



MCRA

ANNUAL REPORT 2015

**Dedicated to providing services,
products and opportunities of value
that offer enrichment to the
community**

Vision Statement

Montgomery County Revenue Authority is committed to growing a sustainable network that:

- *Is nationally, regionally and locally recognized for its offerings and performance.*
- *Is dedicated to achieving higher environmental standards.*
- *Continues to offer new and innovative programs and services for the benefit of the community and our team.*

Montgomery County Revenue Authority is committed to the following core values:

- 1. Genuine Smile*
- 2. Do Anything Attitude*
- 3. Deliver Excellence*

MCRA - OVERVIEW

The Montgomery County Revenue Authority (MCRA), created in 1957, is an instrumentality of Montgomery County, Maryland and a public corporation. The MCRA was established to construct, improve, equip, furnish, maintain, acquire, operate, and finance projects devoted wholly or partially for public use, good, or general welfare. A six-member Board governs the MCRA, with five members appointed by the County Executive and confirmed by the County Council. The sixth member - the Chief Administrative Officer of Montgomery County or designee serves in a non-voting, *ex-officio* capacity.

The two primary activities of the MCRA are to operate self-supporting facilities and to finance public facilities. On the operations side, the MCRA manages its golf course system comprised of nine golf courses along with the Montgomery County Airpark. The operated facilities generate various forms of revenue, which are used to fund MCRA operations and to provide for facility improvements. A portion of the operating revenues are used to retire any debt associated with operated facilities.

On the public financing side, the MCRA issues bonds to raise capital, to acquire land or other property, or to pay construction costs for Montgomery County facilities. Through a financing partnership with a broad range of County agencies, the MCRA has supported important public purposes as far reaching as economic development, education, transportation, health and human services, recreation, and the arts. The agencies' lease payments are used by the MCRA to retire the debt obligations.

MONTGOMERY COUNTY REVENUE AUTHORITY – 2015 HIGHLIGHTS

The Montgomery County Revenue Authority (MCRA) remained committed to its mission to grow through new initiatives and continued partnerships. The golf industry saw an increase in rounds of 1.8% nationally in 2015. Rounds of golf increased 5% locally and 4% in the Baltimore Washington area according to industry data. The MCRA golf courses had an increase in rounds of 6.04%.

The MCRA issued revenue bonds refinancing the Montgomery College Arts Center project in November of 2015. The present value of the cash savings realized is \$3,578,120. The MCRA continues to enhance its operations and work with its partners to provide products that maximize the recreational enjoyment of the community while also identifying opportunities to save taxpayer dollars.

MCRA Golf Initiatives

The MCRA's golf course system, operated under the flag of MCG, hosted 374,985 rounds in 2015 at its nine golf courses. This was an increase of approximately 21,369 rounds from the previous year. The following is a summary of the broad range of MCRA initiatives focused on the needs of the communities we serve.

- ***Community Assistance and Event Programs***
 - MCRA continued its relationship with the Wounded Warriors Foundation during the Labor Day weekend by raising funds for this important initiative.
 - MCRA donated auction items valued at more than \$25,000 to more than 100 local charities including public and private schools.
 - This past year, MCRA once again partnered with TPC of Avenel, PGA Charities and The First Tee to host "Family Golf Day" at Needwood Golf Course. This day was highlighted with a demonstration by nationally renowned trick shot artist Dennis Walters. This was a family event that included golf, carnival attractions and a barbecue all free of charge. Over 100 people attended this fun event.

- ***Family Golf***
 - MCRA continued to offer its successful Family Golf program that is offered at all nine MCG courses throughout the summer. This program consists of:
 - Free Family Golf clinics that are offered each Saturday or Sunday from April - August at rotating golf courses.
 - We estimate that over 1,400 people visited our courses during these special events and possibly put a golf club in their hands for the first time.
 - \$10 rates for all families were offered Monday - Friday at any time at our 9-hole courses and after 5 pm weekdays and after noon on weekends at all 18-hole courses.
 - A "course within a course" is set up for juniors and new players to the game to make the game much more fun and enjoyable, along with family friendly scorecards.

- ***FootGolf***
 - Northwest and Sligo Creek Golf Courses were the first FootGolf courses established in the DC Market.
 - FootGolf is a combination of soccer and golf whereby a player kicks a soccer ball and follows the rules of golf. This proved to be a tremendous success and the two facilities combined experienced 4,284 "rounds" of FootGolf in 2015.

