

**FISH AND WILDLIFE SERVICE  
REAL PROPERTY**

**Real Property** **Part 343 Cadastral Surveys and Maps**  
**Chapter 1 Survey Policies, Authority, and Responsibilities** **343 FW 1**

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**1.1 What is the purpose of Part 343, Cadastral Surveys and Maps?**

**A.** Part 343 describes the U.S. Fish and Wildlife Service (Service) policy for cadastral surveys, other land survey services, and mapping of land ownership. It's organized as follows:

- (1) 343 FW 1, Survey Policies, Authority, and Responsibilities;
- (2) 343 FW 2, Survey Tract Review, Cadastral Surveys, and Boundary Posting;
- (3) 343 FW 3, Construction Surveys;
- (4) 343 FW 4, Contracting for Surveys; and
- (5) 343 FW 5, Mapping.

**B.** Part 343 also establishes the *Land Survey Handbook* as the document employees must use to understand the detailed standards and procedures for performing surveys and survey services.

**1.2 What is the scope of this Part?** In addition to Service land surveyors, the provisions of Part 343 apply to:

- A.** Realty Specialists and others who acquire lands for the Service;
- B.** Managers of Service lands, including wildlife refuges, fish hatcheries, research laboratories, administrative sites, and conservation easements;
- C.** Cartographers and geographers who map Service land interests;
- D.** Engineers and Project Leaders who manage construction projects on Service lands;
- E.** Service employees who acquire mapping services that require a control survey; and
- F.** Employees who use survey grade instruments in their work.

**1.3 What terms do you need to know to understand the chapters in Part 343?**

**A. Cadastral survey.** A cadastral survey creates, marks, defines, retraces, or reestablishes the boundaries and subdivisions of land ownership. It is synonymous with "boundary survey." The cadastral surveys we approve for use are:

- (1) "Official cadastral surveys," which are those carried out in accordance with Part 343 and that the Regional Land Surveyor has approved (whether completed under Federal or State authority);
- (2) Bureau of Land Management (BLM) or General Land Office (GLO) cadastral surveys; or
- (3) Cadastral surveys performed by someone else, but that the Regional Land Surveyor has approved in writing.

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**B. Construction projects.** Construction projects include new construction, rehabilitation, and deferred maintenance projects (see 360 FW 1). Part 343 applies to construction projects that take place outside of the footprint of an existing structure.

**C. Control survey.** Control surveys establish a common, consistent network of physical points that are the basis for controlling the horizontal and vertical positions of a project. The points are then used to reference other survey observations or measurements.

**D. Datum.** A datum is a reference system by which surveyors report the measurements of a survey.

**E. Exterior boundary.** An exterior boundary is any boundary separating Service lands from non-Service lands.

**F. Land(s).** "Land" or "lands" refers to all real property interests that the Service owns or manages, including fee ownership, withdrawals, easements, permits, leases, reversionary interests, and agreements.

**G. Land survey/services.** Land survey/services are any of the services that a Federal or State land surveyor traditionally provides, including cadastral, topographic, construction, facilities mapping, deed research, and water rights mapping.

**H. Public domain.** Public domain includes any or all of those areas of land ceded to the Federal Government by the original states and to other lands that the Government acquired by treaty, purchase, or cession, and are disposed of only under the authority of Congress.

**I. State authority survey.** A State authority survey is one conducted by a surveyor who is licensed to practice land surveying in the State where the subject tract of land is located. The surveyor must perform it in accordance with that State's surveying laws and regulations.

**J. Survey grade.** Survey grade refers to instruments or technology capable of a resolution of less than 1 foot in distance.

**K. Survey Tract Review.** The Survey Tract Review is the Service process for implementing the 600 DM 5, Standards for Federal Lands Boundary Evidence. It consists of the Land Surveyor's Review, the Certificate of Inspection and Possession (CIP), and the Boundary Assurance Certificate.

**L. Topographical survey.** Surveyors use topographic surveys to identify and map the contours of the ground and existing features on the surface of the earth or slightly above or below the earth's surface. These may include hills, ravines, streams, trees, fences, buildings, and other improvements over the natural state of the land.

**M. Vendor surveys.** Vendor surveys are surveys of land we are acquiring that the seller pays for. The seller seeks reimbursement from us after we acquire the land.

**1.4 What is the Service's overall land surveying policy?**

**A.** Land surveys are required throughout the Service for land acquisition and management, construction of Service facilities, controlled mapping, and certain scientific investigations.

**B.** Each Regional Realty program maintains a staff of professional land surveyors, under the direction of a Regional Land Surveyor, sufficient to provide land survey services to all Service programs.

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**C.** Employees must base the acquisition, exchange, or disposal of fee-owned lands on a legal description that the Regional Land Surveyor prepares or approves through the Survey Tract Review process.

