

# GUIDEBOOK FOR INDIANA HISTORIC SITES AND STRUCTURES INVENTORY - ARCHAEOLOGICAL SITES

*Prepared by the Division of Historic Preservation and Archaeology, 2019  
402 West Washington Street, W274  
Indianapolis, Indiana 46204*

## INTRODUCTION

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The location, identification, evaluation, protection, and preservation of archaeological sites is an integral part of the state preservation process. There is a longstanding federal, state, and public concern with the protection of these non-renewable resources<sup>1</sup> and Indiana state laws and rules<sup>2</sup> strongly reflect these concerns as well. Indeed, Indiana Code (IC) 14-21-1-31 (b) (3) explicitly mentions “the value of history and archaeology as a guide to human activity.”

Rules defining archaeological standards, plans, and permits<sup>3</sup> have been established under IC 14-21-1<sup>4</sup> and IC 14-29-1-8 to permit the Indiana Department of Natural Resources (IDNR) and the Division of Historic Preservation and Archaeology (DHPA) to operate a technically accurate and professionally consistent archaeological review and compliance program. Authorized by 312 IAC 21, this Guidebook includes guidelines for archaeological projects to ensure that the products of compliance-related archaeological investigations will lead to the location, identification, evaluation, and protection of archaeological sites. The full text of the Indiana laws and rules regarding archaeological resources can be found at <http://www.in.gov/legislative/ic/code/><sup>5</sup> and [http://iac.iga.in.gov/iac/iac\\_title](http://iac.iga.in.gov/iac/iac_title).

These guidelines have been developed to update and clarify standards for archaeological investigations in Indiana. They have also been developed to assist the archaeologist in identifying the nature and extent of archaeological sites in Indiana, and to define the expectations for the location, identification, and evaluation of archaeological sites. Included are guidelines for records checks/literature reviews; field methodologies for Phase Ia, Phase Ib, and Phase Ic reconnaissance projects; Phase II and Phase III investigations; analyses; and report format.

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<sup>1</sup> See 54 U.S.C. § 300101 *et seq.*; 36 CFR Part 800; and 48 FR 44716 for federal laws related to the protection of cultural resources.

<sup>2</sup> Such as Indiana Code 14-21-1; 312 IAC 21; 312 IAC 22; IC 14-29; 312 IAC 6; IC 14-34; 312 IAC 25; IC 14-22-10-1.

<sup>3</sup> 312 IAC 21; 312 IAC 22; 312 IAC 6.

<sup>4</sup> Indiana Code (IC) 14-21-1. Referred to in some places in this document as the “state statute.”

<sup>5</sup> Please be sure that you are referencing the most up to date legislation, as this link changes annually.

## ARCHAEOLOGICAL RESOURCES AND DEFINITIONS

Archaeological investigations in Indiana are conducted under several federal and state statutes. Primary examples include Section 106<sup>6</sup> of the National Historic Preservation Act,<sup>7</sup> its implementing regulations ("Protection of Historic Properties"<sup>8</sup>), and the Indiana Historic Preservation and Archeology law.<sup>9</sup>

For the purposes of IC 14-21-1 and 312 IAC 21, "important archaeological sites" will include the definitions of "Historic property," "Historic site," and "Site" as defined respectively in IC 14-8-2-124, IC 14-8-2-125, and IC 14-8-2-258, and in 36 CFR Part 60 (as authorized by 16 U.S.C. 470 et seq.). Note that, per the state definition, a site can include a location that contains or did contain a structure (IC 14-8-2-258). Under the federal definition, a site can also be "the location of. . . a building or structure, whether standing, ruined, or vanished, where the location itself maintains historic or archaeological value regardless of the value of any existing structure" (36 CFR 60.3). The presence of sites may be indicated through the use of directly recorded information (e.g., structure locations recorded on Sanborn Fire Insurance maps). A list of possible research sources may be found in National Register Bulletin 39.<sup>10</sup>

In the field, sites are recognized by the presence of one or more artifacts and/or features. Per the National Register Bulletin 36,<sup>11</sup> ". . . the National Register defines an archeological property as the place or places where the remnants of a past culture survive in a physical context that allows for the interpretation of these remains." Physical evidence or archaeological remains usually take the form of artifacts, features, and ecological evidence ("ecofacts"<sup>12</sup>). Once physical evidence of a site is found, an archaeological site number will be assigned.

An archaeological site is any precontact, proto-historic, or historical resource or portion of the resource containing one or more artifact or feature. Examples of archaeological site types can include, but are not limited to, the following: isolated find, artifact scatter, mound, earthwork, camp, village, burial ground/cemetery, ruin, farmstead, school, industrial or commercial use, lime kiln, mine, cave, battleground, shipwreck, dump, linear resources (such as canals, trails, roads, interurban, railroads, etc.) or other similar locations on land, under water, or locations that contain or once contained a structure and associated features.

The Principal Investigator (PI) should consider various factors (i.e., topography, site distance, site type, site elements, etc.) when considering a site's boundaries. Investigations of precontact or historical linear resources (i.e., trails, traces, canals, roads, drainage/sewage systems, railroads/railways, interurban system, etc.), and contiguous portions of a resource in that same county should be assigned the same archaeological site number (See Appendix A). Although historical records may identify a potential resource within the project area, the resource must be investigated in person to record the physical evidence of archaeological material.

See Appendix B for additional information regarding site definitions and site eligibility.

<sup>6</sup> 54 USC 306108. See <http://ncshpo.org/resources/national-historic-preservation-act-of-1966/> and <https://www.achp.gov/protecting-historic-properties/section-106-process/introduction-section-106> for detailed information.

<sup>7</sup> 54 USC 300101, *et seq.* See <https://www.achp.gov/sites/default/files/2018-06/nhpa.pdf> for detailed information.

<sup>8</sup> 36 CFR Part 800. See <https://www.achp.gov/sites/default/files/regulations/2017-02/regs-rev04.pdf> for detailed information.

<sup>9</sup> Indiana Code (IC) 14-21-1.

<sup>10</sup> "Researching a Historic Property," National Register Bulletin 39, National Park Service. <https://www.nps.gov/nr/publications/bulletins/pdfs/nrb39.pdf>.

<sup>11</sup> "Guidelines for Evaluating and Registering Archeological Properties," National Register Bulletin 36, National Park Service. <https://www.nps.gov/nr/publications/bulletins/arch/introduction.htm>.

<sup>12</sup> <https://www.saa.org/about-archaeology/what-is-archaeology>

## Qualifications

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Records checks/literature reviews, fieldwork, and analyses are conducted by professionals meeting the archaeological qualification standards established by the *Secretary of the Interior's Professional Qualification Standards*<sup>13</sup> and/or the state standards set forth in IC 14-21-1 and 312 IAC 21 and 22 (See Appendix C).

The DHPA reviews the credentials of individuals intending to conduct archaeological investigations in the state of Indiana. Individuals working under the direct supervision of a qualified professional, such as crew chiefs, field personnel, field or laboratory technicians, students, avocational archaeologists, and other support staff, may assist in archaeological investigations and reports of those investigations. The Principal Investigator is responsible for the final work product. Projects not conducted under state statute (for example, archaeology required under Section 106 of the National Historic Preservation Act), require a Principal Investigator meeting the archaeological qualification standards in 36 CFR Part 61. Projects conducted under state statute call for additional qualification requirements for personnel, which may be found in 312 IAC 21-3-4 (See Appendix C). Questions concerning the differences in management roles of PI's under state and federal statute should be directed to DHPA.

In order to be recognized as a qualified professional archaeologist in the state of Indiana, the Application for Federal Professional Qualifications Documentation for Archaeology<sup>14</sup> must be submitted with information broken down in terms of weeks (a week is defined as 40 hours) or days (a day is defined as 8 hours) of experience where applicable. A Master's degree in Anthropology, Archaeology, or closely related field is required under state and federal laws for Principal Investigator. (See Appendix C).

It is the intent of the DHPA to respond within 30 days after the credentials are submitted. The qualified professional is responsible for notifying the DHPA of any updates or changes to their Qualified Professional file.

Qualified professionals are expected to adhere to the highest ethical and professional standards, such as those adhered to by members of the SAA, SHA, AIA, AAA, RPA<sup>15</sup> and others, for conducting archaeological investigations and projects in Indiana. Consultants can be removed from the state Qualified Professionals Roster either at their request or where the person fails to substantially comply with this document. Inclusion in the Roster is terminated, suspended, or conditioned through the process outlined in IC 4-21.5-3-8 (Natural Resources Commission; 312 IAC 21-3-4: 24 IR 3019).

Regarding a Principal Investigator's qualified professional file, the DHPA will record the following types of problems/deficiencies, including but not limited to:

- Archaeological fieldwork conducted without an approved plan under state statute, where required per 312 IAC 22-2-3 (a) and IC 14-21-1-16. For example, archaeological investigation on state property without an approved plan.
- Failure to submit a plan more than 30 days prior to commencement of the fieldwork (312 IAC 22-2-3 (b) (2)).
- Use of archaeological methodologies deviating from the plan/research design without prior consultation with the DHPA.
- Violation of ethical or professional archaeological standards.

