste generated (for a particular waste stream) if it can be demonstrated that it is inherently unrecyclable waste.

The topic of greenhouse gases and their relation to municipal solid waste (MSW) was then discussed. Goal #7 of the updated State Plan requires SWMDs to measure the greenhouse gas emissions to evaluate the impact of their recycling programs on reducing greenhouse gas emissions.

Mr. Booker related to the many connections between the waste management process and greenhouse gas emissions. The extraction of raw materials and the manufacturing of products from virgin materials reduce the sequestration of carbon in forests, whereas recycling saves energy and limits the amount of pollution created by reducing the need for virgin materials. Landfills are the second largest source of methane emissions and methane is 21 times more potent of a greenhouse gas when compared to carbon dioxide. Another connection would be the combustion of waste, which produces significant emissions of carbon dioxide. Currently, this is not an issue in Ohio since no

incinerators are operational. Included in the presentation were the following graphics obtained from the U.S. EPA:

## The Link Between Waste Management and Greenhouse Gases



There are many counteracting factors to include when considering the greenhouse effect of waste management. Different materials have different impacts. For some materials, a landfill would be a method of “sinking” the carbon related to its decomposition, especially for organic materials. The travel distances from source to landfill have to be considered as well when calculating the greenhouse effect of waste. Also, the greenhouse effects of a landfill’s methane emissions can be significantly thwarted by utilizing technology to recover the landfill gas. When used as a fuel, landfill gas still creates carbon dioxide, but methane is 21 times more potent so the overall reduction is significant.

Over the years, our understanding of why waste reduction is important has evolved to include greenhouse gas reduction amongst the many other benefits. Therefore, the updated State Plan and SWMD Plans should acknowledge the connection between waste management practices and greenhouse gas emissions. Recommended in this update are some simple first steps. One of the state strategies directs Ohio EPA to monitor and evaluate greenhouse gas impacts of landfills in Ohio. Another state strategy states that Ohio EPA will continue to explore ways to reduce the amount of fugitive landfill gas emissions and increase the utilization of landfill gas for energy recovery. Involvement in U.S. EPA’s Landfill Methane Outreach Program was mentioned as one method to be used. Also, the updated State Plan will require SWMDs to utilize the U.S. EPA **WA**ste **R**eduction **M**odel (Warm model) or equivalent methodology to evaluate the impact of recycling programs on greenhouse gas reduction and include the results in the SWMDs’ plans.

The Warm Model is a web based greenhouse gas calculator (an Excel version is also available) that converts increased waste reduction into greenhouse gas reductions. Some positive attributes of the model is that it is regularly updated, it’s easy to use, and it’s flexible (allows detailed or simple analysis). The recycling data collection system Re-TRAC incorporates the Warm Model as part of its data analyses. The National Recycling Coalition and the Northeast Recycling Council both offer environmental benefits calculators as well.

As a quick summary, these bullet points were offered:

- Leave default drop-off credits the same;
- Allow “tonnage model” and survey methodologies;
- Add drop-off size and general requirements;
- Add flexibility for multi-county SWMDs (85% county/90% overall);
- Incentives for NS Curbside and Volume-based (80% Access);
- No changes to recycling rate goals (25%/66%);
- “Bridge Plan” from access to diversion/effectiveness;
- Greenhouse Gas/Warm Model.

Ernie Stall then provided an updated timeline for completion of the State Plan Update. Chapter VI (Ash Management) and Chapter X (Waste to Energy) are completely revised at this point. Chapters III (Goals) and IX (Market Development) will be posted by May 29, 2009 and SWAC members are to review and submit comments by June 12, 2009.

Ohio EPA will incorporate any comments on those sections and the completed Draft Plan will be posted by June 22, 2009. SWAC will have until July 1, 2009 to review and submit comments on the Draft Plan and revisions will be made, if necessary, before the updated State Plan's public hearings are held later in July. The hearings are to be held in Ohio EPA's five District Offices. Any public comments will be incorporated and SWAC's final review will be from August 10-19, 2009. SWAC will formally approve the updated State Plan at the third quarterly meeting on August 20, 2009 and Ohio EPA will formally adopt the State Plan thereafter.

Mr. Stall then provided a summary of the Market Development section (Chapter IX) of the updated State Plan. Chapter IX provides an overview of commodity markets, a look at the status of the state strategies laid out in the previous State Plan, the Market Development Grant, material specific issues, SWMD programs, and a summary of the state strategies for the updated State Plan.

A quick summary of the commodity markets was presented. From 2001 until 2006 the markets were relatively stable and saw moderate growth. Rapid growth was experienced starting in 2006, and in late 2008 the markets experienced a rapid plunge coinciding with the economic downturn.

A status report of the state strategies from the previous State Solid Waste Management Plan (2001 State Plan) was provided. The six state strategies included in the 2001 State Plan were geared toward State of Ohio agencies, primarily Ohio EPA and ODNR. They were intended to strengthen markets for recovered materials.

Strategy number one supports the continued development and implementation of the "Ohio Recycling Market Development Plan". The plan was prepared by the Interagency Recycling Development Workgroup, whose members included representatives from ODNR, Ohio EPA, ODOD, ODAS, and ODOT. A plan was developed that identified needed assistance, identified a state agency to administer portions of the plan, designated needed funding for the different portions, and included a biennial budget for the implementing state agency. However, the workgroup was eliminated in 2004.

The second strategy plans to increase state agency procurement of recycled content products. ODAS created and maintains guidelines for purchasing and performance standards. State of Ohio agencies are permitted to purchase recycled-content products when those products are no more than five percent more expensive than a comparable non-recycled content product. Also, state agencies report purchases of recycled-content products through the State of Ohio's accounting system using designated reporting codes. At the end of each fiscal year, the Office of Budget and Management (OBM) summarizes the dollar value and types of recycled-content items purchased.