- **MCG Academy**
 - The MCG Academy has continued with our 6-step program for lessons. With Golf 101, 102, 103, 104, 201, and 202, we have found an instructional home for all levels of players. This step-by-step program allows golfers to start with a plan, or intermediate players can fit right in based upon their experience level.
 - The PGA of America is using the MCG Academy program as an example for facilities throughout the United States and has built a Get Golf Ready 2 that mimics the program we have had in place for 3 seasons.
 - In 2015, the MCG Academy increased its instructional program by more than 14%.
 - The PGA Junior League is the biggest programs in the country.

- **MCG Golf Studio**
 - The Golf Studio was launched in April 2013 and is located at Needwood Golf Course. The Studio contains a state-of-the-art Golf Simulator. The Simulator has several components to it:
 - Lessons - the Simulator gives the instructor and student a substantial amount of information that is used to aid in helping the student improve at a much faster rate.
 - Club Fitting - the information that the Simulator gives aids the instructor to fit the player that is perfect for their specific swing and height.
 - Entertainment - the Simulator was successfully used for winter leagues and small groups of players.
 - The Studio also offers all forms of club repair, grips and club adjustments along with a great selection of training aids and the latest selection of golf clubs to try out.
 - The Studio added a traveling club repair service that handles all re-gripping needs for all 9 courses twice a week through the summer months.
 - The Studio has increased 58% in 2015.

- ***Robust Junior Golf Programs***

- The Academy revised its junior program, to separate levels of juniors within the group, which allows for better competition and helps foster lifelong friendships for the same aged kids.
- The MCG Academy also created and implemented a weekly mini-camp for kids. These mini-camps were offered after school at Falls Road, Northwest, Needwood, Rattlewood and Laytonsville.
- We continued our long-standing partnership with The First Tee of Montgomery County, a program that uses golf to teach life skills to underprivileged kids. MCG Academy instructors host more than 400 participants annually at our Laytonsville, Needwood, Northwest and Sligo Creek Golf Courses.
- MCG PGA Junior Teams were present at 8 of our 9 golf courses and one of the teams qualified for the regional finals in 2015.
- High school golf - MCG continued our relationship with the MCPS to provide free access to all facilities for tryouts, practices, matches and season-ending events at an estimated value of more than \$50,000.



- ***Golf Industry Supported Initiatives***

- Get Golf Ready, initiated in 2009, was continued through 2015 with great success.
 - This national “grow golf” program was initiated by the World Golf Foundation.
 - Get Golf Ready instruction is specially priced at \$99 for five introductory golf lessons.
 - More than 700 participants have taken advantage of this great program.
 - MCG was in the Top 25 for Get Golf Ready in the USA in 2015.





- **Junior PGA Teams**

- Junior PGA teams totaled over 350 juniors were involved in either the 7-9 division or the 10-13 division with one of our teams making it all the way through to the third round of the Mid-Atlantic sub regional

finals. We have expanded to include another age group for next season. MCG added a new program and now has the 16U division for junior from 16 and under.



- **Take Your Daughter to the Course Day**

- MCG participated in Take Your Daughter to the Course Day, a Play Golf America event sponsored by PGA of America.

- **MCG Programs**

- The MCG Academy team, as a follow up to the Get Golf Ready Program, developed Keep Golf Going. We developed a new short game and long game program and will be implementing it in the next season. More than 350 players participated in the program and many became loyal MCG customers and new golfers.
- Member For a Day -This program included an “all inclusive” price, which consists of continental breakfast, green fee, cart fee, lunch, driving range and replay rounds Monday - Friday. The program was successfully offered at Little Bennett, Laytonsville, Poolesville, and Rattlewood.





Little Bennett Golf Course

Agronomy and Environmental Stewardship at MCRA Golf Courses

MCRA golf courses remain committed to important environmental initiatives in 2015 and finished another year with great playing conditions in large part due to the maintenance practices that have been implemented over the years. Important agronomic strategies continued and a number of projects were undertaken that will have long-term benefits to playability and the environment.