<sup>13</sup> Standards- 36 CFR Part 61; Guidelines- *Federal Register*, Vol. 48, No. 190 – September 29, 1983, Pt. IV.

<sup>14</sup> State Form 52779 (R/5-11)

<sup>15</sup> Society for American Archaeology, Society for Historical Archaeology, Archaeological Institute of America, American Anthropological Association, and Register of Professional Archaeologists, respectively.

- Conducting archaeological fieldwork prior to completing the archaeological records check.
- Failure to submit required archaeological report and site forms, where relevant, within the required time frames.
- Sharing SHAARD username and password with unqualified individuals.

Problems/deficiencies will reflect on the Principal Investigator, and the noted problems/deficiencies will be placed in the Principal Investigator's qualified professional file at the DHPA. This documentation may be used by the Division Director as part of a complaint with the Natural Resources Commission under IC 4-21.5-3-8.

## RECORDS CHECK/LITERATURE REVIEW

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Archaeological records checks and literature reviews are carried out by professional archaeologists to identify and assess relevant information to determine the known and expected archaeological resources for a particular project location. Archaeologists must review the existing archaeological studies and reports, archaeological site files, documents relevant to establishing the environmental setting (available through the DHPA managed database, the State Historic Architectural and Archaeological Research Database (SHAARD), the SHAARD Archaeology and Structures Map Web App, and DHPA files), and where possible, interview professional and avocational archaeologists and artifact collectors to formulate recommendations for field investigations in the project area. Therefore, the literature review must be conducted prior to the start of fieldwork.

Records checks/literature reviews should include pertinent information on the following aspects of the project area (as available):

- Known archaeological sites
- Previous investigations
- Burial areas, including those listed in the DHPA Cemetery Registry or other files
- Known culture histories
- Current land use
- Previous disturbances
- Geomorphology
- Soils
- Geology
- Fauna
- Flora
- Climate
- Hydrology
- Any additional information the investigator feels is relevant to the project

Cultural and specific project area history can be gathered from:

- Current references/reports and projects in the region
- Site records
- Early photographs and lithographs
- Court records (deeds, mortgages, etc.)
- Real property records
- Transportation records
- Wills and probate inventories
- Census data

- Plat and other types of maps

Historical maps and documents may be found at/in:

- County seats
- Historical societies
- Libraries
- Universities and colleges
- County histories and atlases
- Site and structure inventories
- Avocational/informant interviews
- Other collections, public and private
- Indiana State Archives

Please note: The State Historic Architectural and Archaeological Research Database (SHAARD) is the most comprehensive tool available to access the information housed at the DHPA and must always be consulted for archaeological records checks ([www.in.gov/dnr/historic](http://www.in.gov/dnr/historic)).

As the goal of records checks/literature reviews is to determine whether a project area contains or is likely to contain archaeological resources, the report will reflect the sources used and the results of the research. Qualified professional archaeologists should recognize that archaeological site locations have been reported with variable degrees of accuracy over time, resulting in variable accuracy in the depiction of the site locations on the SHAARD Archaeology and Structures Map Web App. In addition, many of the sites are only represented as a point and may be much larger than depicted. Location information for sites near the project area must be compared to the original documentation (available in SHAARD, within the files at the DHPA, or with the investigating institution). In light of previously inconsistent survey methods and changes in archaeological standards over time, old surveys may not meet current federal review standards. It is the Principal Investigator's responsibility to ensure that the records check is as accurate as possible. The date of the records check and name of the person conducting the records check will be included in the report.

The scope and content of the Records Check/Literature Review will be appropriate and specific to the project and immediate vicinity. The nature of the project area, the area of potential effects, previous work done in the area, and even sites immediately adjacent to the project area should be used to determine the scope of the records check. Culture Histories must be relevant to the project area and up to date with current archaeological research. The detail of the Culture History should be project specific and may vary according to the project requirements and the amount of previous archaeological research that has been conducted in the immediate vicinity and the region. Based on the findings of the records check/literature review, recommendations for field investigations or no further archaeological assessment will be included in the project report.

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## FIELD SURVEY

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### Phase I Reconnaissance

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Archaeological field surveys are systematic, detailed field inspections which seek to locate, identify, and evaluate cultural resources within a project area. Sites may be identified through a combination of documentary research, informant interviews, surface reconnaissance, and subsurface investigations. Field

surveys are supervised by a professional archaeologist who meets federal and/or state standards (See Appendix C). Field surveys are generally grouped into three different levels of effort (Phase Ia, Ib, Ic; see below) in order to identify and provide preliminary evaluation of archaeological resources.

- Phase Ia - surface survey and visual inspection of the soil when ground surface visibility and survey conditions are adequate, or when surface visibility or survey conditions are not adequate, the use of shovel probes, cores, and/or augering techniques to discover site evidence at or near the surface of the site.
- Phase Ib - intensive survey with the use of controlled surface collections, piece plotting, or subsurface sampling.
- Phase Ic - subsurface reconnaissance to locate buried archaeological sites in alluvial, colluvial, or aeolian landforms.

All phases of field survey may include the use of remote sensing and other techniques/equipment including, but not limited to: global positioning system (GPS); total stations; aerial imagery; ground penetrating radar (GPR); magnetometry; gradiometry; electrical resistivity; metal detector equipment; LiDAR; and other scientific techniques as they become available.

Landowner permission is required for all field investigations. It is the responsibility of the supervising archaeologist to contact the landowner, appropriate agency, authority, or consulting firm to confirm permission has been granted. Additionally, the archaeologist needs to work with the relevant property manager regarding any investigations on state-owned or leased property. A written curation agreement, or a written release of interest in the artifacts, with the current legal landowner must be obtained regarding any artifacts recovered during fieldwork. This can be critical in case of possible future legal disputes regarding ownership of artifacts.

Per 312 IAC 22-2-3 (b), an application to conduct an investigation or a scientific investigation will be filed by the PI at least thirty (30) days before the commencement of the project. Plans submitted for review under state statute will be reviewed by the DHPA within 60 days of receipt (per IC 14-21-1-25).

An archaeological plan will include the following at a minimum:

1. A summary of previous archaeological research in the project area, at the site, and at other associated or nearby sites.
2. A detailed description of proposed research and analytical methodologies including:
  - a) Establishment of site boundaries.
  - b) Surface collection
  - c) Hand excavation and coring/augering methodology
  - d) Mechanical soil removal procedure
  - e) Feature excavation methodology
  - f) Artifact collection sampling procedures
  - g) Analytical procedures
3. Release of interest in artifacts by landowner, unless landowner wishes to retain artifacts.
4. Curation agreement or name and address of landowner to whom the artifacts will be returned, if applicable.
5. A proposed timeline.
6. A plan for what will happen if human remains are encountered.
7. Copy of signed landowner permission. Written landowner permission is required for all field investigations, and field crews should carry copies of all documentation authorizing the work.

See Appendix B for additional information regarding archaeological investigation and plan requirements under state and federal statutes, and recording archaeological resources.

If any human remains dating on or before December 31, 1939 are encountered, the discovery must be reported to the IDNR within two (2) business days. The discovery must be treated in accordance with IC 14-21-1 and 312 IAC 22. In that event, please call (317) 232-1646. Any *in situ* human remains and associated artifacts will be left in place and remain unexcavated. If human remains are accidentally discovered during field investigations or related laboratory analyses, and would be subject to the Native American Graves Protection and Repatriation Act (NAGPRA), the investigating or curation facility shall assure NAGPRA reporting and compliance. If the scope of work necessitates, or if avoidance is not feasible, then the excavation of human remains is possible with an approved plan under state statute.

All archaeological investigations must be guided by a research design, and all qualified professional archaeologists conducting archaeological investigations in the state are expected to keep current on archaeological research and information generated in Indiana, and current methods, techniques, and theories in the discipline. An adequate research design identifies legitimate research problems, specifies the objectives for the current study, presents a discussion of any background literature relevant to the problem and its development, addresses the formulation of hypotheses, if applicable, and outlines the level of field and laboratory analysis that will be necessary to address the research problem. The research design needs to ensure that the analytical framework is appropriate to the level of the investigation and that problems addressed are relevant to the temporal period, size of the project, and geographical location. For smaller projects, it is understood that development of testable models is limited; however, attempts must be made to integrate the growing number of surveys into a wider regional research context. Research designs may deviate from the standard guidelines to address the needs of a particular investigation, with consultation from the DHPA.

### Phase Ia (Field Reconnaissance)

Phase Ia field reconnaissance projects, including underwater/nautical archaeology projects, will be systematic and guided by a research design which outlines the logical integration of goals and objectives with field and laboratory methods (312 IAC 21-3-3). Phase Ia field reconnaissance projects will adhere to the stipulations of these guidelines. The Principal Investigator is responsible for consulting with the DHPA regarding any proposed changes to the plan/research design prior to implementation in the field or laboratory.

Description(s) of the project area(s) must be recorded in field notes and through photographs. Areas investigated by different field methods (surface reconnaissance, shovel testing, augering, etc.) must be recorded. Relevant information to be documented includes variables related to surface visibility, surface conditions, erosion, geomorphology, soils, standing water or saturated soils, prior disturbance, etc.

