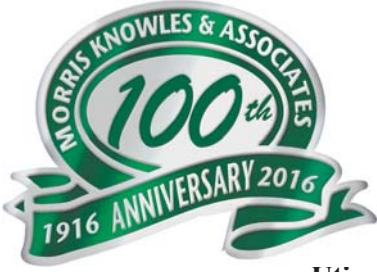




# Morris Knowles HIGHLIGHTS



A Newsletter from  
**Morris Knowles & Associates, Inc.**

(A Hammontree Company)

*Engineers - Planners - Scientists - Surveyors*

Offices in Pennsylvania, Ohio and West Virginia

Utica and Marcellus Shale - Pipelines - Transportation - Bridge - Civil Site  
Municipal - Environmental Science - Structural - Landscape Architecture - Surveying

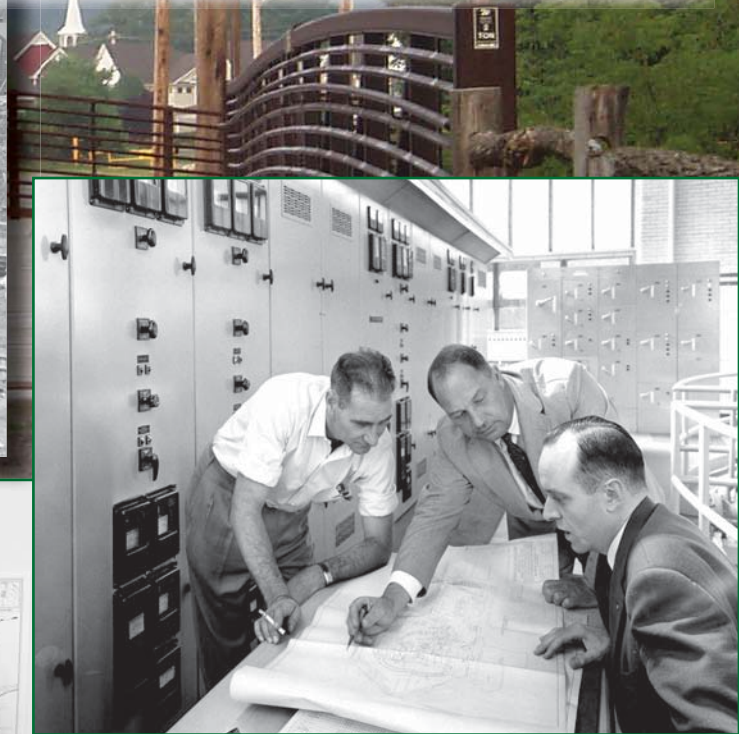
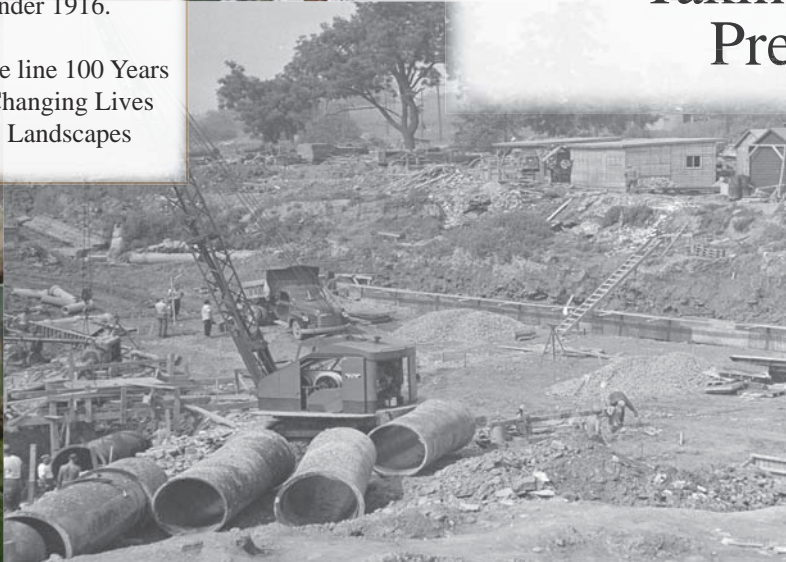
## 100 Year Anniversary Issue, Winter 2016