Agronomy: Among the key agronomic programs that allow our superintendents to deliver appealing playing surfaces while reducing pesticide and fertilizer use are:

- **Aeration:** Aeration is the most important of all cultural practices we perform. Core aeration, wherein plugs of turf, thatch, and underlying soil are removed, allows for increased root growth, improved air exchange to roots, and improved water infiltration, among a host of other benefits. When aeration is performed on greens, holes are typically backfilled with 100% sand, which keeps these important channels open for weeks or months for continued turf health benefits. The sand is of specific angularity and particle size to allow it to maintain surface firmness as well as permit the playing surface to “breathe.” While this procedure is temporarily disruptive for golfers, it is a significant reason why highly scrutinized playing surfaces can be maintained in such great condition. 
- **Deep vertical mowing:** In addition to normal core aeration, some of our courses with historically higher thatch accumulation have implemented a more aggressive strategy of deep vertical mowing, combined with sand injection, to help combat the numerous plant health issues that can be exacerbated by excessive thatch. This process is typically performed in late fall to allow these channels to be open all winter and help reduce potential injury caused by ice accumulation. We are also evaluating the possibility of utilizing this practice system-wide in late fall and eliminating spring core aeration, the timing of which is often challenged by unpredictable temperatures and spring precipitation. 

Topdressing: Weekly or bi-weekly applications of light amounts of sand, brushed in to the greens, go virtually unnoticed by golfers. This important process not only continues to maintain the surface firmness desired by our golfers, but also helps to dilute thatch and organic matter that naturally builds up as the turf grows. Minimizing the buildup of organic matter in soil is important because thatch holds moisture (increasing disease pressure) and is a habitat or food source for undesirable insects.



- **Rolling:** Lightweight (800-lb) dedicated, motorized rollers are used typically 3-5 times per week on greens and have been shown in numerous university research studies to reduce incidence of disease such as dollar spot (*Sclerotinia homeocarpa*), one of the diseases our greens are most prone to getting. Using these machines allows us to also increase green speed when necessary, as well as smooth the playing surface. In 2015, especially during the summer, we were able to eliminate mowing 2-3 days per week by simply rolling greens in the morning to prepare the greens for play; this practice not only reduced disease pressure but also reduced fuel emissions. On these days, we reduce by 75% the amount of fuel used to prepare greens for play.



- **Venting/Spiking:** Every 2-3 weeks throughout the year, superintendents will make a decision to perform another important but minimally disruptive practice. Venting is usually performed with equipment that leaves very small (0.2 - 0.25 inch) holes throughout the green at 1.25-inch spacing. This machine rolls the turf smooth afterwards as well. Spiking is typically done with special units that fit on a greens mower and leave small slits in the green. This process is much faster, but since the slits will close more quickly it is typically beneficial for only a few days up to a week. Both practices are still very important tools that can help dry out a wet green and/or provide oxygen to the upper root zone and make the turf healthier.



- Soil Testing:** Without a well-balanced soil, many of our efforts to maintain great turf are wasted. By taking soil samples of individual greens, tees, fairways, or roughs, we are able to determine exactly what the grass needs. And we save a lot of labor, fuel, and resources by only targeting specific applications of nutrients or soil amendments like gypsum or compost where the soil tests dictate. Not only does the grass perform better at an “ideal” nutrient ratio but the soil will also more readily support a diverse microbiology and have improved drainage properties. In 2016, we will be evaluating the implementation of MLSN (Minimal Levels of Sustainable Nutrition) guidelines (<https://goo.gl/Tzu0PI>), a sustainable approach to managing turfgrass nutrition developed by PACE Turf and the Asian Turfgrass Center after careful analysis of thousands of soil tests of healthy and unhealthy turf.

Total Exchange Capacity (M. E.)		4.86	4.01
pH of Soil Sample		6.80	6.60
Organic Matter, Percent		2.37	2.22
ANIONS	SULFUR: p.p.m.	13	14
	Mehlich III Phosphorous: as P ₂ O ₅ lbs/acre	264	226
	CALCIUM: lbs/acre	661	544
EXCHANGEABLE CATIONS	Desired Value	644	488
	Value Found	-17	-48
	Deficit		
	MAGNESIUM: lbs/acre	100	100
	Desired Value	100	82
	Value Found		-18
Deficit			
POTASSIUM: lbs/acre	100	100	
Desired Value	82	71	
Value Found		-29	
Deficit			
SODIUM: lbs/acre	52	50	

- Water conservation:** One of the keys to managing healthy turf is to be in control of the water (when Mother Nature allows). Keeping soils dry, especially in the spring and fall, makes the grass search for water by growing deep roots. Deep roots help turf survive better by more efficiently accessing water and nutrition that is available in the soil. Irrigation computers are set up to specifically water dry areas when necessary on a large scale using highly efficient sprinkler heads. On a smaller scale, such as greens, much of the water comes in the form of hand watering. Superintendents and their teams can apply water to specific areas that need it at a time when overhead sprinklers that are more general in coverage may give unnecessary water to a wetter part of a green, for example, that could result in rapid turf decline. Hand watering and judicious irrigation programming saves an estimated 10 - 20 million gallons of water each year at our nine golf courses.