If a site is encountered outside of the project or survey area, documenting the resource as an archaeological site is encouraged by the DHPA. However, documenting sites located outside of a project area is not a requirement under Section 106 of the National Historic Preservation Act or the Indiana Historic Preservation and Archeology law. If the archaeologist wishes to investigate the site, then landowner permission is necessary.

#### **SURFACE SURVEY**

A visual surface survey is to be conducted when overall ground surface visibility is greater than or equal to 30% and survey conditions are adequate for detecting archaeological sites. Surface visibility should reflect the average visibility throughout the project area being evaluated. Snow cover, frozen soils, lawns, woods, no-till fields, and freshly tilled fields that have not been rain-washed are not acceptable surface survey conditions.

Additionally, if there is a portion of a field or area that does not have at least 30% surface visibility, even though the average visibility of the area is greater than or equal to 30% (such as grass covered lawns, woods, dense vegetation, etc.), these areas must be shovel tested.

A visual surface survey must conform to the following conditions:

- Standard systematic interval spacing for thorough visual inspection is 10 meters. When artifacts are found, and in areas of previously known or reported sites, spacing is to be reduced to a maximum of 5 meters.
- Where relevant, limited probing, shovel testing, coring or augering will be used to confirm alluvial soils, depth of plowzone, and potential deposits. The location of such probes within an archaeological site must be indicated on a map.
- The excavation of one or more shovel probes must be conducted within the boundaries of a site. The number of shovel tests should be consistent with site size and landform type in order to document the potential for subsurface deposits.

In areas that have been previously cultivated, plowing and discing are permitted to improve ground surface visibility. Plowing will not exceed the existing depth of the plow zone determined through shovel probing or augering. Following the plowing and/or discing of the project area, the surface must be rain-washed prior to surface collection. Rakebacks of surface vegetation are not sufficient for adequate Phase I survey.

Controlled surface collection blocks may be used in lieu of survey transects to facilitate the identification of artifact densities across the site. The collection unit size and methods of collection must be presented in the report.

The areas surrounding extant historical structures, ruins, and demolished historical structures must be investigated to identify any associated archaeological resources. If resources are present, a site map of visible surface features, subsurface features, if present, and extant structures must be recorded and assigned an archaeological site number.

### **SHOVEL PROBING**

Where ground surface visibility is less than 30% (such as grass covered lawns, woods, dense vegetation, etc.) and with a surface slope of less than 20%, a shovel probing methodology is required. If snow is present, shovel testing is allowable provided that there is no more than two inches of snow cover. This will ensure possible surface features or foundations may be identified. Frozen soils are not acceptable survey conditions. Systematic shovel probes will be excavated in transects not to exceed 15 meter intervals. Shovel probes will be a minimum of 30 cm in diameter and extend into sterile soils, or to a minimum depth of 50 cm. The soil excavated from shovel probes will be screened through ¼" or smaller wire mesh. All shovel probes must be backfilled. If there seems a strong probability of discovering sites at less than 15 meter intervals, a shorter distance (5 or 10 meters) between probes should be used, such as in the case of areas where the presence of a site has been indicated through the use of directly recorded information (e.g., structure locations recorded on Sanborn Fire Insurance maps).

Once artifacts are recovered, or if on a known site, spacing to define site limits along site margins is reduced to 5 meters and continued until two sequential negative probes are excavated. Internal radial shovel tests or close-interval shovel tests are appropriate and necessary in certain situations. These circumstances include but are not limited to cases such as: the archaeologist cannot evaluate the potential eligibility of the site and needs a larger sample; complex stratigraphy is encountered and more shovel tests are necessary for interpretation; or artifact concentrations are encountered and need to be better delineated.

- Exceptions/Special Cases:
  1. McGregor,<sup>16</sup> General Land Office [GLO], and collector reported sites do not need to be investigated at a reduced interval (5m) until cultural material is identified. In good practice, at least one shovel probe should be placed within the boundary of the site.
  2. Shovel test intervals may be increased in areas of suspected disturbance with no potential for *in situ* archaeological sites; such as graded areas, borrowed fields, wetlands, or areas of severe erosion. Systematic examination of the disturbed area at the increased interval should continue until the end of the disturbance is located, where the 15 meter interval shall resume. Sediments from disturbed context need not be screened. The disturbance must be documented and mapped. Be aware that fill is not considered to be a disturbance. Shovel tests are expected to be excavated through shallow fill (less than 50 cm deep) into the intact soils below. It is not necessary to shovel test areas of extended disturbance if adequate justification can be provided.
  3. Large areas of suspected disturbance should be shovel tested to depths of 50 cm or greater periodically to confirm that no undisturbed deposits exist below the zone of disturbance. Alternative methods, such as augers or mechanical equipment, should be used to investigate areas of deep fill (greater than 50 cm). See Phase Ic guidance.
  4. If a site has already been determined by the DHPA to not be eligible for the State or National Registers, then no further investigation may be needed.

Additionally:

- Field maps showing transect locations and shovel probe locations (both positive and negative) must be produced.
- Site plans must include locations of shovel tests within the site.
- Artifacts are to be collected and bagged by shovel probe and placed in appropriately identified bags.
- Soil profile information and depth of deposits from shovel tests must be noted and representative profiles described in the report.
- Shovel testing in rockshelters must be minimized to avoid damaging and potentially compromising fragile deposits. If cultural materials are absent on the surface or immediately adjacent to the shelter, then shovel probing or augering to define the presence or absence of archaeological deposits may proceed. However, once the presence of archaeological deposits has been identified, the shovel probing (or any other ground disturbing activity) must stop.
- Shovel testing in known or suspected mounds and earthworks should not be performed. These resources are unique and potentially eligible on their own merit and will be recommended for additional investigation or avoidance. An approved plan must be obtained from DHPA prior to additional archaeological investigations if these are deemed necessary.

### WALKOVER

Areas with slopes greater than 20% will be subject to walkover at 30 meter intervals, including areas conducive for the presence of rockshelters, rock ledges, historical sites, dumping deposits, chert outcrops or other resources, or caves that may contain archaeological resources.

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<sup>16</sup> Historical industrial locations that were recorded by John R. McGregor, Professor of Geography, Indiana State University.

## ARTIFACT COLLECTIONS

All precontact artifacts found within individual transects and shovel probes will be collected, with the exception of fire cracked rock (FCR). If not collected, counts, estimated densities, and/or weights of FCR must be recorded and included in the report. Concentrations and relative densities of all artifacts must be recorded.

All historical artifacts found within individual transects and shovel probes will be collected with the following exceptions:

- Artifacts such as bricks, concrete blocks, and other construction debris do not need to be collected (although they must be noted and described, and densities estimated, counted, and/or weighed), unless there is something diagnostic (e.g., manufacturer's mark, name or place stamped on an artifact, artifact has relevant functional information, etc.) about the artifact or if the research design delineates such methodology for a specific study (e.g., early 19th century brick manufacturing).
- **If the Qualified Professional in the field (the Field Supervisor or Principal Investigator) meets the state qualification standards in Midwestern historical archaeology (312 IAC 21-3-4 (b) or (c)) and is thoroughly familiar with the ages and functions of historical artifacts**, then thorough collections of artifacts of recent origin (Appendix B) need not be made. A decision not to collect all of the artifacts must be justified in the report and a description of the artifacts (e.g., type, number and location) not collected will be included. If a historical isolate that is of recent origin is not collected, and it lacks integrity and context then the artifact will be noted in the report, but not recorded as a site. [Normally isolated finds are recorded as sites]. Collections should be made for identification purposes if there is any doubt as to the depositional context, function, or information potential of artifacts.

In all cases, areas of artifact concentrations and surface features should be mapped spatially and recorded by provenience, with the artifacts collected and bagged separately from other site materials. Collected materials are to be bagged by site and placed in appropriately identified bags. Observations related to artifact concentrations, FCR concentrations, and environmental variables will be recorded and included in the field notes and the report.

## RECORDING FIELDWORK RESULTS

Appropriate field documentation (field notes) for sites identified during a Phase Ia investigation will include: location and type of deposits, features, and subsurface deposits (if detectable from subsurface probing), how sites were discovered, how sites were explored and data recovered, surface visibility, factors affecting visibility, site dimensions and how determined, method of recovery, areas of artifact concentrations, site maps, structures, site integrity, location, and physical environment. The location of all sites will be recorded by GPS. The state standard for UTM's is NAD 83.

All sites encountered must be given a state archaeological site number from the DHPA office. If the site is a cemetery, a Cemetery Registry<sup>17</sup> form must also be completed. A state archaeological site form for each site discovered or reinvestigated must be completed and submitted electronically to the SHAARD database at the Division of Historic Preservation and Archaeology. See the SHAARD Userguide (<http://www.in.gov/dnr/historic/>) for detailed instructions on how to submit a site into SHAARD. These

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<sup>17</sup> State Form 50091 (R/4-02)

instructions explain the type of information that should be included for each field and can be referenced when completing an archaeological site form.

All previously known and reported sites within a project area must be revisited if not already determined not eligible for the State and National Registers, information on them must be updated in SHAARD, and their data included in the analysis and interpretation. To this end, the original site form(s) and report of investigations should be examined to ensure the actual site location and size is known prior to fieldwork.