**D.** All cadastral surveys of Service lands are the responsibility of the Regional Land Surveyors.

**E.** Employees must survey and post all exterior boundaries of fee-owned Service lands at the time of acquisition, as described in the *Land Survey Handbook*. Each Region may establish its policy for surveying and posting lands that are not fee-owned in consultation with the Regional Land Surveyor

**F.** When employees perform land management (see section 1.8B) and construction (see section 1.3B) activities on Service lands, they must post the boundaries in accordance with an approved survey and the *Land Survey Handbook*.

**G.** Service cadastral surveys must:

**(1)** Conform to established professional procedures, and

**(2)** Meet Federal or State requirements, or both, and comply with:

**(a)** The Service *Land Survey Handbook*,

**(b)** The BLM *Manual of Surveying Instructions* (2009) (see 757 DM 2) for the survey of public lands,

**(c)** The Department of Justice's Title Standards 2001 (DOJ Title Standards 2001), and

**(d)** Standards for Federal Lands Boundary Evidence, 600 DM 5.

**1.5 What are the authorities for the chapters in Part 343 and the *Land Survey Handbook*?**

**A.** Migratory Bird Conservation Act (16 U.S.C. 715 – 715r).

**B.** Land and Water Conservation Fund Act of 1965 (16 U.S.C. 460l-4 - 4601—11).

**C.** National Wildlife Refuge System Administration Act of 1966, as amended (16 U.S.C. 668dd).

**D.** 142 DM 3, U.S. Fish and Wildlife Service (National Wildlife Refuge System, Division of Realty).

**E.** 757 DM 2, Surveying and Mapping.

**F.** Office of Management and Budget (OMB) Circular No. A-16, Coordination of Geographic Information Related Spatial Data Activities.

**G.** Federal Acquisition Regulation (48 CFR 1).

**H.** 600 DM 5, Standards for Federal Lands Boundary Evidence.

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1.6 Who is responsible for the Service’s cadastral survey program?

Table 1-1: Responsibilities for the Service’s Cadastral Survey Program	
This official...	Is responsible for...
<b>A. The Director</b>	Approving or declining to approve Service policy.
<b>B. The Chief – National Wildlife Refuge System</b>	Overseeing the Service’s Realty program.
<b>C. Regional Chiefs – National Wildlife Refuge System</b>	<p>(1) Overseeing the Regional Realty programs, and</p> <p>(2) Ensuring that Project Leaders and other employees in the Regions carry out land management activities and exempt construction projects in accordance with this policy.</p>
<b>D. The Chief, Division of Realty in Headquarters (HQ)</b>	<p>(1) Managing the location, examination, cadastral survey, and acquisition of title or interest in Service lands and waters;</p> <p>(2) Ensuring that all lands we acquire have clear title;</p> <p>(3) Ensuring there are adequate resources in place in the Regions and HQ to achieve the Division’s mission; and</p> <p>(4) Evaluating the Regions’ performance at regular intervals to ensure they are achieving goals related to land acquisition and management.</p>
<b>E. The Chief Land Surveyor, HQ</b>	Developing, implementing, evaluating, and providing technical guidance and final review of land surveying activities associated with the Service’s Realty program.
<b>F. Regional Realty Officers</b>	<p>(1) Maintaining an adequate staff of land surveyors, and</p> <p>(2) Ensuring that Realty operations conform to this policy and the <i>Land Survey Handbook</i>.</p>
<b>G. Regional Land Surveyors</b> (see section 1.7 for information about what kinds of surveys our surveyors are authorized to perform)	<p>(1) Ensuring the legal land descriptions and acreage are accurate for each acquisition, exchange, and disposal;</p> <p>(2) Carrying out or overseeing all land surveys, including contract, reimbursable, and force account surveys;</p> <p>(3) Directing and overseeing posting of land boundaries by Service staff or contractors;</p> <p>(4) Reviewing and approving Service boundary mapping by cartographers or geographers;</p> <p>(5) Establishing survey technical standards (or carrying out surveys) for:</p> <p style="padding-left: 40px;">(a) Design of construction projects,</p>