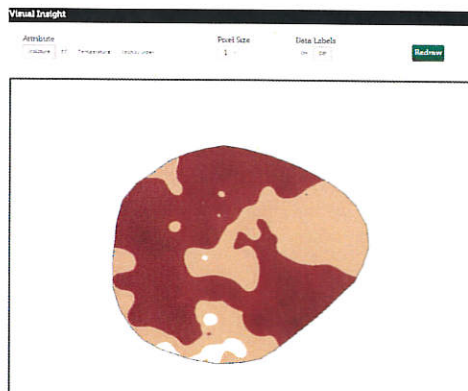
- Wetting agents** are also used at our facilities in an effort to reduce watering and improve the effectiveness of our irrigation practices. Wetting agents allow water to more readily and evenly infiltrate into the soil. This immediately reduces runoff during heavy rain events and allows water from irrigation (when needed) to reach the entire root system and keep plant health at an ideal level to tolerate traffic and weather stress. Wetting agents can be targeted with a hose on localized dry spots, applied to entire turf areas such as greens, tees, or fairways, or applied through the irrigation system for a broad, positive impact as soil

conditions dictate throughout the year. Rates are easily adjusted and different chemistries are available that allow water to be held or penetrate deeper into varying soil types from sand to clay and everything in between.

- **Technology:** MCRA continued its use of tools that we now consider indispensable: TDR 300 Field Scout Soil Moisture Meters. These devices are located at every facility, and allow the superintendents to instantly see moisture levels on a digital display. With this information, they can more accurately pinpoint areas that are deficient in water, or that are too wet. This has enabled us to use even less water as we manage our greens, and by ensuring proper moisture levels (not too wet, not too dry) throughout the entire green, plant health is consistently better, and the grass requires fewer inputs in the way of pesticides or fertilizers.



- In 2015, MCRA acquired a POGO meter. This device captures more data, such as moisture, electrical conductivity, canopy temperature, and salinity index. The data is captured using GPS locations, can be visually presented and analyzed, as well as historically graphed over time. This advanced instrument will allow our superintendents to more precisely deal with various challenges to maintaining fine turfgrass in the Mid-Atlantic. The data also visually demonstrates the



variability of soil moisture, and underscores the importance of hand-watering as a standard and responsible way of managing this important resource.

- **Scouting:** As a part of our Integrated Pest Management (IPM) strategy, scouting the golf courses daily for dozens of insect and disease pests that can significantly damage turf is performed. One example of a relatively new pest that is causing significant turf damage in the Mid-Atlantic region is the Annual Bluegrass Weevil (ABW). The ABW has been a pest to the northern states such as Massachusetts and New York



for many years and is now migrating south and possibly evolving to better adapt to the Mid-Atlantic climate. It has become a big challenge due to the number of generations present throughout the season that are causing turf damage at specific life stages in its development. We spend a significant amount of time talking with university researchers and other experts about ideal control strategies that will allow us to minimize chemical inputs and maximize control of this pest. There are multiple methods to scout for the ABW. A “soap flush” with lemon scented dish soap is applied with water to host turf (primarily *Poa annua*) which makes the adults rise from cover to the tops of grass blades to be identified and counted. A “salt flush” is used other times of year to draw larvae from grass stems, and is done by simply adding salt to a jar with water and adding a small turf plug and shaking. Cutting into the turf then pulling apart the thatch to identify larger, older larvae can also be done. There are other monitoring techniques such as vacuuming to identify ABW numbers and develop a control plan if needed. After scouting data is collected, the turf manager will implement a control strategy to targeted areas as needed based on their findings.

Environment: MCRA courses continue to work within the guidelines of the Audubon International Cooperative Sanctuary Program for Golf Courses (<http://acspgolf.auduboninternational.org/>), as well as the Groundwater Guardian Greensite Program (<http://groundwater.org/gg/greensites.html>). These successful programs help managed green spaces such as golf courses carry out safe groundwater practices against chemical use and pollution as well as develop effective conservation and wildlife enhancement programs.