If a previously recorded site is resurveyed and not found, a new site form must be completed in SHAARD indicating that no evidence of the site was found. The Indiana Archaeological Short Report (“Short Report”)<sup>18</sup> is acceptable for projects involving reinvestigation of previously recorded sites where the current investigation did not identify artifacts and/or features.

For projects requiring an approved plan under state statute, a Principal Investigator must place material collections in a facility that is secure, but accessible to other professionals. This will include artifacts (if applicable), field notes, records, documentation, and completed reports.<sup>19</sup>

### Phase Ib (Intensive Survey)

This level of survey effort is designed to build upon the reconnaissance and may involve the use of controlled surface collections, piece plotting, or subsurface sampling. This is done to assist in the assessment of the site and to guide areas for Phase II testing. Phase Ib can be used when the level of data is not sufficient to determine its characteristics, nature, or potential eligibility; however, it should not be used if standard Phase Ia methodology has the ability to produce an adequate level of information. If the site appears to be potentially eligible for the National Register of Historic Places, a permanent site datum will need to be established.

Phase Ib surveys may be combined with Phase II investigations if they are included in the Phase II work plan. Prior to the initiation of Phase Ib field investigation, a plan must be submitted to the DHPA for approval.<sup>20</sup>

### Phase Ic (Subsurface Reconnaissance)

Subsurface reconnaissance (Phase Ic) is required in areas where archaeological remains are likely to be buried in alluvial, colluvial, and aeolian landforms, or historical fill. This level of reconnaissance may require the use of small excavations, including trenches, to discover, define and assess the nature of buried deposits. Such excavation projects must conform to current U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) standards and guidelines.<sup>21</sup> The subsurface reconnaissance attempts to find sites in both their vertical and horizontal exposures. Prior to the initiation of a subsurface reconnaissance, a plan must be submitted to the DHPA for approval.<sup>22</sup> The plan must include proposed intervals and placement of trenches. Further, in extremely complex depositional situations, such as the large floodplains of the Ohio, Wabash, or White rivers, or alluvial/colluvial fans, the work should be conducted by a qualified professional with prior experience in identifying and interpreting complex buried soil horizons and landforms.

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<sup>18</sup> State Form 54566 (1-11)

<sup>19</sup> 312 IAC 21-3-7 (a)

<sup>20</sup> 312 IAC 22-2-3 (b)

<sup>21</sup> <https://www.osha.gov/>

<sup>22</sup> 312 IAC 22-2-3 (b)

Areas recommended for subsurface investigation should be supported from field data gathered at the Phase Ia level such as shovel testing, cores, and/or bucket augers, or a desktop assessment based on a geomorphic analysis of unconsolidated deposits. The proposal should demonstrate an understanding of the geomorphic setting and potential depth of deposits to justify the designed methods. A subsurface reconnaissance must include an adequate sample (no less than 1%, but no more than 5%, in order to maintain site integrity) of the land surfaces with the potential for buried archaeological deposits. If trenching is not a feasible method, augering or coring may be used and spaced at an interval that is appropriate for the landform and setting.

For large or geomorphically complex settings, a staged approach is recommended to refine and clarify areas for subsurface investigation. Systematic geotechnical cores or augers that would sample all landforms within a project area are one approach to reconstruct the geomorphic setting. The data collected would assist in targeting those landforms with the potential for buried deposits for subsurface investigations through subsequent backhoe trenching or mechanical excavation. Alternative methodologies can be developed in consultation with the DHPA prior to submission of the work plan. The plan must clearly define the strategy regarding placement of cores and trenches.

Note the following requirements for an adequate Phase Ic subsurface investigation:

- The backhoe trenches and activities need to be continuously monitored by an archaeologist during operation.
- Backdirt needs to be inspected for artifacts, ecofacts, and evidence of features as it is excavated. Loose backdirt needs to be kept away from the edges of trenches.
- Cores should be split longitudinally and described in a moist condition.
- Trenches must be hand scraped to identify cultural deposits and related stratigraphy.
- Documentation of trench walls must be completed as soon after excavation as possible. Only excavate as many trenches as can be excavated and documented in a timely manner.
- Detailed soil descriptions, following standard USDA terminology, including the nature of any cultural inclusions, texture, Munsell color, evidence of pedogenesis, bioturbation, and other disturbance must be presented for each identifiable strata and keyed to a trench profile map.
- Materials recovered from subsurface investigations need to be bagged by core/trench/unit as well as stratum/level and other relevant provenience. Any cultural material identified must be keyed to material inventoried either in the report or described with the profile map.
- Carbon, organic matter, or macrobotanicals must be retained and processed as appropriate.
- Ten liter flotation samples, if possible, must be collected from each discrete feature identified.
- GPS coordinates are required for all core and trench locations, and must be shown on maps.
- If buried deposits are encountered, a permanent site datum must be established and also shown on maps.
- Upon completion of excavations, the Principal Investigator is responsible for ensuring that all excavated areas are properly backfilled.

The depth of a trench must include all potentially buried resources, or alternative methodologies should be provided. Depending on environmental factors, the water table may be encountered during archaeological investigations. Archaeological deposits may exist at deeper levels below the water table, and all buried cultural layers need to be assessed and documented. Water may be removed by using well points or pumps, or additional investigations may be conducted at a later time with more favorable conditions.

If mechanical equipment is used to excavate trenches, it must be equipped with a smooth-edged bucket and the excavation must take place in a controlled manner (ca. 10-15 cm layers) in order to avoid damage to

potential cultural resources. This may require initial excavation of shallower trenches before stepping back (to comply with OSHA guidelines) and then re-inspection of the trench surfaces as safety factors dictate. If archaeological deposits are present, then the trench floor must be hand scraped in order to determine the nature and extent of the deposits. At least one wall of the trench should be troweled and profiled. All walls with features present must be profiled. All artifacts observed must be flagged, plotted in the profile drawing, and recovered after documentation. In circumstances where the presence or absence of cultural deposits cannot be determined based on macroscopic or field evidence, adequate standard volume sample columns should be taken and screened and floated (graduated screens are recommended).

All features exposed in the plan view of a trench or unit must be excavated. This may involve expanding the original trench/unit to recover the feature if assessment of the anomaly was not possible during the initial excavation. Features found in trench or unit profiles must be assessed for type, nature, and content if documentation was not possible in the base of the trench. All features must be mapped and photographed. All artifacts must be bagged and recorded by feature. Selected sampling of screened columns should be employed in cases where midden deposits are encountered, or to assist in the determination of cultural affiliation. If possible, carbon samples for radiocarbon dating, as well as appropriate samples for other dating methods (e.g., OCR [oxidizable carbon ratio], bulk soil, etc.), must be properly recovered and an appropriate sample analyzed. Intermediate trenching or augering may be required in order to accurately define site boundaries.

In cases where there is a possibility for buried deposits underlying potentially significant deposits, the Phase I subsurface reconnaissance of the lower levels must be coordinated with the Phase II investigations of the upper cultural deposits.

## Phase II (Testing)

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The goal of Phase II testing is to provide additional information on an archaeological site to establish the National Register eligibility of the site. The significance of an archaeological site cannot always be determined from a reconnaissance level survey. Exceptions may occur when a site contains above-ground features such as mounds or other earthworks, or a historic site with extant structures and identifiable features. Even in those examples, additional investigations involving geophysical surveys, mapping, and sample excavations would be necessary to establish site contexts and provide data to guide Phase III mitigation, if necessary.

Archaeological sites are subject to Phase II testing after they have been located by a reconnaissance level (Phase I) survey and determined to potentially retain archaeological significance and integrity. Sites are tested to find out what cultural material exists below the ground surface or beneath disturbed levels; to determine the nature, extent and context of the archaeological deposits; to evaluate the extent of disturbance; and to gather adequate information to develop a mitigation plan if necessary.

In the absence of above-ground archaeological resources (e.g., mounds) that establish site significance, sufficient investigations must be completed to establish the integrity of deposits that could be used to formulate and answer research questions. A significant site is defined as one that meets the criteria of eligibility for the Indiana Register of Historic Sites and Structures (312 IAC 20-5-2) and/or the National Register of Historic Places (36 CFR Part 60).

Phase II investigations will take place under the field and laboratory supervision of a qualified professional archaeologist meeting the federal archaeological qualification standards established by the *Secretary of the*

*Interior's Professional Qualification Standards*<sup>23</sup> and/or the state standards set forth in IC 14-21-1 and 312 IAC 21 and 22. Written landowner permission is required for all field investigations, and field crews should carry copies of all documentation authorizing the work.

A detailed Phase II plan will be submitted to the Division of Historic Preservation and Archaeology for review and approval prior to initiating Phase II investigations. Please keep in mind that plans must be submitted to the DHPA at least thirty (30) days in advance of fieldwork. Plans submitted for review under state statute will be reviewed by the DHPA within 60 days of receipt (per IC 14-21-1-25). All site-testing project plans will attempt to address historical contexts, and all sites designated for testing are considered potentially eligible for listing on the Indiana Register of Historic Sites and Structures and the National Register of Historic Places. The project plan shall include a detailed summary of the site being tested, the results of the Phase I investigation, and a plan for identifying and evaluating potentially significant deposits and the rationale for recommending Phase II investigations.