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Table 1-1: Responsibilities for the Service's Cadastral Survey Program	
This official...	Is responsible for...
	<p style="text-align: center;"><b>(b)</b> The control and evaluation of accuracy of aerial mapping and remote sensing, and</p> <p style="text-align: center;"><b>(c)</b> Acquisition of water rights;</p> <p><b>(6)</b> Establishing standards for the use of survey grade instruments by non-surveyors;</p> <p><b>(7)</b> Providing guidance and oversight to Regional programs about boundaries and land surveying activities; and</p> <p><b>(8)</b> Assisting the Chief Land Surveyor in preparing and reviewing new survey standards, techniques, and policies.</p>
<b>H. Refuge and Hatchery Managers, Engineering Project Managers, Realty Supervisors and Specialists, and other Service Employees</b>	<p>Consulting with the Regional Land Surveyor on:</p> <p><b>(1)</b> Service activities requiring land surveys (see Table 1-2), and</p> <p><b>(2)</b> Using survey grade instruments, such as a GPS receiver, to achieve survey grade accuracies.</p>
<b>I. Cartographers and Geographers</b>	<p>Creating and maintaining maps and data representing Service land ownership in consultation with the Regional Land Surveyor.</p>

**1.7 What duties may the Regional Land Surveyors perform, and what are they not allowed to do?**

**A.** The Regional Land Surveyors may carry out:

- (1)** Surveys and subdivisions of acquired Service lands and lands proposed for acquisition,
- (2)** Resurveys of public domain lands, and
- (3)** State authority surveys of (1) and (2) above, when properly licensed.

**B.** Our Regional Land Surveyors may not conduct original surveys of the public domain lands or any survey required for issuing a patent, unless acting under the authority of BLM.

**1.8 What activities require survey services? See Table 1-2.**

Table 1-2: Activities Requiring Survey Services		
When we do this activity...	Which means...	The Regional Land Surveyor must ...
<b>A. Land Acquisition</b>	We are obtaining title by purchase, exchange, donation, lease, or devise.	<b>(1)</b> Complete a Survey Tract Review, which means reviewing documents, legal descriptions, and boundary evidence to identify possible

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<b>Table 1-2: Activities Requiring Survey Services</b>		
<b>When we do this activity...</b>	<b>Which means...</b>	<b>The Regional Land Surveyor must ...</b>
		<p>problems. See 343 FW 2 for more information.</p> <p><b>(2)</b> Carry out any required land surveys. This can include subdividing the property, resolving encroachments, monumenting boundary corners, and posting new exterior boundaries.</p>
<b>B. Management of Land Boundaries</b>	We are identifying or maintaining boundaries to support land management (e.g., hunting, controlled burning, thinning of timber, water impoundment, law enforcement).	<p><b>(1)</b> Perform a cadastral survey, when necessary, for positive on-the-ground identification of Service land boundaries, property corners, unauthorized uses, and encroachments.</p> <p><b>(2)</b> Mark and post boundaries as needed. See the <i>Land Survey Handbook</i> and 343 FW 2.</p>
<b>C. Issue Right-of-Way Permits or Dispose of Land</b>	We are granting someone the right to use Service land, or we are disposing of a tract of Service land.	<p><b>(1)</b> Complete a Survey Tract Review.</p> <p><b>(2)</b> Perform a cadastral survey, if needed, to identify the right-of-way location, or to locate and mark the boundary(s) of remaining Service lands.</p>
<b>D. Resolving Adverse Claims</b>	Someone is disputing the boundary location of Service lands.	Perform an examination of the lands in question to determine the basis and extent of the adverse claim (see 340 FW 4).
<b>E. Resolving Trespass or Unauthorized Use</b>	Someone is using Service land without authorization.	Perform an examination of the lands in question to verify the boundary location and determine the nature and extent of the trespass or unauthorized use (see 340 FW 4).
<b>F. Construction Projects</b>	We are constructing or modifying facilities outside of the footprint of an existing building.	<p><b>(1)</b> Review the project site for the status of the boundaries and existence of outstanding rights.</p> <p><b>(2)</b> Perform any needed cadastral surveys.</p> <p><b>(3)</b> Consult with the Engineering Project Manager or Project Leader on datums, coordinate systems, and topographic survey needs (see 343 FW 3).</p>
<b>G. Aerial Mapping/ Remote Sensing</b>	We are acquiring new maps or digital data that must meet specified accuracy standards (not including satellite imagery or other commercial products).	<p><b>(1)</b> Consult with the acquiring program to determine if professional land surveying procedures are required.</p> <p><b>(2)</b> Contract for or carry out any control or</p>

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<b>Table 1-2: Activities Requiring Survey Services</b>		
<b>When we do this activity...</b>	<b>Which means...</b>	<b>The Regional Land Surveyor must ...</b>
		validation surveys that are needed.
<b>H. Water Rights Applications</b>	We are acquiring, maintaining, or transferring the right to divert and use water.	<p><b>(1)</b> Consult with the Water Resources program and the acquiring program to determine project needs.</p> <p><b>(2)</b> If needed, carry out surveys to locate the point of diversion, place of use, storage volume, and flow of water for preparation of State-mandated applications (e.g., Claim of Beneficial Use, Transfer Application). Special State licenses may be required.</p>

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