The third strategy examines the scrap tire rules for impediments to scrap tire markets and identifies barriers to use of tire derived fuel (TDF). Assistance has been provided through the scrap tire grant program, which has focused on use of TDF as a feedstock,

available processing capacity, civil engineering projects, and recycling technology. The beneficial use provisions include two vehicles for approving use of tires: pre-approved/approved by rule and approval by Ohio EPA as a project plan. The pre-approved uses include civil engineering uses in landfill design, public roads, playgrounds, and as a gravel substitute as well as for crash barriers and agricultural use for tarp weights. The barriers identified for use of TDF were various air pollution control requirements.

The fourth state strategy monitors the current efforts to recycle flue gas desulfurization (FGD) waste generated by pollution control equipment at coal-burning power plants. Barriers identified at this time show that supply way exceeds demand and available markets are regional and are saturated. Also, Ohio EPA's rules are not designed to allow for alternative uses so approval of projects can be burdensome. Fees apply to projects that result in using FGD on or in the ground. Uses include substituting the gypsum used in drywall boards, paving livestock feed lots, lining manure lagoons, and sealing underground mines. The following table summarizes FGD recycling in Ohio:

Year	Quantity Generated (tons)	Quantity Disposed (tons)	Quantity Recycled (tons)	Percent Recycled
2003	4,593,363	3,918,307	675,056	14.70%
2004	4,931,341	3,977,148	954,193	19.35%
2005	4,867,423	4,052,842	814,581	16.74%
2006	4,479,272	3,681,760	797,512	17.80%
2007	5,090,541	4,394,065	696,476	13.68%

State strategy number five researches the factors influencing the supply, demand and market price of glass and plastics in Ohio and develops a strategy to improve those markets. For glass, the factors include transportation, quality of the material, and regional markets. For plastics, the market factors were the low value for recovered plastics, the high cost of processing, contamination, low recovery rates, and the lack of markets for plastics numbers three through seven.

The sixth strategy monitors and supports the development of markets and infrastructure for collection and recycling of electronic materials from residential sources. Many examples were provided including SWMD collection programs, Ohio EPA lists, market development grants awarded, and public-private partnerships.

Mr. Stall then provided an overview of the Market Development Grant. The Market Development Grant is an annual program administered by ODNR. The grant is available to businesses and targets particular materials and project types. Local government entities must apply for the grants, which can amount up to \$250,000, and

the business must provide at least a one hundred percent match in funds. In 2008, \$2.2 million was awarded to eight recipients. Projects included C&DD material recovery facilities, a glass processing facility, and food waste composting.

For the part of Chapter IX dealing with material specific issues, inadequate infrastructure and markets are identified and the grant program targets money to help establish infrastructure. There are seven materials that would benefit from stronger markets and infrastructure. For each material, a summary of issues is provided and future directions are identified. The materials are consumer electronics, fiber, construction and demolition debris, glass, organics, scrap tires, and plastics.

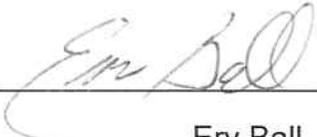
The SWMD projects that are highlighted in this chapter include SWACO and Loraine County SWMD programs. Lorain County SWMD has a recycling revolving loan fund program. Oversight to the program is provided by a committee that includes the County Administrator, the SWMD Director, the Community Development Director, three of the SWMD policy committee members, and a public representative. The committee reviews applications and makes recommendations to the county commissioners, who decide upon the grantees. The Loraine County SWMD placed \$500,000 in a trust fund and the maximum loan amount increased from \$50,000 to \$200,000. The grantees must repay the loan within ten years. SWACO and the Shelley Corporation are developing the Columbus Transformation Center at the location of the former waste-to-energy facility. The concept is a “green” industrial park and may create a market for polystyrene and an infrastructure for food waste composting as well. Up to sixty five jobs are to be created by building a new facility for Rastra, Inc. to manufacture concrete/polystyrene building materials and for Kurtz Brothers to construct and operate and anaerobic digester at the site.

The state strategies identified in the updated State Plan are:

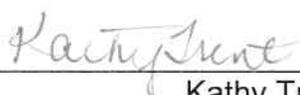
1. Broaden the Recycling Market Development to include markets for fuels, energy, and heat.
2. Focus on systems thinking and integrated solutions, and communicate the connectivity of decisions.
3. Strengthen relations with Ohio’s universities and research institutions to utilize new modeling tools for complex business decisions.
4. Develop and implement industrial ecology tools, such as By-Product Synergy, to further converting waste into resources. One or more byproduct synergy networks are to be established.
5. Reconstitute the IAWG – adding Dept. of Agriculture to the membership.
6. Facilitate implementing waste-to-energy technologies. This strategy includes streamlining the permitting process (Ohio EPA) and funding through through the Market Development Grant Program (ODNR). ODNR has funded projects, and will continue to solicit projects to convert landfill gas to natural gas operations ODNR also funds projects for energy efficiency – either constructing a new building or to convert existing buildings by installing energy efficient equipment.

**Agenda Items for the August 20, 2009 SWAC meeting**

As indicated earlier, part of the next meeting will be reviewing any public comments that are received on the State Plan and it is anticipated that SWAC will formally approve the update for the State Plan at that meeting as well. An update on the RecycleBank pilot in Hamilton County was mentioned as a potential agenda item. No other agenda items were recommended at this time. Jack Jensen MOVED to adjourn the meeting and Erv Ball SECONDED the motion.

Respectfully submitted:   
Erv Ball, Vice Chair

Minutes approved on: March 25, 2010

Certified by:   
Kathy Trent, Secretary