Sampling during site testing should be of sufficient extent to evaluate the site's integrity and significance (no less than 10%, but no more than 15%), but without unnecessarily damaging site data. Phase II testing must provide an explicitly justified representative sample of deposits to allow prediction of the density, distribution, and nature of the deposits to formulate the effective development of a Phase III data recovery plan, should mitigation of the project effects be required. In some circumstances, Phase II investigations can be combined with Phase III investigations. This rationale should be supported in the project plan. However, if the project is a federal undertaking pursuant to Section 106 of the National Historic Preservation Act (NHPA), coordination with the federal agency and a signed Memorandum of Agreement (MOA) are necessary prior to Phase III archaeological investigations.

#### **ARCHIVAL AND BACKGROUND RESEARCH**

The purpose of Phase II archival and background research is to supplement the existing information on a previously identified archaeological site. This additional information is meant to add to the body of knowledge regarding the site and ultimately should assist in determining whether the site meets the criteria for the Indiana Register of Historic Sites and Structures or the National Register of Historic Places. Investigators should carry out documentary research, informant interviews, and/or collection studies, as appropriate, to achieve these objectives.

Precontact site background research should involve the review of current archaeological sources regarding the appropriate precontact components. The various components of Phase II archival and background research should lead to the refinement of the historical contexts particular to that archaeological resource.

#### **FIELD METHODOLOGY**

The DHPA recognizes that not all field and site conditions may be anticipated in this Guidebook or in archaeological plans. If, in the field, it becomes evident that the methodology (including sample size) needs to deviate significantly from what was agreed upon in the approved plan or in these guidelines, then the alternative methodology must be discussed with and approved by the DHPA prior to implementation in the field.

The Principal Investigator will develop and maintain a system for identification and recording of artifacts and their provenience (in both horizontal and vertical context). All tested sites that have revealed contextual deposits must be marked with at least two permanent datums that should be easily marked for relocation and

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<sup>23</sup> Standards- 36 CFR Part 61; Guidelines- *Federal Register*, Vol. 48, No. 190 – September 29, 1983, Pt. IV.

are clearly identified on the site map. These datums will be georeferenced, and all excavations will be tied to these datums.

The Principal Investigator will ensure that the planned amount of work relates to the question(s) defined in the research design. An adequate sample (as defined in the approved research design) of the surface and plowzone deposits must be investigated to determine the nature and extent of the archaeological materials present. Phase I archaeological reconnaissance may aid in the placement of excavation units (hand and mechanical). Excavations must provide a representative sample of no less than 10%, but no more than 15%, of each total site area. Power machinery may be used to expose cultural deposits as long as the Principal Investigator has determined through sufficient and prior hand excavations that no buried features or intact cultural deposits will be adversely affected by its use. Prior to mechanical stripping, at least 1% of the area to be investigated must be hand excavated to provide small (1m x 1m or 50cm x 50cm) representative “guide units” to better determine the depth and character of the ground to be mechanically stripped. Other techniques, such as controlled surface collection, shovel testing, coring, and geophysical techniques, may be used as supplemental methodology to hand and mechanical excavation.

All excavation units/trenches must be clearly troweled under moist soil conditions to allow accurate identification and mapping of strata and features both in plan and profile views. Screens with ¼ inch mesh will be used to recover specimens from excavated soils; however, project objectives may require the use of finer screening.

All exposed cultural features within the boundaries of the excavation unit/trench must be excavated. If intact archaeological features and/or midden are encountered within the scraped area of the site, 100% of those intact deposits must be excavated by hand, unless a sampling strategy has been approved by the DHPA. If an unusually large or extensive range of features are encountered during the field investigation, an approved representative sampling strategy may be developed. If features extend into the wall of the originally placed test units/trenches and the nature and function of the feature cannot be determined, the unit must be extended to excavate the entire feature encountered.

All precontact artifacts will be collected. Fire cracked rock (FCR) may be exempt from collection if not part of the research design, but the amount and distribution must be recorded in the field. On historical (post-contact) sites, an attempt should be made to recover 100% of all exposed artifacts, with the exception of construction debris, which may be representatively sampled after documentation. All features should be documented on a field map of the site. Also, if particularly dense concentrations of artifacts or features are encountered, an acceptable sampling strategy must be coordinated with the DHPA.

All artifacts and special samples (e.g. soil, pollen, plant, coprolitic, phytolithic, and those necessary for archaeomagnetic, radiocarbon, dendrochronological, and thermoluminescent dating) must be carefully packaged and preserved in the field to ensure that provenience and physical data are not lost. The preservation of these data must be ensured through all phases of analysis and curation.

### **GEOPHYSICAL TECHNIQUES**

Non-invasive geophysical techniques should be considered in addition to excavation and can be used to guide shovel tests or test unit placement. Remote sensing alone is not sufficient documentation for a Phase II investigation, and the areas selected for excavation cannot be based solely upon geophysical data.

### **SHOVEL TESTS AND CORES**

Screened shovel tests or augers may be used to define the depth of disturbance and overburden and whether undisturbed cultural deposits exist. Shovel testing and augers, in the absence of a controlled surface collection,

can provide a representative sample of artifacts. If implemented, shovel testing procedures shall follow those outlined within the Phase I guidelines, unless the Principal Investigator deems an alternate shovel testing program is necessary.

A soil core auger, bucket auger, or post-hole digger can probe deeper than a shovel and should be employed if deeply buried deposits are suspected or present below the level of the known cultural deposits subjected to Phase II testing. Spacing should be sufficient to determine the depth and horizontal extent of deposits as appropriate.

### **TEST UNITS**

If the site is identified in a cultivated or previously cultivated setting and the geomorphic setting indicates that features are only anticipated at the base of the plow zone, a representative sample of units should be placed in the plowzone, hand excavated, and screened in order to define the nature of deposits. Units must be excavated at a minimum of 10 cm levels, or by natural or cultural depositional layers, whichever method best suits the recovery of data.

Test units should minimally provide information on stratigraphy, depths of deposits, range of material culture, and the potential presence of cultural features. Units should extend at least 10 centimeters into culturally sterile soils. Soil cores at the lowest excavated level can be used to determine the presence or absence of cultural deposits. All areas of the site and associated landforms should be sampled through hand-excavated units prior to the implementation of mechanical soil stripping, although a justified biasing of the sample towards areas of artifact concentrations may be warranted.

### **MECHANICAL EXCAVATION**

Mechanical stripping is an effective method for removing plow zone, to expose features at the base of the plow zone, and to access deeply buried deposits. When employing heavy machinery on archaeological sites, the topographic setting should be taken into consideration to determine appropriate machinery. When using a backhoe, a smooth-edge or toothless (mud) bucket must be used. Mechanical soil removal must always be carefully and continuously monitored by at least one archaeologist who has the authority to stop the machinery should deposits be revealed and/or to control the depth of soil removal with each pass of the machine. The amount of information likely to be revealed by the use of power machinery must be weighed against its impact (e.g., compaction, tire cuts) on the cultural deposits. Data recording procedures following mechanical stripping and testing should follow the Phase Ic guidelines above.

All landforms within the site area with the potential for cultural deposits must be sampled. The excavation of all trenches must continue to the depth of the water table, culturally sterile deposits, or the maximum extent of the backhoe, whichever comes first. If there is the potential for archaeological deposits below the water table, all buried cultural layers need to be assessed and documented. Water may be removed by using well points or pumps, or additional investigations may be conducted at a later time with more favorable conditions.

At least one wall of each subsurface trench should be profiled and mapped. For hand excavated units and stripped area excavations, one N-S and one E-W profile will be drawn. Any walls with features in them will also be profiled.

### **ANALYSES**

All information, artifacts, and samples recovered during test excavations must be subjected to analyses within the relevant regional and local historical contexts, so that the research design and questions may be addressed, the site interpreted, and the site evaluated for inclusion in the Indiana Register of Historic Sites and Structures and the National Register of Historic Places.

All artifacts collected during Phase II testing should be analyzed and reported following standard procedures. In addition, samples of ecofacts (e.g., paleobotanical and faunal remains) should be analyzed by appropriate specialists and any additional specialized analyses (e.g., chert type studies and microwear analyses) necessary to answer questions outlined in the research design should be conducted by experienced and qualified individuals. If intact deposits are encountered, radiocarbon (or other chronometric) analyses should be conducted, if appropriate, and the results presented in the report.

## Phase III (Data Recovery/Mitigation)

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Phase III investigations are undertaken when a site has been determined eligible for listing on the Indiana Register of Historic Sites and Structures or National Register of Historic Places (or both), and adverse effects require mitigation. The goal of data recovery investigations is to recover, analyze, and disseminate data gained at an intensive level of investigation. Phase III plans should be developed in consultation with the Division of Historic Preservation and Archaeology. Plans must be submitted to DNR (DHPA) for review and approval prior to initiating data recovery efforts. Please keep in mind that plans must be submitted to the DHPA at least thirty (30) days in advance of fieldwork. However, if the project is a federal undertaking pursuant to Section 106 of the NHPA, coordination with the applicable federal agency and a signed Memorandum of Agreement (MOA) from the federal agency are necessary prior to Phase III archaeological investigations.