### Inside this Edition

- Morris Knowles the Man and Our Founder 1916.
- Time line 100 Years of Changing Lives and Landscapes

# “A Century in the Making!”

Taking a look at the Past,  
Present and Future



Photos from left to right: Construction of water pump station for the City of Allentown, PA in July, 1952; Engineering group photo of G. Maibach, G.V. Gustafson, and M.B. Trimble in March 1958; Construction of the Ross Pumping Station in Aspinwall, Pa. in June, 1907; Mr. James C. Bollibon, P.E., P.L.S., current President of MKA; background photo is Ligonier Valley Walking Trail Bridge.

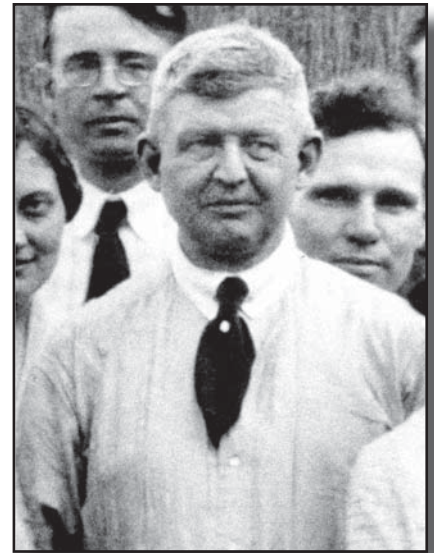
# Morris Knowles & Associates, Inc

## Morris Knowles - the man, the legend and the founder of Morris Knowles, Inc.

Morris Knowles & Associates, Inc. is able to trace its successes of today back to the impressive work and long journey of one man – Morris Knowles.

Morris Knowles was born in Lawrence, Massachusetts on October 13, 1869. While growing up, he spent a lot of time with his neighbor, Hiram F. Mills, who was at the time conducting historic studies in the field of water and sewage treatment. Perhaps that is why young Morris elected to study engineering at the Massachusetts Institute of Technology (MIT), where he graduated from in 1891.

During the time between his graduation in 1891 and 1900, Mr. Knowles spent time working under the guidance of many important and famous engineers including Richard A. Hale of the Essex Company; Clemons Herschel and J. Waldo Emerson of the East Jersey Water Company; F.P. Stearns of the Massachusetts State Board of Health; and John R. Freeman of the City of New York.



While working under these impressive individuals and later as the engineer-in-charge, Mr. Knowles completed a number of significant projects in several major cities that would later be credited for helping to eliminate water borne diseases, such as dysentery. These projects included the formation of the Massachusetts Metropolitan Water Board and the development of the Wachusett Reservoir and Aqueduct to supply Boston and twenty-eight (28) surrounding cities with clean water; continuous additions to the slow sand filter plant in Lawrence, Massachusetts; a new gravity water supply for the City of Philadelphia; and the creation of laboratories and experimental filters for the City of Pittsburgh leading to the construction of slow sand filters on the Allegheny River at Aspinwall.

Upon the completion of the Pittsburgh Filtration Plant, Mr. Knowles devoted himself actively to the consulting engineering practice which he had formed in partnership with L.E. Chapin in Pittsburgh a few years before, and which he continued, first as a partnership with Mr. Chapin, and later (1916) as a corporation under his own name Morris Knowles, Inc.

During his ownership and work in private practice, Morris Knowles continued his outstanding efforts in water treatment and expanded his expertise into city planning and zoning. He even authored a book titled “Industrial Housing” in 1920, along with many professional papers and contributions to the technical press. His impressive knowledge in these areas kept him very busy serving on several advisory and council boards in both the industrialized northeast and internationally in Great Britain and Germany. In addition, he worked on such projects as an impounding dam for the development of an industrial water supply for the Tennessee Coal, Iron, & Railroad Company and supervised the design and construction of Camps Meade and McClellan during the World War I. He received numerous awards including an Honorary Doctorate of Engineering from the University of Pittsburgh.