Field Code

Field Code

In 2015, Needwood Golf Course became the 17th golf course in Maryland to complete the certification program. Through the end of 2015, all MCRA golf courses are much closer to achieving Audubon certification by completing requirements in the six focus areas of this intensely managed program:

- Wildlife & Habitat Management
- Water Conservation
- Environmental Planning
- Water Quality Management
- Chemical Use Reduction & Safety
- Outreach and Education

Research: MCG courses continue to evaluate new and existing strategies for optimizing playing conditions with fewer inputs of water, fertilizer, and pesticides. One of the ways we do this is by the use of check plots when applications are made. By keeping a small plot of turf untreated with a particular application, it allows us to evaluate the effectiveness and timing of control strategies. The goal is continue to enhance the ways in which we can manage our courses more sustainably - both environmentally and economically.

Projects: Numerous projects were completed in 2015, which have a direct, positive impact on course playability, as well as the world around us.

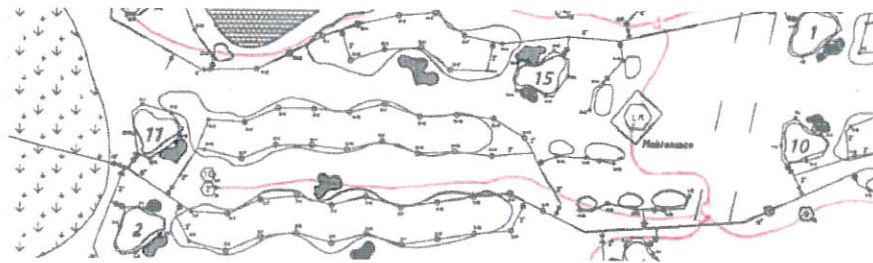
- **Drainage** was installed in rough (#16) at Northwest. This large scale project included reshaping the soil along the cart path for most of the hole, adding a number of catch basins to get water off the surface after rain and flood events. Portions of this hole get flooded numerous times every year, with more and more surface runoff coming from upstream housing development in the area. The work done here will allow the golf course to re-open much sooner after rain events and will save labor and fuel resources needed during extensive clean-up from floods.
- **Bermudagrass conversion** was expanded in 2015 at Falls Road (numerous tee boxes) to this water-, fertilizer-, and pesticide-reducing turfgrass. Bermudagrass is typically native to Southern climates, but new cultivars have been developed that are more cold-tolerant, and are increasing in usage now further north into our area and even Pennsylvania. This grass requires far fewer resources and inputs to keep it alive because of its aggressive growth habit in the summer months, as well as its tolerance to attack from disease, insects, and drought. The challenge, however, because it is dormant for about 5 months of the year, is its reduced ability to recuperate from traffic during colder months, as well as the perception in the off-season that these large turf areas are “dead,” when in fact they are not. While bermudagrass transitions have been stalled at Rattlewood due to severe winter injury at this site, we continue to be successful at our other 8 courses in promoting this more sustainable grass in our system.
- **Forward tee construction** was completed at Needwood (#s 1, 6, 11, 13) and Northwest (#16) in 2015. New forward tees were shaped within Needwood’s fairway areas to provide a wider range of teeing space and distance for these holes. We continue to look at our properties to evaluate current tee box placement to determine whether adding new teeing ground would be beneficial to our customers’ skill and distance abilities. The addition of a new tee box on #16 at Northwest allows golfers of all abilities to better be able to reach the fairway on their tee shot.



- **Select sand traps** (37 altogether) were fully rebuilt at Falls Road (4), Poolesville (5), Laytonsville (5), Rattlewood (19) and Little Bennett (4). Other bunkers were reduced in size at Poolesville, Little Bennett and Rattlewood. Renovating these bunkers provides a long-term reduction in fuel emissions, especially after large rain events when bunkers had large puddles of water in them that had to be pumped out. Large amounts of labor and fuel are consumed each year simply repairing washed-out, silted bunkers after it rains.

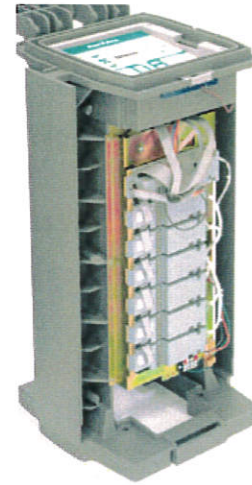


- **Fairway Drainage** projects were performed at Laytonsville and Falls Road in order to try to keep these high maintenance areas as healthy as possible after flooding rains. Even small areas that hold water cause significant turf loss annually, wasting resources and diminishing the customer experience.