Given the wide diversity of sites examined in Phase III investigations, the DHPA expects considerable variation in the strategy to address data recovery goals. Generally, Phase III investigations involve such endeavors as block excavation units, additional archaeological test units, site mapping, feature recording, mechanical stripping, trenching, remote sensing, and artifact analysis, among other possible techniques. It is important, at the mitigation phase of investigations, that the plan include appropriate current professional archaeological research questions and historical contexts for the archaeological sites and cultural affiliations/time periods, in a regional context. Each Phase III plan must be customized to each particular site, and at a minimum must incorporate a discussion of previous investigations, records and archival research, and explicit research problems regarding the cultural components and historical contexts of the sites. Please keep in mind that a minimum 25% sample of the entire archaeological site within the project area must be investigated at a Phase III level. This is in addition to what has previously been investigated.

Investigators must clearly present the Phase III excavation strategy in the final archaeological report that is submitted to the Division.

Written landowner permission is required for all field investigations, and field crews should carry copies of all documentation authorizing the work. Phase III investigations will take place under the field and laboratory supervision of the federal archaeological qualification standards established by the *“Secretary of the Interior’s Professional Qualification Standards”*<sup>24</sup> and/or the state standards set forth in IC 14-21-1 and 312 IAC 21 and 22.

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<sup>24</sup> Standards- 36 CFR Part 61; Guidelines- *Federal Register*, Vol. 48, No. 190 – September 29, 1983, Pt. IV.

## IDENTIFICATION, INTERPRETATION, AND ANALYSES

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Artifacts recovered during archaeological investigations must be identified, classified, and analyzed according to current standards of archaeological documentation. Classification schemes should be provided in the report. Identification, tabulation, and interpretation of artifacts are the primary concerns of analysis and should be conducted by a professional qualified in lithic analysis, ceramic analysis, historical artifact analysis, floral analysis, faunal analysis and osteology, as appropriate. The individual conducting each particular analysis must be identified in the report.

In general, artifacts must be identified and classified into defined categories to be used in an artifact analysis. Raw materials, technical/functional type, and alterations must be included. In addition, summary tables tabulating artifacts by count (including percentages), and/or weight need to be included in the report. Whenever possible, cultural/chronological types, metric data, and named material types for lithic artifacts should be used. When in doubt, be less specific, for an unambiguous general label is preferable to an unsupported or questionable specific label. Photographs and/or illustrations must be provided for all diagnostic, unique, or unusual artifacts, and artifacts which may be identifiable, but the researcher cannot identify.

For historical artifacts, analysis will specify and tabulate: ceramics by type, ware, decoration, and manufacturer, if possible; metal by type and manufacturing technique; and glass by color, type, and manufacturer. Whenever possible, date ranges will be determined and stated in the report. Representative samples of diagnostic, unique and unusual, and artifacts which may be identifiable, but which the researcher cannot identify, must be photographed and/or illustrated.

Floral and faunal material will be identified and tabulated by taxon, provenience, weight, and size of sample(s) analyzed.

Human remains identified in the laboratory phase of work are to be: 1) analyzed by a qualified osteologist, physical anthropologist, or forensic anthropologist; 2) summarized by individuals for location, deposition, position, orientation, depth, stature, sex, age at death, pathologies, etc., as appropriate; and 3) treated according to IC 14-21-1 and its rules. If human remains are subject to the Native American Graves Protection and Repatriation Act (NAGPRA), the investigating or curation facility shall assure NAGPRA reporting and compliance.

Non-curation greatly limits the information potential and future evaluation of artifacts and sites. All artifacts not curated (e.g., returned to the landowner) must be thoroughly documented and subjected to detailed recording and analyses prior to return, including, but not limited to:

- Classification of all artifacts.
- Analysis of each individual artifact type to determine if it is chronologically and/or culturally diagnostic.
- Standard measurements of attributes of all diagnostic artifacts.
- Identification of raw materials, including a description of all chert types recovered, relevant references, and source areas. It is better to identify a chert type as unknown than to mis-identify the type.
- Minimum taxonomic identification, when possible, of all faunal remains from an archaeological site.
- Scaled photographs of all diagnostic, unique, and unidentifiable artifacts and relative samples of artifacts recovered from each site recorded from the study.

- Include an artifact inventory in an appendix to the report. Tables need to be provided detailing artifacts by provenience, giving the sample number, method of recovery, material categories and descriptions, raw materials, counts, plate or illustration number, and any other pertinent information. Items returned to the landowner(s) must be identified in the report.
- Individual photographs and/or illustrations and measurements of all lithic tools (i.e., standard measurements of projectile points, use wear, any organic materials present).
- Classification, photographs and/or illustrations, measurements, and morphology for precontact pottery.
- Individual photographs and/or illustrations and measurements of representative specimens of other diagnostic historical artifacts.

**NOTE-** If the Principal Investigator wishes to propose non-curation of certain parts of a collection, they must consult with the DHPA and the curation facility regarding that type of proposed action. In that type of situation, any portion of the collection that is not curated must be thoroughly documented and subjected to detailed recording and analyses, as referenced above.

## REPORT FORMAT

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A report must be written and supplied to the appropriate agency and the DHPA. The minimum requirements for a report are detailed in this document and in 312 IAC 21-3-8 for projects conducted under state statute. Copies of all publications, including reports, journal articles, manuscripts, theses and dissertations resulting from excavations within the state of Indiana should be provided to the DHPA and digital versions uploaded to SHAARD.

Reports must be submitted within one year after the completion of fieldwork unless otherwise specified by an approved plan or other arrangements are made with the DHPA. The Principal Investigator or Field Supervisor(s) who conducted the fieldwork and project should prepare the report. Projects may be approved prior to the receipt of needed report corrections based upon the degree of importance and need for that information to make an accurate determination of a site's nature and register eligibility. The DHPA retains the right to require additional necessary information to make such an assessment prior to approval. If a report does not characterize all relevant aspects of the project, it will need to be revised.

For investigations which identify archaeological sites, the following report format should be used. The Short Report form is available for Phase Ia projects that do not locate archaeological resources ([www.in.gov/dnr/historic](http://www.in.gov/dnr/historic)). If a new site(s) is encountered, do not use the Short Report. Projects which are only for archaeological records checks may take the form of a standard report, or the Short Report may be utilized.

The Principal Investigator is responsible for assuring that all of the contents of the report and accompanying site forms are a true representation to the best of his or her knowledge and ability.

### A. Title Page

1. Title of the report, including project name, township, and county.
2. Author(s), Principal Investigator, company/organization/institution, address, e-mail address, and telephone numbers.
3. Client for whom report is prepared, address, and telephone number.
4. Lead public agency if applicable.
5. Date of report.

6. Approved plan number if applicable and conducted under state statute (IC 14-21-1). Projects conducted under an approved plan under state statute require the signature of the Principal Investigator.

#### B. Abstract/Management Summary

1. Summary of location (including Section/Township/Range and U.S.G.S 7.5' topographic map), nature of the project, project goals, scope of work, personnel conducting the project, methods, findings, and recommendations.
2. Statement of the project size, the area surveyed (in acres and hectares), new and previously recorded sites investigated, and which site(s) were recommended for further work.
3. Approved plan number if applicable and conducted under state statute.

#### C. Front Matter - Small projects finding few or no sites or artifacts do not need this front matter.

1. Table of Contents – topical headings with corresponding page numbers.
2. Lists of figures, plates and tables with corresponding page numbers.

#### D. Introduction

1. Discuss thoroughly the purpose, goals, and circumstances of the contracted services, including but not limited to: description of the project, location (including PLSS coordinates) and size (in acres and hectares) of project, areas surveyed, scope of work, dates and types of field work and analyses, project administration and personnel for each portion of the project, sites found, summary of nature and characteristics of sites, constraints, areas surveyed, and recommendations. All submitted reports must clearly state who conducted the survey and laboratory work, their capacity, exactly when the survey was conducted, and what task(s) were completed. For larger, extended surveys, this information should be included in tabular form in an appendix.

#### E. Research Design

1. All archaeological investigations are guided by a research design. The research design identifies legitimate research problems, specifies the objectives, and outlines the field and laboratory analysis that will be necessary. The research design should be appropriate to the level of investigation.

#### F. Background Research

1. Precontact
  - a. Documentary research on environment may include local physiography, topography, geomorphology, soils, hydrology, flora, fauna, climate, and geology relevant to the project.
  - b. Provide a review of relevant culture histories specific to the region or cite a relevant culture history. The information can include previous research including chronology, settlement and subsistence patterns, site types, and any other available data which may be important for determining what types of cultural resources are likely to be present, how these may be recognized, and which methods will be effective in their location, identification and evaluation.
  - c. Identify known and reported archaeological resources utilizing the site files of the DHPA and other institutions, colleges and universities, and informant, artifact

collector, avocational archaeologist, and landowner interviews. Include date of records check and/or interview.

- d. If possible, record interviews with informants providing names and date of interview, general inventories of reliable collections as well as illustrations of any representative material remains.
  - e. Discuss the regional settlement patterns, if available.
  - f. Special attention should be paid to archaeological sites located within or adjacent to a project area.
2. Historical/Urban/Industrial  
In addition to a-f above, provide -
- a. Information regarding the history of land-use since European settlement and settlement history.
  - b. Research including state and county histories, previous survey reports, historic property registers, historical maps, atlases, photographs, etc. Appropriate primary and secondary documents should be consulted as necessary to identify potentially significant historical events, activities, occupations, sites, etc., in the project area, as well as to plan for field survey investigations.