Mr. Knowles continued to expand his outstanding efforts to the community until the time of his death at his home in Pittsburgh, Pennsylvania, on November 10, 1932, leaving behind a legacy of commitment to providing clean healthy water to all.

**Morris Knowles  
& Associates Inc.**  
A Hammontree Company

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### Officers

Charles F. Hammontree, P.E., P.S.  
C.E.O. of MKA and H&A

James C. Bollibon, P.E., P.L.S.  
President of MKA

William P. Utzman, P.E., CPESC  
Vice President of MKA

Michael M. Vale, P.E., CPESC  
Executive Vice President of H&A

# c. Celebrates 100 Years of History



Photo above: Horses used in August 1909 to move equipment for the foundation of the Ross pumping station in Aspinwall, PA.



Photo above: Panoramic view showing the construction of concrete pump-pit, Ross Pumping Station, April, 1906

In 1901 Mr. Knowles became the Chief Engineer of the Pittsburgh Bureau of Filtration. It was his task to design and supervise the mammoth construction of a slow sand filtration plant that would encompass over 200 acres on the old James Ross farm property in Aspinwall Pa. The project was one of the largest public works Pittsburgh had seen at the time. Construction techniques included steam engines as well as horse-drawn wagons and good old fashioned manual labor.

## Early 1900

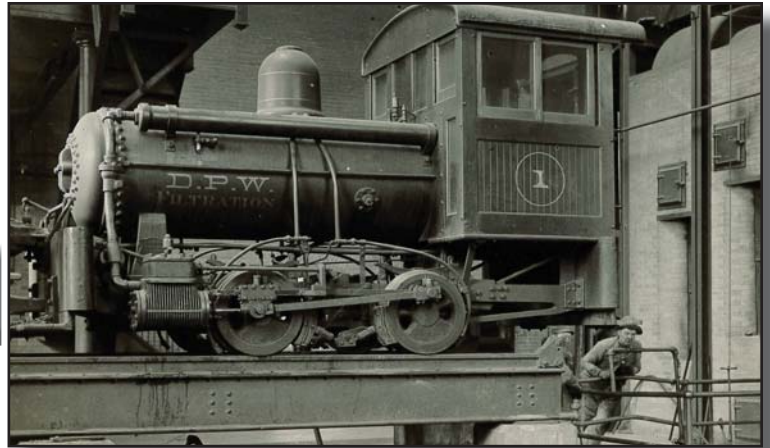


Photo above: Steam engine used in hauling and construction at Ross Pumping Station, February 1909

A partnership was formed with L.E. Chapin in Pittsburgh and later in (1916) as a corporation under his own name Morris Knowles, Inc.



Photo above: Water Works Pumping Station in Franklin, PA. in October, 1926.



Photo above: Water Works Pumping Station showing the constructed manhole tops in February, 1927

# FALLINGWATER

Morris Knowles Inc., was asked by Mr. Edgar J. Kaufmann, owner of Kaufmann's Department Store in Pittsburgh Pa., in early 1920 to report on leased camp property at Bear Run Pa. Mr. Kaufmann was considering to purchase the property for \$25,000. Morris Knowles Inc., was to report on the entire site – the topography, water, sewerage and mineral resources. From 1920 – 1934 the property served as a summer retreat & camp.

In a memorandum dated February 20th 1935, Morris Knowles' Engineers, were asked to furnish a "plane table survey" very quickly: "Mr. Kaufmann wishes particularly to identify the larger trees and the character of the rock outcrops...Mr. Kaufmann is particularly anxious to have the survey cleaned up this week as he is thinking of building a house at the camp in the spring." The map was finished March 9th 1935. Morris Knowles Inc., also provided construction staking and other engineering services for the world famous house designed by Frank Lloyd Wright, which became known as "FALLINGWATER".

