Conservation and Efficiency Survey Results Summary

In order to promote establishing conservation and efficiency goals under the Great Lakes Compact, Indiana set out to determine what methods and practices were currently in place or in the planning stages among the significant water withdrawal facilities located in the Great Lakes Basin. Since 1983 Indiana has had in place a very successful Significant Water Withdrawal Facility (IC 14-25-7-15) program that requires all facilities that utilize an aggregate capacity to pump 100,000 gallons of water or more per day from ground or surface sources (or a combination) be registered as significant water withdrawal facilities. The program includes a reporting requirement that each facility measure and maintain an annual inventory of water withdrawn from those sources. The annual water use reporting component of the program was the vehicle utilized to facilitate obtaining data on conservation and efficiency activities of facilities located in the Great Lakes Basin as well as Statewide.

A checklist style survey was developed specifically for each registered water use category including Industrial/Energy Production, Irrigation, Public Supply, and Rural / Miscellaneous. The checklist contains examples of general Best Management Practices (BMP) for water conservation and efficiency that might be considered by a significant water withdrawal facility. Each practice had checklist boxes for the facility to indicate whether a particular water management practice was "Current"—for a practice currently being utilized at the facility, or that may be "Planned" or implemented over the next water use reporting year. The list was not to be considered complete or mandatory, as no one set of BMP's would be appropriate or applicable to all facilities, therefore room for open ended responses were included in the survey as well.

- Basin Survey:
  - Within the basin 858 facilities received a checklist survey
  - Response rate higher than expected at 54% [276 returned surveys; 194 implied (470 total)]

- Statewide Survey:
  - 3652 received the survey
  - Response Rate at 52% [1254 returned surveys; 659 implied (1913 total)]

Most Often Indicated Responses & Type:

- The checklist responses are further categorized as being Policy, Mechanical, Technology, or Education based.

  Most Common 'Current' Responses Indicated:
  - Industrial / Energy Production (IN/EP) —Technology based practices
  - Irrigation—Policy based practices
  - Public Supply—Technology based practices
  - Rural/ Misc—Mechanical practices

  Most Common 'Planned' Responses Indicated:

- Industrial / Energy Production—Education based
- Irrigation—Education based
- Public Supply—Policy based
- Rural /Misc—Tied: Technology and Education

Most Often Indicated Survey BMP:

- Industrial & Energy Production
  - Within the Basin:
    - *Statement 4*— Install cooling towers or retrofit once-through applications with closed loop recirculation systems to reduce cooling water use.
    - *Statement 10*—Turn off all flows during shutdowns and use solenoid valves to stop the flow of water when production stops.
  - Statewide: SAME
    - *Statement 4*— Install cooling towers or retrofit once-through applications with closed loop recirculation systems to reduce cooling water use.
    - *Statement 10*—Turn off all flows during shutdowns and use solenoid valves to stop the flow of water when production stops.
- Irrigation
  - Within the Basin:
    - *Statement 5*— Operation of pumps to meet, but not exceed, application rates to reduce excessive pumping.
    - *Statement 1*— Develop a system wide (pivot, pump, water supply) maintenance program to reduce in season shut downs, improve water distribution, and enhance overall conservation objectives.
  - Statewide:
    - *Statement 6*— Match pump output to distribution equipment design parameters.
    - *Statement 5*— Operation of pumps to meet, but not exceed, application rates to reduce excessive pumping.

- Public Water Supply
  - Within the Basin: TIE: Statements 5 & 6
    - *Statement 5*— Implementation of universal metering combined with a meter testing, calibration, and replacement program.
    - *Statement 6*— Develop a system wide large water meter (1 ½" and larger) testing, repair and/or replacement program to increase revenues and to mitigate water losses to enhance conservation objectives.
  - Statewide:
    - *Statement 5*— Implementation of universal metering combined with a meter testing, calibration, and replacement program.
    - *Statement 1*— Implementation of comprehensive water accounting and loss control program.

- Rural Use / Miscellaneous
  - Within the Basin: TIE Statements 4 & 6

- *Statement 4*— Development of an accurate water measurement system; including mechanical metering, or by figuring water use by flow meters, by acre inches applied, or by pump capacity.
- *Statement 6*— Operate pumps to meet, but not exceed, necessary rates to reduce excessive pumping.

- Statewide: SAME
  - *Statement 4*— Development of an accurate water measurement system; including mechanical metering, or by figuring water use by flow meters, by acre inches applied, or by pump capacity.
  - *Statement 6*— Operate pumps to meet, but not exceed, necessary rates to reduce excessive pumping.