#### G. Field Methods and Techniques

1. Describe and justify data collecting techniques, sampling, horizontal and vertical controls, size of intervals, grid, and units, and artifact retrieval procedures. Datum used and permanent datum must be indicated on a site or project map. If probability zones are established, they should be illustrated on a project map (U.S.G.S. 7.5' topographic map, including scale and name of map). Grid, probe, unit, trench, feature, provenience, etc., designations must be described. Screen size and method of screening must be described.
2. Describe environmental (weather and surface) conditions during the survey and their effects on survey results. Be sure to include any variability in surface visibility, and any known areas of previous ground disturbance.

#### H. Results of Investigations

1. Written site descriptions of all sites investigated to be included in the report will include at a minimum:
  - a. Resource type
  - b. Cultural affiliation
  - c. Topographic setting
  - d. Size
  - e. Elevation
  - f. Location
  - g. Diagnostic artifacts
  - h. Features
  - i. Recommendations
  - j. Discussion of the resource and supporting information for recommendations.
  - k. Associated structures and their significance to archaeology should be discussed in the project report.

### I. Analyses

1. Specify counts of materials recovered, provenience, and associations. Provide tabulations of all artifacts, with descriptions of the criteria used to define the artifact categories or types. Include any specialized analyses conducted, such as lithic or ceramics studies.
2. Identify cultural affiliations with classification type names and the references used for the identification.
3. All artifacts to be returned to a landowner must be thoroughly documented and subjected to detailed recording and analyses prior to the return, as specified in the "Identification, Interpretation, and Analyses" section of this document.

### J. Curation

1. All artifacts not returned to the landowner, copies of field and laboratory records and documentation, maps, photographs, samples recovered or taken, notes, site forms, site and project report(s), other relevant records, documentation, etc. must be curated at a qualified curation facility within six month after the approval of the report. For projects conducted under state statute, please see the requirements for curation as specified in 312 IAC 21-3-7.

### K. Eligibility Assessments

1. Recommendations and justifications must be presented for each site to be evaluated for its potential significance and eligibility for nomination to the Indiana Register of Historic Sites and Structures and the National Register of Historic Places. The investigator must detail the justification for each site's assessment and recommendations for further investigations. For larger projects with numerous sites, the recommendations must be summarized in a table.

### L. Interpretations of the Findings into a Regional Context

1. The investigator must use the data gathered to form new or reaffirm previously determined concepts on the use of landscape, cultural chronologies, etc. Provide a synthesis of the information and data gained by the project.

### M. Advanced (Phase Ic, II, and III) Field Investigations

In addition to the relevant information listed above, the following must be included in the report for advanced field investigations, so that the interpretation and evaluation of the site may be addressed according to the research design and questions, historical, local, and regional contexts:

1. Describe, define, and document the methodology used for intensive survey and for establishing units and/or trenches. A composite map depicting all cores, probes, trenches, units, features, and artifact concentrations must be included. A map showing locations of all exposed surface features and artifact concentrations must also be included. Site datums and standard north arrow, scale, and legend(s) must be presented, as well as site boundaries as defined during intensive investigations if different from the Phase I study. The size of excavation units and method(s) of excavation (stratigraphy, levels, treatment of features, etc.) must be included. Sampling strategies, if used, must be clearly defined and described.
2. Descriptions and interpretations of all units and trenches excavated, as well as all features, artifacts, and proveniences must be included. Representative graphics and/or photographs must be included. Tables indicating artifacts from each unit, feature, or area must be included, by strata and level, if appropriate.

#### N. Conclusions

A concise summary and conclusions section must present clear recommendations as to whether each site investigated is considered eligible for the Indiana Register of Historic Sites and Structures and the National Register of Historic Places. In addition, a brief synthesis of the information gathered from each site needs to be presented with potential research problems or questions that could be addressed in future investigations, if appropriate. An evaluation of how well the investigation met the goals of the original research design also needs to be included.

#### O. Bibliography/References Cited

1. Must be complete, consistent, and follow *American Antiquity* style guidelines.

#### P. Graphics and Illustrations

1. A U.S.G.S. 7.5' quadrangle map locating the project area(s) and site(s) produced at 1:24,000 scale.
2. A map locating the project area(s) in the region and state.
3. Color photographs of project area, including representative photos of field conditions and visibility.
4. Composite or aerial map of field investigations (e.g., locations of shovel probes, grids, units, trenches, artifact concentration, activity areas, features, etc.) as appropriate.
5. Representative profiles of the stratigraphy of the project area and site(s). Profiles of all trenches with cultural deposits. The walls of trenches placed within site areas must have the entire wall segments drawn in profile showing soil strata, cultural deposits, and the extent of the area excavated by the backhoe.
6. Photos, plan views, and profiles of all features discovered and investigated.
7. Representative, all diagnostic, and unidentified artifacts which may be identifiable must be photographed and/or illustrated with a scale. A digital CD of photographs of all images may be supplied.
8. Scale, north arrow or stated direction of photograph, and pertinent legends will accompany all graphics and illustrations.
9. Maps of the project area and those areas subjected to archaeological survey will be indicated on a standard U.S.G.S. 7.5' topographical maps with the quadrangle(s) identified, and include:
  - Previously disturbed areas.
  - Areas of differential or varied surface visibility and areas of slope 20% or greater.
  - All previously known sites.
  - All newly recorded sites.

#### Q. Appendices

1. Include all relevant materials, summary tables, specialized analyses, etc.
2. Important or relevant correspondence pertinent to the project should be included in an appendix.

#### R. Addenda

Addenda to previously-submitted and approved site/survey reports are discouraged. They may be acceptable in situations such as where a parcel of property was not accessible during the original survey

or there are **minor** changes in the boundaries of the project area. However, to be considered, they must meet the following stipulations:

1. The original site/survey report must not be over two years old. Records checks must be updated with current information.
2. The addendum must be written by at least one of the original report authors.
3. The area incorporated in the addendum may not exceed forty (40) acres.
4. Approval for the use of an addendum must be obtained from the DHPA prior to the submission of the addendum report.

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## APPENDIX A – RECORDING LINEAR RESOURCES

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If remnants of precontact or historical linear resources (e.g., trails, traces, canals, roads, drainage/ sewage systems, railroads/railways, interurban system, etc.) are identified by archaeological field investigations, they are archaeological features. These resources may be part of above-ground or subsurface, in use, linear systems. However, in use, modern (less than 50 years old) linear elements would not need to be recorded as an archaeological site, unless they exhibit unique characteristics. (For projects conducted under Section 106, and for archaeological investigations conducted on state property, see *Bulletin for Evaluating and Nominating Properties that have Achieved Significance within the Past Fifty Years*, at <https://www.nps.gov/subjects/nationalregister/upload/NRB22-Complete.pdf>, for cases where resources less than 50 years old may have achieved significance.)

Examples:

1. A rail line that is in use, installed in 1980, and has no elements older than 50 years, would not be considered an archaeological site.
2. A wood plank road dating from 1849 would be recorded as an archaeological site.

Archaeological sites will be documented (including assigning an archaeological site number) and evaluated for National Register of Historic Places and/or Indiana Register of Historic Sites and Structures eligibility.

Contiguous portions of an archaeological resource, within the same county, will be assigned the same archaeological site number.

Examples:

1. If physical evidence of a portion of the Wabash and Erie Canal is encountered in Carroll County, a site number is assigned to that portion of the canal. If the archaeological survey, and the evidence of the canal, continues into a neighboring county, a site number for that portion of the linear archaeological resource would be assigned for the relevant neighboring county.
2. If non-contiguous portions of the canal in Carroll County are investigated, the individual segments of the resource which were archaeologically investigated will be assigned separate site numbers.

## APPENDIX B – ARCHAEOLOGICAL INVESTIGATIONS AND RECORDING ARCHAEOLOGICAL RESOURCES

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Qualified professional archaeologists need to know the following:

### **Definition of Site:**

*Federal-* 36 CFR 60.3- A site is the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archeological value regardless of the value of any existing structure.

### ***State-* IC 14-8-2-258 "Site"**

Sec. 258. "Site", for purposes of IC 14-21, includes the following:

- (1) An aboriginal mound, a fort, an earthwork, a village location, a burial ground, a ruin, a mine, a cave, a battleground, a shipwreck, or other similar location on land or under water.
- (2) A location that contains or did contain a structure.

[Pre-1995 Recodification Citations: 14-3-3.3-1(p); 14-3-3.4-1 part.]

*As added by P.L.1-1995, SEC.1. Amended by P.L.167-2011, SEC.10.*

### **Other Important Definitions:**

#### **IC 14-21-1-2 "Artifact" defined**

Sec. 2. As used in this chapter, "artifact" means:

- (1) a feature that is:
  - (A) nonportable evidence of past human behavior or activity;
  - (B) found on or in the ground, including structural remains; and
  - (C) formed before December 31, 1870; or
- (2) an object made, modified, or used before December 31, 1870.

[Pre-1995 Recodification Citation: 14-3-3.4-1 part.]