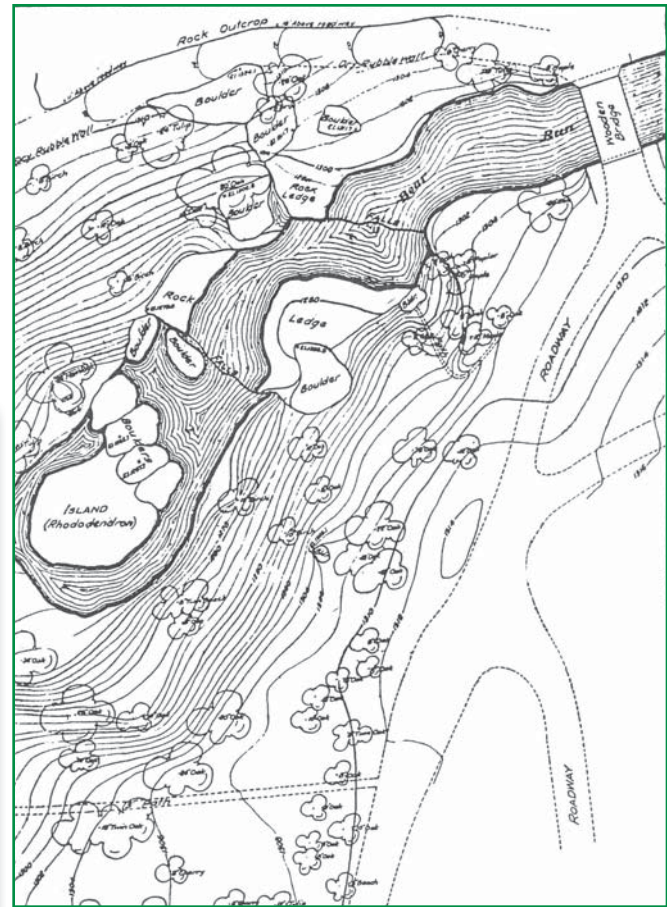
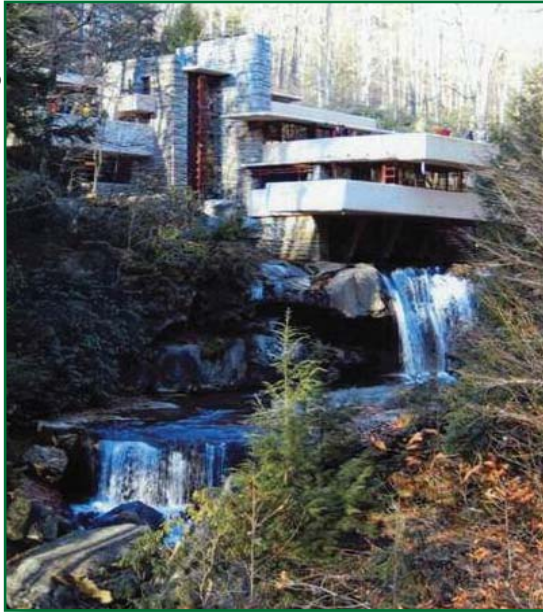


Photo above: Topographic map of building site, March, 1935; Photo left: Fallingwater

