June 28, 2018

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Sent Via Email: rvankoot@indiana.edu

From: Philip S. Worrall,
Advisory Council Chair for the Indiana Geological and Water Survey
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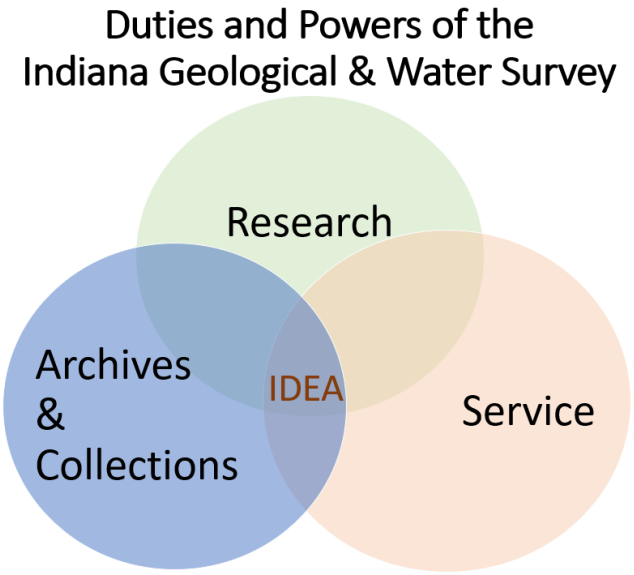
RE: A call to increase the Indiana Geological and Water Survey's state appropriation and fund the "Indiana Dynamic Earth Archive (IDEA)."

In a 2017 economic impact analysis study [LINK], the Indiana Geological and Water Survey (IGWS) was shown to provide a conservative estimate of $110 million dollars in economic benefit to the citizens of Indiana on an annual basis, excluding the value of IGWS physical collections. A noteworthy (non-economic) conclusion from this study states that "Not only does the IGS provide technical information for discovering, developing, and preserving the mineral, energy, and ground water resources of Indiana, but it reduces environmental risks to the health, safety, and welfare of Indiana residents." IGWS resources are recognized as second-to-none across the nation, and one important way IGWS accomplishes this is through the geographic information system (GIS) data and services they provide for FREE through public initiatives like IndianaMap [LINK].

State appropriation in 2017 of $2.8 million dollars covered only 69% of the operating budget IGWS needed to provide the legislated services, research, and collecting & archiving of materials and data. This appropriation still resulted in a 40:1 return on investment, clearly a tremendous benefit and value for the citizens of Indiana.

The IGWS Advisory Council believes that the historical accomplishments and efficiencies of the IGWS have been so good that it has masked the State's inaction to properly invest in them. Two recent events, described below, put both the past and future good work of the IGWS at risk. As a result, this letter is being sent by the Chair of the IGWS Advisory Council to explain our concerns and to recommend actions to guarantee the continued success and mission of the IGWS by exploring avenues to increase state appropriation and to fund a new "Indiana Dynamic Earth Archive (IDEA)."



The Indiana Dynamic Earth Archive (IDEA) is envisioned as the intersection of the physical archives (rock and unconsolidated cores and samples) and the digital collections (scientific testing data and geospatial data), and the geological and water research and services of the IGWS (see figure above). Simply stated, the proper care and investment in Indiana's geological and water resources through IDEA is as important an investment and initiative as any other environmental, infrastructure, social, or economic challenge Indiana faces today.

First: In 2017 the IGWS's mission, codified in Indiana Code IC 21-47-2, was changed to include an expanded study of Indiana's water resources.***** Current Indiana Code states that the IGWS is under the direction and control of the board of trustees of Indiana University to: (1) study the geology and hydrogeology of Indiana; (2) provide unbiased and nonregulatory information for the wise stewardship of the water, mineral, and energy resources of Indiana; and (3) acquire and curate the State's geological sample collections for public use.

The IGWS mission is broad; yet vitally important to Indiana's economic viability is the legislature's recognition of Indiana's dependence on our single-most important and limited natural resource—water. "Water is Life" and Indiana's future depends on maintaining a strong and secure water resource as well as our water utility infrastructure. From our groundwater and surface water to each tap and back again, Indiana's societal and economic future is tied to safe, abundant, reusable, and affordable water.

***Why?** The Indiana Chamber of Commerce report—*Modernizing the State's Approach to a Critical Resource*, 2014 [LINK], The Conservation Law Center report—*Water and the Quality of Life in Indiana*, 2017 [LINK], and the actions of the Indiana State Legislature have all recognized the importance of Indiana's water resources and the critical role the IGWS can play. As a result, the legislated mission and work of IGWS was significantly increased in 2017 to focus on Indiana's water resources, *yet state appropriations to support this effort did not increase*. With 2017 appropriations lower than the average over the last 30 years, the result is a current funding at less than 50% of the annual budget needed for the IGWS to fulfill its legislated mission.

Ask #1: The IGWS Advisory Council is recommending a 100% increase in current annual appropriations to $5.6 million dollars to support the full mission of the IGWS starting in the next biennium.

Second: The IGWS buildings, infrastructure, research, testing, and archival facilities located on the Indiana University Bloomington campus have aged, are out of date, and are filled beyond capacity. This continues to endanger the preservation and access to important physical geological cores, samples, records, and digital data needed to support the ongoing and new work of the Survey. The University plans to renovate the Geology Building and remove the existing Core Library and warehouse buildings. Any proposed solution must recognize the importance of these vital geological assets, as well as allow for the growth of the collections. Easy access to these resources by IGWS staff, university researchers, and private industry users must be maintained.

The IGWS Advisory Council strongly recommends that Indiana University—the legislated home of the Survey—recognize the role that IU can play to advance the growth in research opportunities (including current and future IU Grand Challenge initiatives), as well as the added economic benefit to both private industry and other government agencies to easily access these invaluable resources. Indiana University can leverage this opportunity and build a world-class and state-of-the-art Indiana Dynamic Earth Archive (IDEA) facility****** to support Indiana's economic future.

Ask #2: Establish a dedicated facility for IDEA. The IGWS Advisory Council is recommending an investment by Indiana University of $5 million to build a new Indiana Geological & Water Survey IDEA facility located near the current facility on the Indiana University Bloomington campus, breaking ground in 2019.

Summary of the proposed IDEA: For IU to be proactive in addressing both of these critical issues and to provide the infrastructure to support Indiana's water future, the IGWS Advisory Council proposes the creation of the Indiana Dynamic Earth Archive (IDEA). IDEA is a natural extension to the current resources, capabilities, and skills of the survey as a non-regulatory, research-centric, archival-rich, and geospatial-skilled organization. IDEA is grounded in the two recommended actions above.

These two actions clearly support the mandate of the IGWS to provide the services, research, and the development of collections and archives needed to ensure Indiana's water and economic future.

Thank you for your consideration; I look forward to your feedback.

****What?** Indiana is not Texas, but Indiana University Bloomington and the IGWS can take a page from the play book of the University of Texas Austin and the Texas Bureau of Economic Geology (the Texas Geological Survey), who just last year broke ground on a new 10,000-sq-ft Core Research Building. "Everything we do is built on rocks." [LINK]

Sincerely,

Philip S. Worrall,
Advisory Council Chair for the Indiana Geological and Water Survey,
and Executive Director, Indiana Geographic Information Council

Attachment:

Non-governmental Indiana Geological and Water Survey Advisory Council Members endorsement of this letter.

Attachment: Non-governmental Indiana Geological and Water Survey Advisory Council Members

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