*As added by P.L.1-1995, SEC.14. Amended by P.L.26-2008, SEC.2.*

#### **IC 14-8-2-124 "Historic property"**

Sec. 124. "Historic property", for purposes of IC 14-21-1, means:

- (1) a historic site;
- (2) a historic structure; or
- (3) other personal or real property located on or in a historic site or historic structure.

[Pre-1995 Recodification Citations: 14-3-3.3-1(g); 14-3-3.4-1 part.]

*As added by P.L.1-1995, SEC.1. Amended by P.L.167-2011, SEC.5.*

#### **IC 14-8-2-125 "Historic site"**

Sec. 125. "Historic site" has the following meanings:

- (1) For purposes of IC 14-21-1, means a site that is important to the general, archeological, agricultural, economic, social, political, architectural, industrial, or cultural history of Indiana. The term includes adjacent property that is necessary for the preservation or restoration of the site.
- (2) For purposes of IC 14-22-6, the meaning set forth in IC 4-37-1-7.

[Pre-1995 Recodification Citations: 14-3-3.3-1(h); 14-3-3.4-1 part.]

*As added by P.L.1-1995, SEC.1. Amended by P.L.167-2011, SEC.6; P.L.111-2016, SEC.5.*

#### **IC 14-8-2-126 "Historic structure"**

Sec. 126. "Historic structure", for purposes of IC 14-21-1, means a structure that is important to the general, archeological, agricultural, economic, social, political, architectural, industrial, or cultural history of Indiana. The term includes adjacent property that is necessary for the preservation or restoration of the structure.

[Pre-1995 Recodification Citations: 14-3-3.3-1(i); 14-3-3.4-1 part.]

*As added by P.L.1-1995, SEC.1. Amended by P.L.167-2011, SEC.7.*

#### **Eligibility:**

*Federal-* National Historic Preservation Act:

§ 300308. Historic property. In this division, the term "historic property" means any prehistoric or historic district, site, building, structure, or object included on, or eligible for inclusion on, the National Register, including artifacts, records, and material remains relating to the district, site, building, structure, or object.

- As a general guideline, to be considered for listing in the National Register of Historic Places, a resource should be at least 50 years old. See *Bulletin for Evaluating and Nominating Properties that have Achieved Significance within the Past Fifty Years*, at <https://www.nps.gov/subjects/nationalregister/upload/NRB22-Complete.pdf>, for cases where resources less than 50 years old may have achieved significance.

*State-* 312 IAC 20-4-7 Evaluation of a historic site

Authority: IC 14-10-2-4; IC 14-21-1-25; IC 14-21-1-31 Affected: IC 14-9; IC 14-21-1 Sec. 7.

In evaluating whether a site is a historic site, the division shall take into account what is important to the: (1) general; (2) archaeological; (3) agricultural; (4) economic; (5) social; (6) political; (7) architectural; (8) industrial; or (9) cultural; history of Indiana.

In evaluating impacts on a historic site, the division shall also consider adjacent property that is necessary for the preservation or restoration of the site. To assist in an evaluation, reference shall be made to the definitions of a "site" or a "district" set forth by the National Park Service (36 CFR 60.3 (July 1, 2009)) and to the definitions for "historic designed landscape" and "historic vernacular landscape" in "The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes"

(U.S. Department of the Interior, National Park Service, Washington, D.C., 1996, page five (5)). (Natural Resources Commission; 312 IAC 20-4-7; filed Dec 10, 2010, 10:40 a.m.: 20110105-IR312100042FRA; readopted filed Sep 19, 2013, 10:16 a.m.: 20131016-IR-312130184RFA)

### **312 IAC 20-4-8 Evaluation of a historic structure**

Authority: IC 14-10-2-4; IC 14-21-1-31

Affected: IC 14-9; IC 14-21-1

Sec. 8. In evaluating whether a structure is a historic structure, the division shall take into account what is important to the:

- (1) general;
- (2) archaeological;
- (3) agricultural;
- (4) economic;
- (5) social;
- (6) political;
- (7) architectural;
- (8) industrial; or
- (9) cultural;

history of Indiana. In evaluating impacts on a historic structure, the division shall also consider adjacent property that is necessary for the preservation or restoration of the structure. To assist in an evaluation, reference shall be made to the definitions of a building, structure, or object set forth by the National Park Service at 36 CFR60.3 (July1, 2009). (Natural Resources Commission; 312 IAC 20-4-8; filed Dec 10, 2010, 10:40 a.m.: 20110105-IR-312100042FRA; readopted filed Sep 19, 2013, 10:16 a.m.:20131016-IR-312130184RFA)

### **Investigations conducted under Section 106 of the National Historic Preservation Act:**

#### **1. Section 106 Phase Ia investigation-**

- Private property- Does not need an approved archaeology plan from the DNR/DHPA.
- Federal property- requires coordination with the federal agency and the manager of the federal land. The relevant regulations (e.g. ARPA, NAGPRA) would need to be adhered to. Does not need an approved plan from the DNR/DHPA, unless also leased to the state.
- State Owned or Leased Property- Does need an approved archaeology plan (IC 14-21-1-16).

#### **2. Section 106 investigation other than a Phase 1a-** Archaeology plan should be submitted to the DHPA/SHPO and the federal agency as a necessary part of Section 106 consultation and compliance. This applies to private property, federal property, and state property (IC 14-21-1-16).

**Note-** Sites 50 years or older will be taken into consideration.

### **Investigations conducted under state statute (Indiana Code [IC] 14-21-1):**

Sites containing artifacts and features dating before Dec. 31, 1870- Except for Phase 1a, a plan approved by the DNR/DHPA (IC 14-21-1-26) is needed to conduct archaeological investigation at those sites. However, any field investigation on state property requires an approved plan under IC 14-21-1-16. Note that archaeology conducted under state statute requires a Principal Investigator and/or Field Supervisor meeting the requirements in 312 IAC 21 (see Appendix C).

**Note-**

- Artifacts and features dating before Dec. 31, 1870 on private property are recorded as sites. However, for research projects, many archaeologists, depending upon the research design, will record artifacts and features dating after Dec. 31, 1870 as archaeological sites.
- On state owned or leased property - the definitions of historic site, historic structure, and historic property do not include the Dec. 31, 1870 date; so, in practice, sites 50 years or older are taken into consideration.

**Some examples-**

- Archaeological excavation on private property, at a site dating before Dec. 31, 1870, requires an approved plan (IC 14-21-1-26) from the DNR/DHPA.
- Excavation for an archaeological field school at a site dating after Dec. 30, 1870, and on private property, doesn't require an approved plan. However, if the project is using state funds, and conducting archaeological investigation at a site or structure listed on the state or national register, the project must be submitted for review to the DNR/DHPA under IC 14-21-1-18.

## APPENDIX C – QUALIFICATION REQUIREMENTS FOR PRINCIPAL INVESTIGATOR

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See also: Application for Federal Professional Qualifications Documentation for Archaeology<sup>25</sup>

**Federal:** “Secretary of the Interior’s Professional Qualification Standards,” (36 CFR Part 61); *Federal Register*, Vol. 48, No. 190- September 29, 1983, Pt. IV.

The minimum professional qualifications in archaeology are a graduate degree in archaeology, anthropology, or a closely related field plus:

1. At least one (1) year of full-time professional experience or equivalent specialized training in archaeological research, administration, or management.
2. At least four (4) months of supervised field and analytic experience in general North American archaeology; and
3. Demonstrated ability to carry research to completion.

In addition to these minimum qualifications, a professional in prehistoric archaeology must have at least one (1) year of full-time professional experience at a supervisory level in the study of archaeological resources of the prehistoric period. A professional in historic archaeology must have a least one (1) year of full-time professional experience at a supervisory level in the study of archaeological resources of the historic period.

**State:** Indiana Code (IC) 14-21-1 and 312 IAC 21.

312 IAC 21-3-4 Personnel qualifications

Authority: IC 14-21-1-31; IC 14-34-4-10

Affected: IC 4-21.5-3-8; IC 14

Sec. 4. (a) An individual who wishes to conduct an investigation under this article must submit a curriculum vitae to the division to satisfy the qualification standards of this section.

(b) A principal investigator must have the following:

- (1) A graduate degree in anthropology or a closely related field with a specialization in archaeology at the graduate level.
- (2) Three (3) years of experience in anthropology or a related field, consisting of at least two (2) years as a supervisor in archaeological survey and excavation and one (1) year of laboratory cataloging and analysis and the preparation of a research-oriented monograph, thesis, or dissertation.
- (3) Graduate course work, training, and experience in archaeology, including theory, methods, techniques, cultural areas, and field and laboratory techniques, under the direction of a qualified professional archaeologist.
- (4) In addition to the requirements contained in subdivisions (1) through (3), the following requirements apply to a project in the areas specified:

(A) For a prehistory project, two (2) years of supervisory experience and research in Midwestern archaeology.

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<sup>25</sup> State Form 52779 (R/5-11)

(B) For a history project, two (2) years of supervisory experience in Midwestern historic archaeology and archival research.

(C) For a marine project, two (2) years of supervisory experience in underwater archaeological techniques and research. Diving certification is also required from a recognized certifying organization (examples: NAUI, PADI, Red Cross, YMCA, and United States Navy).