1926

1950

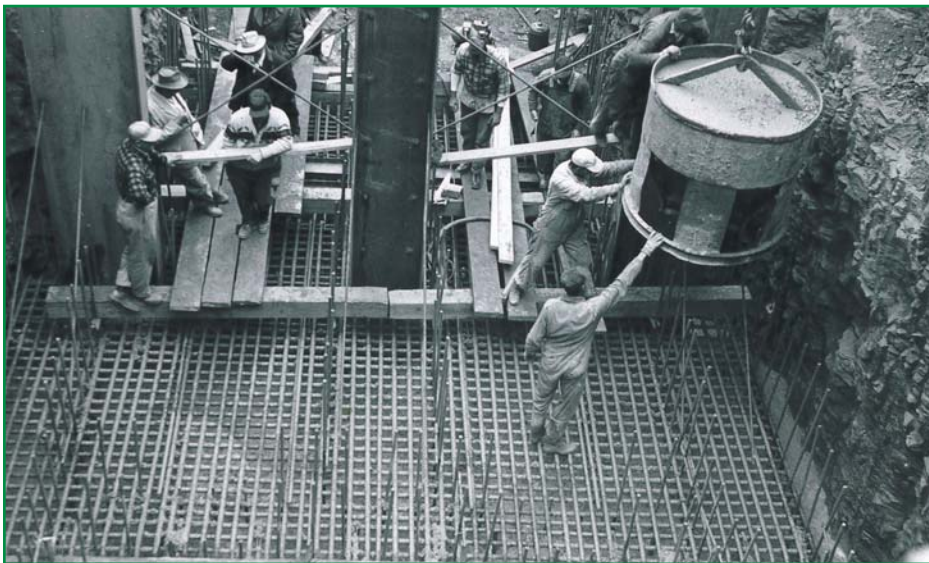


Photo above: Penn Forest Dam, Control Tower footing

Photo right: Penn Forest Dam, pouring west-half of Ogee Spillway

In 1956 Morris Knowles & Associates, Inc. started the Bethlehem Authority Penn Forest Impounding Dam and Reservoir Project.



From 1960 to 1966 Morris Knowles designed and engineered the Wilkinsburg-Penn Joint Water Authority Filter Plant Improvements.



Photo left: The filter plant excavations for the 36" connection to a 42" line at the Wilkinsburg- Penn Joint Water Authority.



Photo above: Wilkinsburg - Penn Joint-Water Authority Excavation for a 16" line at Turtle Creek, PA in April, 1962

Photo below: The Construction of the Covered Reservoir for the Wilkinsburg - Penn Joint Water Authority.



## 1970

## 1980



Photo above: In 1976 and 1977 Morris Knowles provided an inspection review and designed upgrades for the Zelenople, PA water reserves.

In 1980 Morris Knowles was acquired by Hammontree & Associates, Limited which expanded our services to clients in Pennsylvania and Ohio. In the 1980s and 1990s Morris Knowles & Associates, Inc. expanded and restructured into multi-disciplines. We now offered complete in-house engineering services including: civil, structural, environmental, planning and surveying.

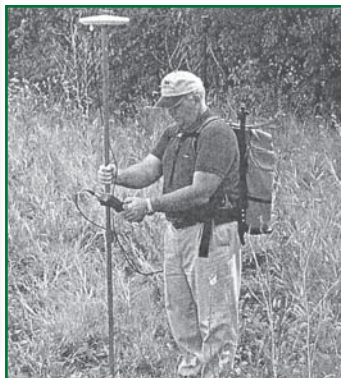


Photo above: Surveyor using one of the earliest GPS receivers for surveying.



Photo above: 1980 - 1990 swimming pool inspection and restoration for Pittsburgh Municipal Pools



In April 1987 MKA was retained by the Westmoreland Fayette Municipal Sewage Authority to design and oversee construction of a new sanitary sewer line in the Brown Street area of Everson Borough, PA.

Photo above: In 2004, Morris Knowles & Associates moved to their current location at 443 Athena Drive, Delmont, PA. This converted church structure allowed for greater expansion to grow the company and meet the needs of clients in western PA.



Photo right: In 2004 Mr. James C. Bollibon, P.E., PLS became the president of Morris Knowles and is on the managing board of directors at Hammontree & Associates.



In the 1990s MKA provided civil site design and permitting for over 50 Brusters' locations in PA, OH, NH, SC, and FL. Above photo is a Brusters near Pittsburgh, PA.

## 1990

## 2000



Photo above: Bedford Dwellings owned by the Housing Authority of the City of Pittsburgh, PA.