- A **major irrigation upgrade** at Rattlewood was performed in-house by many talented crew members from 6 different MCG golf courses. There were two main components to the upgrade: add greens perimeter sprinklers and upgrade irrigation field controllers.

- Greens perimeter sprinklers are needed because quite simply, the grass in the rough has different water requirements than the grass on the greens. In the past, a large amount of labor was expended every year to supplement water needs in the rough by hand-watering. While this will still be done to target specific areas as needed, more attention can be spent caring for the high-maintenance needs of greens, tees and fairways at this facility.
- Irrigation field controllers house all of the wires and control modules that link every sprinklerhead in the field to the main irrigation computer at the shop. By upgrading the field controllers, we have more modern hardware in the field that is now capable of individual sprinkler control for every sprinkler on the golf course (fairway heads used to be paired together), saving water and allowing us to more specifically target smaller dry areas with new irrigation programs.



Montgomery County Airpark

The Montgomery County Airpark (Airpark), acquired in 1960, is owned and operated by the MCRA through a 99-year lease dating back to 1959. The MCRA maintains sole control over the northwest end of the Airpark property. In addition, the MCRA subsidizes the annual operating losses for the benefit of the County and the community.

As owner and federal grant sponsor, MCRA secures State and Federal funding for the Airpark and is responsible for the runways, taxiways, navigation aids, and other common areas. The fixed base operator (FBO) offers services to support aeronautical activities including fueling, aircraft storage, aircraft maintenance, flight training, and related services. Following the expiration of an 18-year lease with an aviation services company, the *long-term* leaseholder, doing business as DC Metro Aviation Services, became the fixed base operator (FBO). Since DC Metro Aviation Services took over as FBO, there have been vast improvements in both operations and facilities, including the construction of new hangars for aircraft storage and the addition of self-fueling service for pilots.

More than 150 aircraft are stored on the property. Montgomery County Airpark's 4,200-foot runway has three instrument approaches and is the closest "jetport" to the Nation's Capital. A portion of the traffic is of the commercial type or air taxis consisting of a variety of modern day aircraft such as Cessna Citation, Lear Jet, Beechcraft (both jet and turbine), and Falcon Jet. The Airpark is also home to an air taxi firm that specializes in transporting air travelers to various destinations in the east coast and the mid-west on a regular on-demand basis.

In 2015, the MCRA secured an MAA grant to crack fill the runway, taxiway and parking lot at the Airpark. This project also addressed ADA compliance issues with parking.

According to 2015 economic data supplied by the Maryland Department of Transportation, the Airpark provides the following direct, indirect, and induced benefits to Montgomery County:

- 290 jobs
- \$11.26 million in personal income
- \$11.84 million in business revenues
- \$1.19 million in tax revenues



Financing Activities

Long-term sustainability continues to be a focus at the MCRA. A key strategy to attain this, in addition to constant attention to the operating budget, is an ongoing effort to reduce overall liabilities. Despite the economic downturn and the declining number of golf rounds nationally, the MCRA successfully boosted its Moody's rating in order to enhance its efforts to refinance its long-term debt. The effort bore fruit in December of 2010 with our refinancing of 21.4 million dollars in debt with very favorable terms. In 2013, the MCRA refinanced its debt again in the amount of 20.6 million dollars to lock in its interest rate for the outstanding life of the bonds and to obtain \$2 million in extra financing for capital purposes at the golf courses. Final maturity occurs in December 2027.

In addition to its own debt, the MCRA carries more than \$81 million in debt related to projects around the County, which is not considered part of the County's debt service calculation. The MCRA issued revenue bonds refinancing the Montgomery College Arts Center project in June of 2015. The present value of the cash savings realized is \$3,578,120. The Goldenrod Building was purchased in September of 2011 with bonds totaling over \$15 million. It is now owned by Montgomery College. MCRA refinanced the Bethesda North Conference Center bonds in 2012, thereby saving the County \$1.052 million in cash flow over the remaining life of the bonds.

Additional projects include:

- Bethesda North Conference Center
- Health and Human Services Building
- Germantown Indoor Swim Center and other County swim facilities
- Montgomery College Arts Center
- Montgomery College Silver Spring Parking Facility
- Goldenrod Building



Bethesda North Conference Center



Germantown Indoor Swim Center