In the 2000s MKA was hired by the Housing Authority of the City of Pittsburgh for various communities in the City to provide civil/site and structural design and topographic and cartographic surveys. MKA continues to provide services to the City of Pittsburgh to this day.

Photo above: Walgreens Pharmacy in Murrysville, PA. MKA was hired by Alex Development for the new Walgreens Pharmacy in Murrysville in 2007. MKA provided civil engineering, geotechnical investigation and recommendations and surveying. The team also provided handicap accessibility review. This new Walgreens is approximately 14,800 square feet.

In 2007 MKA was hired by Big Savage, LLC to provide foundation design parameters, geotechnical investigation and recommendations for the Twin Ridges Wind energy project in Somerset County, PA.



In the 2000s MKA began providing civil engineering and surveying services to oil and gas companies in the Marcellus Shale Play. Above photo: Marcellus Gas Wells.



In 2013 MKA provided civil site engineering, surveying and permitting and landscape architecture for the Cozza Enterprises in Monroeville, PA. that includes a Five Guy Restaurant and various shops.



MKA was hired by Sweeney Shank Architects in 2012 to provide structural design services for the Mercante Brother's Market in Washington County, PA.



The Dean Honda project in 2014 located in Pleasant Hills, PA involved MKA providing surveying and civil site design.

In the 2000s some of the projects MKA completed include: Dean Honda; Holiday Inn; Roth Carpet; Mercante Brothers; Gibson Stainless; Pasqualinos; Upper Tyrone Township; City of Pittsburgh; Penn-Trafford School District; Twin Ridges Energy Farm; Ligonier Valley Walking Trail Bridge; Pitcher Park Memorial Skate Park and Royal Building Products.



MKA was hired by Dom Pasqualino in 2013 to provide site survey, civil site design and landscape architecture for this 11,220 square foot retail development.

## 2000

## 2015 - 2016



Photo left is the New Ligonier Valley Walking Trail Bridge. MKA served as Ligonier Township's Consulting Engineer on this bridge in 2012.



Photos left: In 2015 MKA was retained by RSH Architects to perform the civil site design and geotechnical investigation and recommendations for a five story apartment building for autism clients. (Rendering shown by RSH Architects). Lower photo shown is the ground-breaking ceremony for the new "Dave Wright Apartments" on October 15, 2015.



managment design for the Pitcher Park Memorial Skate Park in Carnegie Borough.

In 2013 MKA was hired by Grindline Skate-parks, Inc. to complete civil site services including site layout, grading, erosion and sedimentation control and stormwater



In 2015 the Bellwood Borough, a municipal client since 1922, once again entrusted MKA to prepare plans and specifications, contract award administration and construction observation to replace an existing corroded 2" diameter cast iron water line with a 6" and 8" diameter water main to improve water volume, pressure and fire flow for existing customers along East 9th Street, 8th and 7th Street and South Tuckahoe Street in Antis Township.

# The Face of Morris Knowles & Associates, Inc. Today



Mr. Charles F. Hammontree, P.E., P.S., Chairman and C.E.O. of Morris Knowles & Associates, Inc. and Hammontree & Associates, Limited



Mr. James C. Bollibon, P.E., PLS, President of Morris Knowles & Associates, Inc., and Managing Board of Hammontree & Associates, Limited



Mr. William P. Utzman, P.E., CPESC, Vice President of Morris Knowles & Associates, Inc.



Mr. Michael M. Vale, P.E., CPESC, Managing Board Member and Executive Vice President of Hammontree & Associates, Limited.

**As we celebrate our 100 year anniversary we would like to thank you our clients, vendors, community and all our employees. We have survived competition, adversity and grown as a successful firm. We are here, a leader in our market, successful and growing.**

## Morris Knowles & Associates, Inc.

A Hammontree Company  
Offices in PA, OH and WV

*Consulting Engineering and Surveying*

443 ATHENA DRIVE  
DELMONT, PA 15626



**ADDRESS CORRECTION REQUESTED**